NAAC RE-ACCREDITATION 2014

SELF STUDY REPORT
VOLUME - I
(Profile of the University & Criteria-wise Inputs)

Panjab University
Chandigarh

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VOLUME – I
Profile of the University

Criteria-wise Inputs

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Note: These annexures will be shown to the NAAC Team on their visit to the Panjab University, Chandigarh.

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Vice Chancellor

PANJAB UNIVERSITY

CHANDIGARH, *India* 160 014

From the Desk of the Vice-Chancellor

Panjab University (PU) has strived to remain at the forefront in serving as an intellectual, cultural and educational resource for the country since its inception in 1882 at Lahore. History of PU is an embodiment and a continuation of social and cultural ethos of liberal and holistic education.

As 12th Vice Chancellor of PU after independence in India, it is my privilege to present the Self Study Report (SSR) of PU to the National Assessment and Accreditation Council (NAAC) for re-accreditation and also to highlight significant contributions made in the last five years.

In the Times Higher Education (THE) World University Rankings Survey, powered by Thompson Reuters, PU stands placed amongst topmost Indian institutions of higher learning in 2013 as well as 2014. PU is ranked at the 13th place amongst the universities from BRICS and twelve other emerging economies, and at the 32nd rank amongst the Asian Universities. The ASSOCHAM adjudged PU as the Best Government University of the year 2014. The Chairman, UGC recently addressed the University Communities via a National Knowledge Network webcast from the PU Campus on the title 'Impetus to Research in Indian Universities: Strategic Planning and Work Plan'. A national level Discussion Meeting has been convened in October 2014 to draft a concrete proposal for presentation to UGC before the end of the Diamond Jubilee year of the Commission in December, 2014.

PU took initiative to nucleate Chandigarh Region Innovation and Knowledge Cluster (CRIKC), which has brought together fifteen academic institutions and national laboratories in and around tricity Chandigarh to share their research infrastructure and expertise to enable each of the institutes to perform at a higher level of excellence. The UGC, MHRD, Planning Commission, Department of Science and Technology (DST), Department of Biotechnology (DBT) and Department of Atomic Energy (DAE) of Union Government have taken cognizance of the potential of CRIKC to nurture excellence. DST and DBT have respectively entrusted the tasks of promoting Academia-Industry interactions to a new 'Centre for Policy Research' and of incubating new ideas to a new 'Centre for Innovation Cluster in Biotechnology' being set up at PU Campus. DST-DAE have asked PU to create and coordinate 'Centre for High Energy Physics Detector and Instrumentation' on behalf of the Indian Universities as a part of larger Indian Institutions Fermi Laboratory Collaboration under the DAE-DOE (Department of Energy of USA) Strategic Research Initiative.

PU was accredited by NACC with five star rating in 2004 and re-accredited with 'A' grade rating in 2009. Department of Science and Technology, G.O.I., New Delhi has selected PU for the *PURSE (Promotion of University Research and Scientific Excellence)* award for the second time. The university has been recognized by the UGC as the "*University with Potential for Excellence in Bio-Medical Sciences*" with facilities for '*Stem Cell Research and Drug*

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Development', "*Centre of Excellence*" in '*Application of Nano Material, Nano Particles and Nano Composites*', and "*Centre of Excellence*" in '*Cultural Fixation on Honour: A gender Audit of Punjab and Haryana*'.

Some of our other highlights include:

- ✓ Initiation of monthly Colloquia Lecture series with the objective of providing a platform for discussion and deliberations to academia and igniting mind of the young students and persuade them to innovate and research.
- ✓ Organized a seminar (Oct 24–26, 2013) on the issue of "The Making of Modern Punjab from 1850 to Contemporary Times, in the background of 150 years of Higher Education in Punjab" as part of the celebration of the **Foundation Day of the university** and the commemoration of the 150th birth anniversary of eminent scholar Professor Ruchi Ram Sahni.
- ✓ Collaboration with national as well as international institutions through MoUs
- ✓ Organizing annual Chandigarh Science Congress (CHASCON) and Chandigarh Social Science Congress (CHASSCONG) regularly since 2006 in collaboration with different academic institutes in the Chandigarh region
- ✓ Launching of new courses to teach students
- ✓ Preparing students to excel in job market through Campus Placement Cell and skill development activities
- ✓ Strengthening of physical as well as IT enabled infrastructure to enhance teaching-learning experience
- ✓ Introducing of Choice Based Credit System (CBCS) in the University Institute of Engineering & Technology as well as School of Communication Studies

PU has embarked upon a path of continuous assessment of its programmes and practices and taken decisive steps to build good physical infrastructure, excellent human resource, adherence to academic calendar and above all, emphasis on work culture and ethics of our teaching and non-teaching employees. This SSR is the summary of our efforts, hard work, concern, and commitment.

I certify that the data included in this SSR are true to the best of my knowledge. This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced. I am aware that the peer team will validate the information provided in this SSR during the peer team visit.

Place: Chandigarh

Date:

(Arun Kumar Grover)

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Executive Summary

Introduction

Present day Panjab University traces its origin to the Punjab University established in 1882 at Lahore (now in Pakistan Punjab). After the partition of India, in 1947, university was split into two for Indian Punjab and Pakistani Punjab. To distinguish the two, name of university on the Indian side was changed from Punjab to Panjab. After 1947 the university had no campus of its own for nearly a decade. The administrative office was located at Solan, Himachal Pradesh and the teaching departments functioned from Hoshiarpur, Jalandhar, Delhi and Amritsar. In 1956 the university was relocated to Chandigarh, on a red sandstone campus designed by Pierre Jeanneret under the guidance of the legendary Le Corbusier. Till the re-organization of Punjab in 1966, the university had its regional centres at Rohtak, Shimla, Jalandhar and its affiliated colleges were located in the states of Punjab, Haryana, Himachal Pradesh and Union Territory of Chandigarh. With the re-organization of Punjab, the university became an Inter-State Body Corporate catering to the newly organized states of Haryana, Himachal Pradesh, Punjab and U.T. of Chandigarh

The main campus at Chandigarh is residential and is spread over 550 acres (2.2 km^2) in Sectors 14 and 25, the teaching area is in the north-east, with the Central Library, Fine Arts Museum, and three-winged structure of the Gandhi Bhawan forming its core; the sports complex, the health centre, and the shopping centre in the middle; 18 university hostel and residential area in the south-east, stretching into the adjacent Sector 25 which also houses the University Institute of Engineering and Technology (UIET) and Dr. Harvansh Singh Judge Institute of Dental Sciences and Hospital, University Institute of Applied Management Sciences (UIAMS), Institute of Biological Sciences etc.

As a self-sustaining township, the campus has amenities like a State bank of India branch, Post and Telegraph Office, public transport system, open air theatre, guest and faculty houses, seminar complexes, staff club, several spacious lawns, botanical and medicinal herbs gardens, a newly laid rose garden, a school and a day-care centre for the employees' children. The campus is adjacent to a medical institution known as the Post Graduate Institute of Medical Education and Research. The teaching departments, students' hostels, faculty residences and other amenities are all within walking distance of one another.

The university has 78 teaching/research departments under the faculties of Arts, Science, Languages, Law, Education, Fine Arts, Business Management & Commerce, Engineering & Technology, Medical Sciences, and Pharmaceutical Sciences. It has 181 affiliated colleges, 4 constituent colleges, 1 rural centre at Kauni, 1 Regional Centre each at Muktsar, Ludhiana and Hoshiarpur, spread over Punjab & Chandigarh. The total number of students at PU campus and colleges is approximately 3 lacs.

The professional courses offered by the departments of Law, Business Administration and Management Sciences, UIET, the Dental Institute, the Institute of Hotel Management, University Institute of Pharmaceutical Sciences (UIPS), Computer Science, and Fashion Designing etc. are heavily subscribed today. Many of the professional courses run by the university rank among the best in the country at present.

The University has been accredited by the NAAC with the celebrated "Five Star" accreditation status in September 2004 and reaccredited by the NAAC with "A" Grade in January 2009. NAAC, in its last visit, has succinctly opined the strength of the university: *As an institution which has gone through the vicissitudes of time, the Panjab University has demonstrated its resilience, durability, utility and acceptability as a unique institution of higher education. Retaining the time honored and valued subjects of study, it has simultaneously started programmes in emerging areas and provided infrastructure of a substantial nature to provide quality education".*

The University calendar of Panjab University, Chandigarh defines the mandate of the University as:

"The University has been incorporated for the purpose, among others, of making provision for imparting education in Arts, Letters, Science and the learned professions and of furthering advancement of learning, the prosecution of original research, with power to appoint University

Professors, Readers and Lecturers, to hold and manage educational endowments, to erect, equip and maintain University colleges, libraries, laboratories and museums, to making regulations relating to the residence and conduct of students and to do all such acts as tend to promote study and research".

CRITERION I: CURRICULAR ASPECTS

The vision and mission of the University reflect in all its academic programmes. The curriculum is continuously revamped once in three years incorporating major changes and reviewing it every year incorporating minor changes in close coordination with the faculty, academic peers, experts from industry, current students and alumni, so as to keep pace with the rapid developments in various fields of study, scientific and technological advancements, and to meet the demands of academia, industry and society.

The revised curriculum enables the teachers to carry out continuous internal assessment, ensures flexibility in choosing courses, and provides opportunity for students to choose elective courses. All UG Courses including Honours School Courses in the Faculty of Science and PG Courses on the Campus follow Semester Based (Credit) System with many electives courses to choose from.

The Choice Based Credit System(CBCS) has been introduced in UIET, and 'School of Communication Studies' on a pilot basis from the academic session 2014-15 and is running successfully to impart student-centric education and to provide enhanced learning opportunities to match the students' scholastic needs and also their aspirations.

The University offers a total of 308 programmes during the academic year 2013-14 through its departments. This includes 1 D.Litt. 56 Ph.D., 1 LL.D., 141 PG including M.Phil., 11 Integrated 5-year, 51 UG, 12 PG Diploma, 23 Diploma and 12 Certificate programmes.

The University through *Centre for Emerging Areas in Science and Technology* and *Centre for Emerging Areas in Social Sciences* provides the right ambience for introducing several innovative interdisciplinary programmes to enhance their research knowledge through mechanisms which encourage working on empirical data, writing term-papers, field-based research, working on live projects, etc.

The Advanced Diploma, Diploma and Certificate programmes are offered as add-on programmes for enriching the students further with relevant specializations and learn additional foreign languages. Under this system the University provides an opportunity to get one UG/PG degree and Advanced Diplomas / Certificates within a period of two/ three years of stay at the University.

Several Communication Skill, Soft Skill development courses and applied courses, workshop-based courses, internships and dissertation are offered, leading to better employability.

The University has facilitated the development of its affiliated colleges as research centres with the respective PU department serving as their nodal agencies so that there is a 'capacity building' through which a larger research community gets distributed to these research centres and will eventually go on to contribute at universities and colleges.

The feedback from the students regarding curriculum both on the course content and teaching methodology is being taken by the faculty on informal and periodic basis at the end of every Semester.

The University has framed a new policy to attract foreign students, which include single window facility through Dean International Students (DIS), on-line entrance test/waive-off Ph.D. entrance test wherever applicable and construction of state-of-the-art International Hostel (near completion). The foreign applicants are admitted under 10% supernumerary seats of the permitted intake.

CRITERION II: TEACHING-LEARNING AND EVALUATION

The University has been by far successful to ensure the quality of the student learning experience that combines academic rigour and employability through introducing students to the most up-to-date knowledge and to enhance it, where appropriate.

The admission to various academic programmes in the University teaching departments is based on (i) merit based on qualifying marks only, (ii) merit based on academic marks and entrance test marks,

(iii) merit based on University level common entrance test marks, or (iv) merit based on national level entrance test marks conducted by IIT/IIM/any other National agency.

The University follows the Seat reservation policy of the Government of India. The University through its SC/ST cell, Centre for the study of Social Exclusion and Inclusive Policy and Department of Community Education and Disability Studies attempt to enhance the access for students belonging to SC/ST, BC, persons with disabilities, economically weaker sections and outstanding achievers in sports.

The number of students admitted in various academic programmes of the University teaching departments has increased by 21.24%, that is, from 31316 in 2010-11 to 37967 in 2013-14. The men to women enrolment ratio have also increased from 1:0.68 in 2010-11 to 1:0.79 in 2013-14. The demand ratio for the various academic programmes of the university departments and affiliated colleges has also increased during the assessment period. Another very important change in enrolment trend is the admission of more students from marginalized groups (SC, ST, BC and others).

The academic programmes are designed in such a way so as to cater to the student diversity and their ability to cope with the programmes. The Computer Centre of the university provides assistance to educate the students free of cost in acquiring computer skills. The faculty members adopt innovative teaching methods combined with the ICT and digital technology.

Almost all University Departments organize a large number of guest lectures and visits of eminent personalities from time to time and are drawn from both industry and academics. The University's colloquium lecture series draws outstanding speakers from around the country and abroad, as well as providing an opportunity for faculty and students to have a meaningful interaction with the speakers.

The University has a central digital library (AC Joshi Library) which provides for the digital and e-learning resources and is virtually open 24 hours with special skilled staff to guide whenever necessary. Various e-learning resources such as online Journals, CDs and online data bases through INFLIBNET/ Web of Science are used by the students to enhance their knowledge.

To academically recharge and rejuvenate teachers, the University encourages teachers to regularly attend orientation / refresher / Faculty Development programmes for in-service training in new technologies in emerging fields through Academic Staff College of UGC, provide financial assistance and special study leave to teachers for attending as well as for organizing these events.

Many important reforms have been initiated in examination system such as Implementation of Examination Grievance Monitoring System (EGMS), Adoption of Online submission of forms for UG/PG examinations and the OMR based method of evaluation to avoid mistakes in coding and decoding of answer sheets at UG/PG levels and to ensure unbiased and error-free evaluation and to save time.

The University ensures transparency in both internal and final evaluation. Internal assessment is done based on the mid semester exams in which the answer scripts are returned to the students for verification. Final evaluation is done by external experts chosen by Board of Studies (BoS) and the students are allowed to go for re-evaluation, if any discrepancies arise.

CRITERION III: REASEARCH, CONSULTNCY AND EXTENSION

A fairly good quality research is being carried out in a number of disciplines (especially in Pharmacy, Chemical Engineering, Physics, Chemistry, Geology, Biomedical Science, Life Sciences, Social Sciences among others) as is evident from some patents, technology transfer to industries, consultancy, and publications in high impact factor journals.

To support high quality research among its faculty members and students, the state-of-the art infrastructure facilities are available for students and faculty members to carry out research in cutting edge areas. A testimony to this is the PURSE (Promotion of University Research and Scientific Excellence) award of Rs 30 crores given by the Department of Science and Technology, G.O.I., New Delhi and the recognition accorded by the UGC as the "University with Potential for Excellence in Bio-Medical Sciences" with facilities for 'Stem Cell Research and Drug Development' as well as "Centre of Excellence" in 'Application of Nano Material, Nano Particles and Nano Composites' as well as "Centre of Excellence" in 'Cultural Fixation on Honour: A gender Audit of Punjab and

Haryana' and support extended to eighteen departments of the University under the Special Assistance Programme (SAP) of the University Grants Commission (UGC) and seven teaching departments accorded the status of Centre of Advanced Studies (CAS) besides FIST grants from DST.

The university also has a DST supported Regional Sophisticated Instrumentation Centre along with a Central Instrumentation Laboratory (CIL) and a University Science Instrumentation Centre (USIC) to serve the scientific community on the campus and in the region. The Centre for Industry Institute Partnership Programme (CIIPP) promotes the academic-industry interface. Several teachers of various faculties have received National/International recognition for teaching, research and consultancy.

A total of 210 individual research projects were sanctioned and completed and the total research grant received during the assessment period was Rs. 15.60 crores. Also a total of 173 more research projects (approximate amount: Rs 31.95 crores) have been sanctioned and are currently ongoing. The University also succeeded in attracting about 28 consultancy projects with a total budget of Rs. 1.09 crores.

The university has been an active participant in the project called International Collaboration for Research for Elementary Particles and the Large Hadron Collider (LHC) CERN, Geneva CMS Experiment with a Government of India grant of Rs. 2.49 Crores, Fermi Lab (USA), KEK (Japan) and DESY (Germany), besides several MOUs with national institutes.

The record of research publications in the University is excellent. The number of publications has increased from 875 in 2011 to 992 in 2013. With a total of 4020 publications reported over the past four years, 3649 are in refereed national and 371 are in international journals. The average impact factor of various articles is in the range of 0-10. 5 patents have been granted and 23 patents were filed during the assessment period. In the last four years, a total of 162 books were published and 89 International/national awards/recognitions have been received by the faculty.

The extension activities in the University are taken up through tree plantation drive, village adoption programme, organization of blood donation camps, AIDS awareness, and literacy-drive and personality development. The dissemination of knowledge for the benefit of society at large is however an essential service that is practiced through the Population Research Centre (PRC) and Department of Life-long Learning and Extension.

The Department of Life Long Learning & Extension endeavors to transform the University system into an active instrument of social change through the institutionalization of extension as a Third dimension of the University in addition to teaching & research. The development of capability of community for the over all development of nation and help people to improve the quality of their life is the mandate of Department of Life Long Learning & Extension. To fulfill above aims and objectives, Department of Life Long Learning and Extension tries reach the un-reached, the socially and economically deprived section of society through its number of programmes viz. Literacy, Awareness Generation, Vocational and Skill Development. Our flagship programmes are UGC/ NET Coaching Classes , UGC sponsored Remedial classes in English for STs, SCs, OBCs and Minority Communities, Three months certificate course in Computer Applications, Sewing & stitching, Cosmetology, Computer Hardware etc. and a host of others awareness generation programmes of social and national importance are conducted by the Department. Department reaches to about 1500-1800 community members per year on the average.

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

The University has made a tremendous overall growth with new constructions in Sector-14 & Sector-25 in the last many years namely Academic Staff College, College Bhawan, IAS Coaching Centre, Youth Welfare, Music, Emerging Areas in Social Sciences and Sciences, Shooting range, Indoor swimming pool of Olympic size, foreign students hostel and two more hostels one each for boys and girls. The university has a modern infrastructure, well integrated with old infrastructure to match the requirements of curriculum, pedagogy, research, extension and student related services. Power lines have been re-wired at selected places which were essential for Laboratories for Computers and other equipment.

Panjab University's Construction Office has Civil Maintenance, Public Health maintenance, Electrical maintenance, Horticulture maintenance and Sanitation maintenances wings, to manage the repair & maintenance works of buildings, open spaces including roads & lawns, class rooms and laboratories.

The University provides all faculty members, students and staff with a modern, fully networked computing and IT environment for academic use. All academic areas, hostels, guest houses, student centre etc are Wi-Fi enabled in Sector-14 campus, whereas Wi-Fi facility in Sector-25 South campus is in progress and will be operational very soon.

The University has 1Gbps National Network Connectivity effective from April 2009. Internet, Countrywide Virtual Classroom, Collaborative Research (CERN), Domain Name System, Video Portals, Video Streaming, Multipoint Control Unit (MCU) Services are being availed in the campus. Provision of video-conferencing, smart classrooms, various research CDs and DVDs for the teachers and the students have been created to meet their needs of research oriented programs.

A C Joshi Library is the first one in North India to implement RFID technology to support Self check in (24 x 7) and Check out of books as well as the security aspect. The total annual Library Budget for purchasing Books & Journals and e-subscription is approximately Rs 7.0 crores.

There are eighteen Residence Halls (17 for students and one for working women) on the campus, 8 for boys, 9 for girls and 1 for working women and has a provision to accommodate about 6770 students (approximately 3200 boys, 3500 girls & 70 Working Women).

CRITERION V: STUDENT SUPPORT AND PROGRESSION

Career Guidance & Information Bureau, Centre for Life Long Learning, and IAS coaching Centre for civil services, Judiciary & UGC-NET coaching are functioning well to prepare our students for various competitive examinations.

University has a well-functioning health centre where free outdoor and indoor medical facilities are provided to our students. For critical cases, Doctors of health centre also refer patients to specialist doctors / hospitals.

Panjab University has anti-ragging and anti sexual harassment committees headed by a senior Professor to look into day-to-day complaints made by the students.

Panjab University bring out the Annual Issue entitled 'PANJAB UNIVERSITY CAMPUS REPORTER' having Hindi Section, English Section, Punjabi Section, Sanskrit Section, Urdu Section, Engineering Section, Science Section and Law Section. The university involves and encourages the students of various departments to act as Sub-Editors for various sections of the Campus Reporter.

The Department of Youth Welfare encourages the young students to express their views, opinion, dreams in the form of creative writings by holding competitions at different level. The annual magazine 'Jawan Tarang' has been launched to provide ample opportunities to the students to express their imaginations and expressions.

The University also extends financial assistance to campus students by instituting various scholarships/fellowships through various agencies.

The University has set up a Central Placement Cell as well as Career & Guidance Cell to organize Campus Placement Drive to support and facilitate students to find gainful engagements after their university education. The number of students finding jobs through campus placements has considerably increased.

A wide range of services/resources such as e-Resources in the main library, Internet Access through computer centre, sports facilities through department of sports, hostels through Dean of Students Welfare, SC/ST Cell, NCC, NSS etc are made available to the campus students to make their stay useful, purposeful and enjoyable. Separate Gymnasium Hall with sophisticated fitness equipment has been set up for men and women for improving their physical fitness. The University has also established four constituent colleges in Punjab to reach the remote communities.

The University is proud to have among its alumni illustrious and eminent scholars like Dr Hargobind Khorana (Nobel Laureate Biotechnologist), Dr Shankar Dayal Sharma (9th President of

India), Dr Manmohan Singh & Shri I.K. Gujral (former Prime ministers of India), Dr Kalpana Chawla (NASA Astronaut), Dr Yash Pal (scientist and educator), Romila Thapar (prominent Historian), Shri Sunil Bharti Mittal (founder, chairman and Group CEO of Bharti Enterprises), Shri F.C. Kohli (first CEO of TCS. Considered as Father of Indian Software Industry) etc. At any time, several Ministers in the Central Government can be counted amongst the alumni of the Panjab University. A total of 1027 Ph.Ds were awarded to the students in all the faculties.

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

The Organizational structure of the University encompasses the Senate, the Syndicate, the Academic Council, the Faculties, the Board of Finance and the Boards of Studies. All these bodies, consisting of eminent persons from outside and also from within the University, promotes participative approach of management at all levels and plays an active role in drawing up long term plans.

The various wings of the University are empowered to formulate and implement the policies as per the rules of the University to maintain the quality. While following the bottom-up approach, the Boards of Studies of respective departments, Research Promotion Cell (RPC), Departmental Research Monitoring Committees (RMCs), Departmental Committees and other stakeholders define and deploy the quality benchmarks. The Internal Quality Assurance Cell (IQAC) and College Development Council (CDC) on the University campus ensure successful implementation of these policies.

All the teaching departments are autonomous and function independently except in case of certain policy matters like Annual Academic Calendar, Course Structures, Course Fees, Recruitments, and Financial Matters etc. The University directs all the departments to submit Annual Reports, Annual Confidential Performance Reports and Annual Quality Assurance Reports (AQAR) which are reviewed to ensure accountability.

The University has put in place structures and policies for creating a healthy and inclusive learning environment for its students. There are a large number of scholarships and fee waivers available for meritorious and needy students. The University has also set-up a students' elected Panjab University Campus Students Council (PUCSC) run solely by students for nurturing and hand-holding students in their academic life. To enhance the language skills of students, specially designed English Proficiency Courses are being offered in undergraduate and postgraduate study programmes.

The Centre for Industry Institute Partnership Programme (CIIPP) and Policy Research centre (PRC) of the University aims to bring the industry closer to the academia and vice-versa, and enriches the university by providing monetary support in the form of university share received through various consultancy projects.

The University has a well defined Human Resource Planning and Development policy. The policy lays down guidelines for recruitment, remuneration, performance appraisal, career advancement, training and development, superannuation, health & insurance benefits, research grants and leave entitlement.

The University operates several welfare schemes for the staff and faculty and some of them are unique. The university offers fee concession to the wards of the staff. Also, group insurance for the faculty and students is provided. Subsidy on home loans is provided to staff.

ICT is creatively implemented in the University to support use of software, hardware, LCDs, broad band internet etc thereby enhancing the e-governance benefits. The university's administration is computerized to the extent possible. This has made the Examinations Wing to function efficiently and the results are published very quickly without delay. Automation of the university's Main Library is a boon to students.

For day to day financial transactions, the University has prepared its Accounts Manual which provides the rules for making various expenditures following the principle of transparency, efficiency and fair procedures.

The University has created Foundation for Higher Education & Research Fund and Endowment Fund as corpus funds out of the internal resources generated by the University.

CRITERIA VII: INNOVATIONS AND BEST PRACTICES

In the era of information explosion and globalization building up, up-keeping and strengthening the institutions of great repute such as Panjab University calls for a crusader's approach towards multifarious activities of teaching, research and administration. Universities are increasingly being called upon to play their roles as instruments of social change. The challenges of enhancing reach, ensuring equity and transparency calls for pivotal role and undertaking of multifarious activities by the Vice-Chancellor. Ever since the assumption of the office on July 23, 2012, Professor Arun Kumar Grover, Vice-Chancellor, Panjab University, Chandigarh has undertaken a combination of meticulous planning and expeditious implementation on a number of strategic issues that has helped university make rapid strides in all spheres of its activities.

Capitalizing on its glorious traditions and rich heritage, PU has developed a dynamic, decentralized and transparent governance system which is employer driven, student centric and socially relevant.

One of the Unique Selling Propositions (USPs) of the Panjab University since its positioning at its present location is the Honours School System, where the students can enroll at an impressionable age immediately after leaving the school and be taught by the teachers who are active researchers as well.

Some of the other best practices in the University include monthly colloquium speaker series, Research Centres in affiliated colleges, e-resources, eco-friendly campus, anti-sexual harassment and anti-ragging committees, group insurance for the staff and students, free education scheme, on-line admissions, provision for soft skill courses through Central Placement Cell, industry internship, travel grants, and facilities for the differently-abled.

Panjab University has been reaping optimal advantages of globalization. The University in the recent past has signed 26 Memoranda of Understanding (MoU) with foreign universities/institutions.

For the last many years, Panjab University is successfully delivering on its mandate of creating employable youth, preparing students to be global leaders in research and academics and producing enlightened citizens.

Previous Peer Team Report

Overall Analysis

Institutional Strengths:

- A fairly good quality research being carried out in a number of disciplines (especially in Pharmacy, Chemical Engineering, Physics, Chemistry, Geology, Biomedical Science, Life Sciences, among others) as evident from some patents, technology transfer to Industries, consultancy, publications in high impact factor journals, and several Departments recognised for CAS/SAP/FIST supported by UGC; Centre for Biomedical Sciences conferred with the status of Potential for Excellence with a grant of Rs.5.00 crores by UGC.

- An impressive infra-structure, well maintained and utilized to the full capacity a fully air-conditioned massive and well stocked Library, most of the Science Labs. with state-of-the-art equipments, a centralised Sophisticated Instrumentation Facility, super computing facility, sports infra-structure, staff quarters, and hostels lending almost a residential character, among others.

- A good track record and social reputation, and also the locational advantage helping the University attract a significant number of meritorious students, around 50 p.c. of them from outside the State and NRIs, and an array of very distinguished alumni and some of the outstanding faculty over the period.

- A significant quantum of resource generation and facility development through offering a wide range of programmes in career focused/cutting-edge areas (including Engineering, Pharmacy, Management, Law, Education) on high fee/self-financing basis, consultancy earnings, Dental Hospital attached to Dental Science Institute, a large number of funded research projects, a well-designed Correspondence Education programme and several other initiatives.

- Innovative managerial initiatives of the recent past in creating new institutional structures (Centres/Institutes in emerging areas in Sciences; Social Sciences; applied management; Sophisticated Instrumentation Facility and others) availing the collaborative participation of core faculty drawn from different disciplines, and also outsourcing faculty expertise from industries.

Institutional weaknesses:

- Faculty shortage (a significant number of positions lying vacant for reasons perhaps beyond the control of the University) hampering the effective conduct of programmes; some of the Departments in Languages, Humanities and Social Sciences, and particularly in the newly crated structures offering programmes in cutting edge areas (such as Nuclear Medicine, Stem Cell, Nano Science & Technology), with sub-optimal faculty strength are struggling to do justice to their programmes; hence, tending to erode the credibility of the system.

- Notwithstanding super-computing and good Information Technology (I.T.) infra-structure, the use of Information and Communication Technology (I.C.T.) in teaching-learning is quite marginal in a good number of Departments.

- A sort of reluctance/hesitance to go in for some contemporaneous academic reforms such as choice-based credit system, internalization of evaluation as against the present practice of just 20 p.c. CIA, academic autonomy to all viable Departments/Schools, effective IQAC, among others.

- The rapport between the students and the faculty seems to suffer from inadequate mutual thrust and confidence; this tendency is reflected, for instance, in the resistance (among many faculty) to the introduction of a systematic/structured student evaluation of teachers. Similarly, a broad-based/participatory management style is perhaps yet to become a visible campus culture.

- Student Support Services including functioning of a structured grievance redressal cell, effective placement services (now evident mostly in a few science/professional programmes), institutional support and freeship for underprivileged students especially in the high fee/self-financing programmes, among others deserve improvement.

Institutional Opportunities:

- Opportunity for better linkages with industries and national-level institutes located at the local city, Chandigarh for offering some twinning programmes in partnership with them; with many faculty having research collaborations with experts from foreign Universities, there is good scope for formal operative Memorandum of Understandings (MoUs) at the institutional level for teaching/research collaborations.

- Scope for tapping the rich and enlightened alumni potential for resource generation as well as getting academic feedback/support for strengthening the University programmes; some of the alumni working as faculty abroad could be better used by crating appropriate visitorship.

- Opportunity for strengthening soft-skills as part of the curricular requirement for all the students and thereby ensuring their career prospects.

- Scope for extending autonomy to all the major Departments/Centres with a proven track record of academic achievements, (say, Pharmacy, Chemical Engineering, Life Sciences, Physical Sciences) and enable them emerge a Centres of Excellence.

- Opportunity for pooling all the skill oriented/vocational programmes offered by various units (Adult Education, Regional Resource Centre, Women Studies and others) under the structure of a "Community College" and integrate these credit-based Certificate/Diploma programmes for vertical mobility into the mainstream of higher education. Similarly, there is scope for pooling all the related Departments, under the umbrella of Schools, if necessary, cutting across the faculties (which were historically created) by appropriate amendments to statutes.

Institutional Challenges:

- Challenge of dealing with the increasing trend of politicised, elections to student bodies, vitiating the campus peace and the academic atmosphere; this trend if unchecked at the right moment would eventually destabilize the whole system.

- Challenge of managing the faculty shortage, through guest faculty/visiting faculty; and difficulty attracting and retaining qualified/competent faculty in professional programmes such as Dental Science, Management, Computer Science.

- Challenge of resolving the uncertain flow of grant, partly from the State and partly from the Centre because of the special nature of the University being a "body corporate" not fully supported by either the Centre of the State.

- A macro-level challenge arising out of creation of a number of Central Universities and World-Class national Universities competing for funds and the faculty.

- Challenge of consolidation of the newly started programmes (as many as 42 in the last couple of years; some of them in the emerging areas), most of which are encountering constraints of faculty and space. The newly established Regional Centres also pose a serious challenge in this regard.

Action Taken Report on the Previous Peer Team Recommendations

- **Recommendation #1:**

  Steps be taken to confer autonomous status to the select Departments/Centres (such as Pharmacy, Chemical Engineering, Physical Sciences, Life Sciences) with better viability and proven track record of academic achievements. Academic autonomy (framing syllabi, conduct & evaluation of examinations etc.) be extended to all the Departments.

  Action Taken on Recommendation #1:

  All the teaching departments are autonomous and function independently except in case of certain policy matters like Annual Academic Calendar, Course Structures, Course Fees, Recruitments, and Financial Matters etc. The University directs all the departments to submit Annual Reports, Annual Confidential Performance Reports and Annual Quality Assurance Reports (AQAR) which are reviewed to ensure accountability.

  Each department in the University has a freedom to:

- ✓ determine their own courses, curricula, methods of education and training in pursuit of excellence;

- ✓ prescribe rules for admission on merit, subject to the reservation policy in pursuit of excellence;

- ✓ evolve methods of evaluation, conduct examinations and finalize results for declaration;

- ✓ enter into collaborative arrangements for purposes of teaching, research and extension education with other institutions of higher learning and industries / Organization wherever need be.

- ▪ **Recommendation #2:**

    Curricular reforms be pursued in tune with the contemporaneous global trends. Choice-based credit system, internalisation of evaluation, enhanced weightage for continuous internal assessment, student evaluation of teachers and such other reforms be introduced as a package, for better interfacing with the global Universities.

- ❖ **Action Taken on Recommendation #2:**

    Each department performs periodic review of curricula within their disciplines or related disciplines. Curricula in each discipline have been made flexible enough to allow for the incorporation of new technologies and modes of delivery while maintaining a constant focus on quality. Other Curricular reforms such as use of ICT for interactive learning and Project learning have also been introduced.

    All the UG and PG courses on the campus follow a semester pattern, including B.Sc./ M.Sc. (Honours School), B.Pharmacy/ M.Pharmacy which follow Semester Based Credit System.

    The Choice Based Credit System(CBCS) has been introduced in 'School of Communication Studies' on a pilot basis from the academic session 2014-15 and is running successful to impart student-centric education and to provide enhanced learning opportunities to match the students' scholastic needs and also their aspirations. Efforts are being made to adopt Choice Based Credit System (CBCS) in the Faculty of Engineering & Technology, Pharmaceutical Sciences, and Sciences etc

    Continuous internal evaluation through 2-3 mid-term tests has been introduced and it includes (a) Quizzes (Scheduled/Unscheduled) (b) Written and Oral Tests: (Objective, Short Answer, Long Answer, and Problem Solving).

    For Honours School and Engineering courses, under which, the answer books after examination are retained in the Department concerned for evaluation by the internal teachers and the answer books are shown to the students after evaluation. The awards are finalized after sorting out/removing the query/doubt of students, if any, regarding evaluation. With this system, the checking of answer-books and re-evaluation of answer books are no longer required resulting into saving the time and providing much required transparency in evaluation. The university adopts the method of spot evaluation (Central) and dispatch answer books for evaluation at the residence of examiners (door). Double evaluation is adopted in case of such students who wish their scripts to be re-evaluated.

    Many of the university teaching departments seek feedback (informally) from the students on a proforma after the last examination of each semester of the course. This serves as an evaluation tool of the teachers by the students. The students are encouraged to respond without any fear and exercise all fairness in their evaluation of each teacher of the course. The evaluation parameters relate to the quality of the course, teacher's effectiveness, clarity of the objectives, relevance of material provided, fairness of grading procedure, helping attitude, regularity, punctuality, discipline, extent of encouraging and provoking to ask questions and non-scholastic attributes etc. The identity of the students is concealed on the form. The teachers see the feedback forms collected from the students so that there is self growth.

- **Recommendation #3:**

  Information and Communication Technology (ICT) thrust in teaching-learning be enhanced. At least one Lecture Hall/Seminar Hall in every Department be equipped to be a e-class room, motivating/facilitating the faculty for intensive application of I.C.T. Internet reference facility in the Library deserves substantial expansion.

- ❖ **Action Taken on Recommendation #3:**

  The ICT thrust in Teaching and Learning has been strengthened by extending the facilities of LCD projectors, laptops/desktops, Computing Software, Internet connection, Wi-Fi in all academic areas including hostels/guest houses, e-Resources in A.C. Joshi Library etc to promote ICT learning. One smart class room has been set up in each of the professional departments such as University Business School, Department of Chemical Engineering & Technology, University Institute of Engineering & Technology, Department of Computer Science & Applications. Video Conferencing facility has been set up in Computer centre.

  Moreover, NPTEL and, other Open Source Study materials are used for the purpose of teaching and learning. ICT & Other tools such as Web Online Public Access System (Web OPAC), Digital Library, Computer Based Retrieval of information, Institutional Repository, Reprography, Scanning, Laser Printing etc have been deployed for maximum access to the library collection. Moreover, the use of the SLIM21 Software and INFLIBNET by the faculty members and students is praiseworthy.

- **Recommendation #4:**

  Faculty shortage in some of the Departments, particularly in the newly started Centres of emerging areas, be remedied expeditiously. Programmes started with a lecturer as the nucleus generally fail to take off on account of lack of academic leadership.

- ❖ **Action Taken on Recommendation #4:**

  Faculty shortage in the University has been looked into very seriously by the authorities for the last five years and the number of teaching staff recruited during the last five years is given below:

Year	Newly Recruited Faculty		
	Professor	Associate Professor	Assistant Professor
2008-09	2	3	43
2009-10	4	-	17
2010-11	3	11	28
2011-12	1	0	52
2012-13	2	2	29
Up to August 31, 2014	-	-	56

In the month of August-2014, the University has made an advertisement to recruit 150 vacant positions for the posts of Professors, Associate Professor and Assistant Professors in various teaching departments and these posts are likely to fill up in 5-6 months.

- **Recommendation #5:**

  Consolidation of all the newly started programmes (as many as 42) deserves top priority, before going on for further expansion/diversification.

  ❖ **Action Taken on Recommendation #5:**

  All the programmes offered in University Institute of Emerging Areas in Science & Technology (UIEAST) and University Institute of Emerging Areas in Social Sciences (UIEASS) have been given top priority in all academic activities and have been provided with spacious building (in Sector-25 and Sector-14 respectively), reasonably good infrastructure, Internet Access, Wi-Fi and manned by well experienced senior faculty members and making fresh recruitment of teaching staff.

- **Recommendation #6:**

  The nomenclature of some programmes (MA/M.Sc.[Hons School], BA/B.Sc.[Hons.School]) historically conditioned and peculiar to Punjab State (quite different from the national practice) may need to be relooked at the State level, for ensuring parity with the rest of the Country.

  ❖ **Action Taken on Recommendation #6:**

  Honours School is a unique system of education at Panjab University in which Senior Professors teach and ignite young minds for future leadership roles and encourage them to think critically. Also, Research Students of Senior Professors take Laboratory sessions, thereby giving students a better appreciation of what "real world" research is all about.

  Honors School system enjoys autonomy in question paper setting, its evaluation and final result preparation.

  'Continuous Internal Evaluation' is the central feature of the evaluation in this system. A teacher who offers the course is the best person to assess performance of the students. However, there is the end-semester evaluation. And, to ensure transparency, fairness, and accountability appropriate mechanisms such showing evaluated answer sheet to students for verification have been devised.

  Keeping all this in mind, University never thought of offering this system in its affiliated colleges.

- **Recommendation #7:**

  The student support services such as grievance redressal, placement services, and special support (by way of cross subsidy) to the deserving weaker students in the high fee/self-financing programmes be given due emphasis.

  ❖ **Action Taken on Recommendation #7:**

  Panjab University has constituted a **grievance redress cell** in all the Professional Institutes at the campus to handle student or staff grievance. To handle student's grievances, there is a mechanism in place in which 5 to 10 first-year students are assigned to each teacher. Panjab University has also launched the **online examination grievance-monitoring system** to redress the examination-related queries in a time-bound manner.

  The University has set up a special cell headed by a Senior Professor to handle **sexual harassment** on the campus. Another special cell is there to handle **ragging** on the campus and running hostels. Not only does it muster opinion among students against ragging but also hears all such cases of juniors' grievance against seniors.

The University also has a specific Caste (SC) and Scheduled Tribes (ST) Cell that promotes the special interests of students in the reserved category.

The University has set up a **Central Placement Cell** (CPC) headed by a Senior Professor of University Business School to support and facilitate students to find gainful engagements after their university education. During the assessment period, every year AVSAR, a campus placement drive is being organized by the CPC jointly with Panjab University campus students' council for placement of campus students.

The University has put in place structures and policies for creating a healthy and inclusive learning environment for its students. There are a large number of **scholarships and fee waivers** available for meritorious and needy students.

- ■ **Recommendation #8:**

    The Departments with sub-optimal faculty strength be encouraged to offer short-term Diploma/Certificate Courses (with career/skill focus) which can be opted by the current students of other programmes on concurrent basis; these Departments need not also offer regular PG programmes, compromising the quality.

    - ❖ **Action Taken on Recommendation #8:**

    The Advanced Diploma, Diploma and Certificate programmes are offered as add-on programmes for enriching the students further with relevant specializations and learn additional foreign languages. Under this system the University provides an opportunity to get one UG/PG degree and Advanced Diplomas / Certificates within a period of two/ three years of stay at the University.

    The University encourages its affiliated colleges to provide additional skill-oriented programmes relevant to regional needs.

    The colleges are encouraged to introduce add-on courses and vocational courses with funding support from the UGC. The affiliated colleges have introduced large number of add-on/vocational courses such as Community Development, E-Banking, Guidance and Counseling, Food Preservation, Web Designing and Multimedia, Tax Procedure & Practice etc.

- ■ **Recommendation #9:**

    In order to encourage inter-disciplinary teaching/research programmes, closely related Departments be grouped into "Schools", may be cutting across the stutorily formed Faculty groups, by appropriate amendments to the statutes.

    - ❖ **Action Taken on Recommendation #9:**

    In order to encourage inter-disciplinary teaching/research programmes, closely related disciplines such Microbial Biotechnology, Public Health, System Biology & Bio-Informatics, Nuclear Medicine, Medical Physics, Nano Science & Nano Technology, Stem Cell & Tissue Engineering have been grouped into "University Institute of Emerging Areas in Science & Technology (UIEAST)".

    Also disciplines like Social Work, Police Administration and Human Rights & Duties have been grouped into " University Institute of Emerging Areas in Social Sciences (UIEASS)".

    School of Communication Studies has been set up to offer PG Diploma in Advertising & Public Relations, PG Diploma in Hindi Journalism and P G Diploma in Punjabi Journalism programmes.

- ■ **Recommendation #10:**

    E-Governance be systematically adopted with basic principles of transparency/accountability. The de-bureaucratization of University administration by suitable professional training of the administrative staff may be pursued. The administration be made hassle-free for the execution of research projects. For a holistic quality enhancement, a pro-active IQAC and a perspective plan for the University are of immediate priority.

❖ **Action Taken on Recommendation #10:**

The University greatly relies on ICT, to automate and simplify its daily activities thereby establishing an automated, accountable and transparent Governance System.

The processing of examination results have been computerized which has enabled the declaration of early results. The use of OMR technology has been implemented in the entrance tests which also helps early results declaration and reduce errors in compilation. The pay rolls and provident fund accounts are also completely computerized. The students' registration is also fully computerized; further streamlining and coordinating between the examination branches and the registration branch and eliminate delays in Result Late cases. For hassle-free execution of research projects, Office of the Dean Research has been established with senior most faculty member next to Dean of University Instruction acting as Dean Research.

Research Promotion Cell (RPC) has been created which has senior faculty members as well as research scholars to inculcate team spirit and to facilitate research and to provide avenues for handling grievances of students/faculty.

After a long gap, more than 300 fresh appointments were made at lower level of administration having IT knowledge to improve functioning of the administrative set up.

During the assessment period, the University has organized Induction Training Programme through Academic Staff College and others for newly recruited ministerial and secretarial (non-teaching) staff to make them aware about the functions of the University and use of campus portal (http://campus.pu.ac.in) for efficient operations.

The Internal Quality Assurance Cell (IQAC) has been set-up in the university, with Vice-Chancellor as the Chairman and Dean Research as the member Secretary. The IQAC has prepared a road map for improving quality in the teaching and non-teaching departments as well as the administrative wing of the University. The focus areas in this road map include restructuring of curricular design in the light of changing socioeconomic environment; promotion of inter-disciplinary/multi-disciplinary programmes and courses; introduction of ADD-ON Courses of an inter-disciplinary character; Faculty enrichment programmes; international and national research projects; international collaboration in the emerging areas of research; and computerization of admissions, administration and examinations.

Mini-IQAC cells have been created in individual departments to monitor quality of teaching learning processes.

Certificate of Accreditation
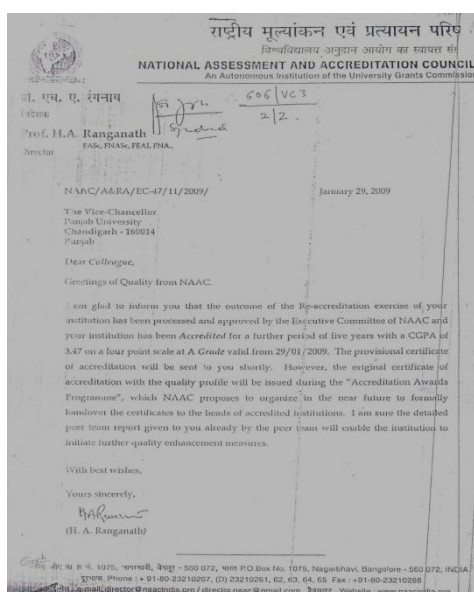
Profile of the University

1. Name and Address of the University:

Name:	*Panjab University, Chandigarh*
Address:	*Sector 14, Chandigarh*
City: *Chandigarh*	**Pin:** *160014* **State:** *UT (Chandigarh)*
Website:	*http://www.puchd.ac.in*

2. For communication:

Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Vice Chancellor	*Prof Arun K Grover*	**O:** *0172-2541945* **R:** *0172-2541945*		*2541022*	*vc@pu.ac.in*
Pro Vice Chancellor (s) **Dean of University Instruction**	*Prof A. K. Bhandari*	**O:** *0172-2534292* **R:** *0172-2541609*		*2541022*	*dui@pu.ac.in*
Registrar	*Prof A. K. Bhandari*	**O:** *0172-2534867* **R:**		*2783335*	*regr@pu.ac.in*
Steering Committee / IQAC Co-ordinator	*Prof L K Bansal*	**O:** *0172-2534535*			mis@pu.ac.in
	Guldeep Singh	**O:** *0172-2544022*	*9815604576*		

3. Status of the University: *Inter State Body Corporate*

4. Type of University: *Affiliating*

    5. **Source of funding: Central Government:** *Yes*

                 State Government: *Yes*,   **Self-financing:** *Yes*

6.   **a. Date of establishment of the university:** *14-10-1882*

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

              i.   **PG Centre**   *No*

              ii.   **Affiliated College**   *No*

		Constituent College	No
iii.		Constituent College	No
iv.		Autonomous College	No
v.		Any other (please specify)	Yes

Panjab University College, Lahore was established by Notification # 472, dated 08/12/1869 before being transformed into a full-fledged University in 1882. After partition in 1947, it was setup in Punjab and in Chandigarh since 1956.

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

	Under Section	Day	Month	Year
i.	2f of UGC*	03	03	1956
ii.	12B of UGC *	03	03	1956
iii.	3 of UGC #	N.A.	N.A.	N.A.

8. **Has the university been recognized?**

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

Yes ☐   No ☑

b. For its performance by any other governmental agency?

Yes ☐   No ☑

*However, two centres of Excellence by UGC during the 11th Five Year Plan (2007-2012). a) Centre of Excellence in "**Application of Nano Materials, Nano Particles and Nano Composites**", b) Centre of Excellence in "**Cultural Fixation on Honor: A Gender Audit of Punjab and Haryana**", and c) Biomedical Sciences. The departments of different faculties are recognized by associated agencies such as AICTE/NBA/NCT/MCI/BCI/DCI/PCI/DEC.*

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

Yes ☑   No ☐

Name of the Centre	Year of Establishment
P.U. Regional Centre, Ludhiana *(as a Panjab University Extension Library in the year 1959)*	*2007*

P.U. Regional Centre, Muktsar	*08/08/1998*
P.U. Rural Centre, Kauni, Muktsar	*2010*
P.U. S.S. Giri Regional Centre, Hoshiarpur	*2006*

10. Does the university have off-shore campuses?

Yes ☐   No ☑

11. Location of the campus and area:

		Location (Urban)	Campus area in Acres	Built up area (FAR)
i.	*Main campus area*	*Chandigarh*	*550.71 Acres*	
ii.	*Satellite campus area – 14*	*Sec-14, Chandigarh*	*380 Acres*	*0.35*
	Satellite campus area – 25	*Sec-25, Chandigarh*	*170 Acres*	*0.50*

12. Provide information on the following: In case of multi-campus University, please provide campus-wise information.
- Auditorium/seminar complex with infrastructural facilities: **Available**
- Sports facilities
  ∗ playground: **Available**
  ∗ Swimming pool: **Available**
  ∗ Gymnasium : **Available**
- Hostel
  ∗ Boys' hostel
    i.   Number of hostels: **8**
    ii.   Number of inmates: **3200**
    iii.   Facilities: Dining Hall, Canteen, Mess, Visitor's lounge, Common Room, Wi-Fi facility, indoor games, LCD TV and music system, medical, transport etc.
  ∗ Girls' hostel
    i.   Number of hostels: **9**
    ii.   Number of inmates: **3500**
    iii.   Facilities: **Dining Hall, Canteen, Mess, Visitor's lounge, Common Room, Wi-Fi facility, indoor games, LCD TV and music system, medical, transport etc.**

* Working women's hostel
  i. Number of hostels: **1**
  ii. Number of inmates: **70**
  iii. Facilities: **Dining Hall, Canteen, Mess, Visitor's lounge, Common Room, Wi-Fi facility, indoor games, LCD TV and music system, medical, transport etc.**

- Residential facilities for faculty and non-teaching: **Yes**.
- Cafeteria: **Yes**
- Health centre: **Yes**. Nature of facilities available – inpatient, outpatient, ambulance, emergency care facility, etc. Details at Annexure 'A'.
- Facilities like banking, post office, book shops, etc. : **Yes**
- Transport facilities to cater to the needs of the students and staff: **Yes**.
- Facilities for persons with disabilities: **Yes**.
- Animal house: **Yes**.
- Incinerator for laboratories: **No**.
- Power house: **No**
- Waste management facility: **Yes**

13. **Number of institutions affiliated to the university**

Type of Colleges	Total Number	Permanent	Temporary
Arts	105	105	0
Science	91	91	0
Commerce	82	82	0
Law	3	3	0
Medicine	3	3	0
Engineering	2	2	0
Education	60	60	0
Others (please specify)	1 = Oriental Learning/Art 2 = Architecture / Design and Fine Arts 2 = Physical Education	5	0

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**

Yes ✓   No ☐   Number=0

The university encourages autonomy to its colleges. In its statute i.e. university calendar there are provisions for autonomy to a college which is mentioned under Chapter-VIII (F) given at page 177-178 of Panjab University Calendar Volume I of 2007.

(Weblink: http://puchd.ac.in/includes/documents/vol1/chap6to11.pdf)

15. **Furnish the following information:**

	Particulars	Number	Number of Students
a.	University Departments	78	37967
	Undergraduate	35	23958
	Post graduate	79	14009
	Research centres on the campus	--	--
b.	Constituent colleges	4	3331
c.	Affiliated colleges	181	Approx 2.5 lacs

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

Yes ✓   No ☐

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

PhD	57
PG	141
UG	51
PG Diploma	12
Advanced Diploma	7
Diploma	16
Certificate	12

Others	13
Total	309

18. **Number of working days during the last academic year:** *249*

	2013-14	2012-13	2011-12	2010-11
No. Of Working Days	249	248	251	248

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

2012-13	**2011-12**	**2010-11**	**2009-2010**
183	183	183	183

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

Yes ✔   No ☐

If yes,

    a. Year of establishment: *1963*

    b. NCTE recognition details (if applicable) Notification No.: *NRC, NCTE, Jaipur vide its order dated: 30.03.2001.*

    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 *1963*

    b. NCTE recognition details (Latest) Notification No.:

        F.NRC/NCTE/PB-111/162nd Meeting/2010 Date: *03.07.2010*

    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.*

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

The departments of different faculties are recognized by associated agencies such as AICTE/NBA/NCT/MCI/BCI/DCI/PCI/DEC. NAAC reviewed Panjab University in October 2008. The peer team report and action taken report is already given on pages 13-22 of this volume.

24. Number of positions in the university

Positions	Teaching faculty			Non-teaching staff	Technical staff
	Professor	**Associate Professor**	**Assistant Professor**		
Sanctioned By the UGC / University /State Government	251	339	828	1893	828
Recruited	215	110	368	588	323
Number of persons working on contract basis	--	--	141	173	22

25. Qualifications of the teaching staff

Highest Qualification	Professors		Associate Professors		Assistant Professors		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
Ph.D.	103	94	45	37	101	120	500
M.Phil.& PG	03	01	06	11	84	78	183
Temporary teachers							
Ph.D.	00	01	00	00	16	14	31
M.Phil.& PG	00	00	04	01	57	66	128
Part-time teachers							
Ph.D.	00	00	00	00	01	00	01
M.Phil.& PG	00	00	00	00	08	15	23

26. Emeritus, Adjunct and Visiting Professors.

		Emeritus	Adjunct	Visiting
Number		2010-11: 37	None	None
		2011-12: 44		
		2012-13: 40		
		2013-14: 41		
		2014-15: 39		

27. Chairs instituted by the university:

School / Department	Chairs
1. Punjabi Department	1. Bhai Vir Singh Chair
2. Punjabi Department	2. Guru Ravi Das Chair of Sant Sahitya Studies
3. Punjabi Department	3. Sheikh Baba Farid Chair
4. Sanskrit Department	4. Dayanand Chair for Vedic Studies

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

Particular	Number of students enrolled	Average % of Students from the same university	Average % of Students from other universities within the state	Average % of Students from other universities outside the state	Average % of Students from other countries
UG	22945	34.21	47.79	17.13	0.67
PG	12786	60.92	16.35	21.98	0.27
M-Phill	149	75.14	14.5	9.5	0.86
Ph.D	538	60.46	10.15	17.58	8.04
Diploma	644	89.06	4.42	5.7	0.39
Certificate	740	84.13	7.13	8.63	0.13
Self Financing (All Courses)**		5190 Students (Rs **446239973** funds generated)			

Students' strength	Female	Male	Total
Total	15721	21025	36746

29. **'Unit cost' of education:**

 ✓ *including the salary component = Rs. 0.92 lacs*

 ✓ *excluding the salary component = Rs. 0.13 lacs*

Note: The Unit Cost is calculated on the basis of Actual Non-Plan Expenditure of 2013-14 and the number of PG/UG/ M-Phil/Ph.D Students enrolled with Departments/ Centres of University and USOL

30. **Academic Staff College**

 • Year of establishment: **1987**

 • Number of programmes conducted:

   ∗ UGC Orientation: **4 (Four weeks)**

   ∗ UGC Refresher: **11 (Three weeks)**

   ∗ University's own programmes: **2+3 (One week)**

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

 Yes ✓   No ☐

 If yes, indicate the number of programmes offered. : *26 (in 2013-14)*

 Are they recognized by the Distance Education Council? *Yes*.

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

 Yes ☐   No ✓

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)

Sl. No.	Cycle	Grade	CGPA	Year of Accreditation
1	1st Cycle	Five Star		2004
2	2nd Cycle	A	3.47 on a four point scale	2009
3	3rd Cycle			
4	4th Cycle			

Copy of accreditation certificate and peer team report at page# **13-22**.

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.

Yes. Details are also available at Panjab University website:

http://dcdc.puchd.ac.in/affiliateColleges.aspx

Number of accredited affiliated colleges: 181

Number of constituent colleges = 4

Number of autonomous colleges = 0.

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

AQAR 2009-10 :….. 29-09-2014

AQAR 2010-11 :….. 29-09-2014

AQAR 2011-12 : …..29-09-2014

AQAR 2012-13 : …..29-09-2014

The above mentioned AQARs are available online at the URL: http://iqac.puchd.ac.in

Criteria wise Inputs

CRITERION I: CURRICULAR ASPECTS

1.1   Curriculum Design and Development

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

The vision and mission of PU has been reflected in all its academic programmes in the following way:

a) By continuously revamping the curriculum of its academic programmes once in three years incorporating major changes and reviewing it every year incorporating minor changes, so as to keep pace with the rapid developments in various fields of study, scientific and technological advancements, and to meet the demands of academia, industry and society.

Most of the academic disciplines have large number of elective options in the syllabi to ensure the latest one to be taught.

b) By imparting quality teaching and research facilities at affordable resources with an aim to broaden the horizons of education.

c) By strengthening the academic and industrial linkages, that starts with UG/PG Board of Studies (BoS), proceeds with in-course fieldworks/lab experiments; internships, institutional training and industry based projects and finally concludes with campus placements/ entrepreneurship development.

d) By offering its academic programmes in both the conventional face-to-face and the distant mode of education thereby reaching out to a wide spectrum of students across the globe.

e) By readily responding to the requirements of the society by way of introducing programmes of contemporary relevance such as M.Ed. (Guidance & Counseling), M.Ed. (Educational Technology), M. Ed Special Education (Learning Disability), outreach programmes through USOL, Stem cell and Tissue engineering, Nanotechnology etc. These academic programmes are an attempt to create new knowledge by catering to contemporary concerns and challenges, such as development, gender, environment, social innovation, human rights issues, disaster management, artistic, literary and creative practices and psychosocial issues.

1.1.2   Does the university follow a systematic process in the design and development of the curriculum? If yes, give details of the process (need assessment, feedback, etc.).

Yes, the design and development of the curriculum is organized in a logical sequence, progressing from basic concepts to more complex themes and latest developments in a graded manner.

The details of the systematic process followed in the design and development of the curriculum in line with global standards and regional relevance are as follows:

a) As a mechanism, various rounds of consultative meetings, seminars, and workshops are arranged, involving experts from academia, practitioners, government and non-government agencies, industry and others, prior to the introduction of any new programme. The purpose of this mechanism is to clearly understand the content and organization of the syllabi, the relevance of the programme, suggest deviations and departures from the conventional programmes being offered in other universities.

b) Feedback is taken from faculty, academic peers, experts from industry, current students and alumni, which is used in the initiation, review, and redesign of curricula.

c) Once a suitable need assessment is carried out, the programme committee takes it for approval to the academic bodies constituted at the University level. The University follows a four-tier structure for the development of any academic programme – programme teams, Board of Studies (at the Department-level), Various Faculties (Arts/

Science/ Languages/ Education/ Law/ Business Management & Commerce etc), and the Academic Council, a highest academic body of University chaired by the Vice-Chancellor, which is the final approving body.

A similar process is also followed while introducing amendments in existing academic programmes.

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

- **Employability**

  ➢ Several Communication Skill, Soft Skill development courses and applied courses, workshop-based courses, internships and dissertation are offered, enabling students to engage with a focused domain of their choice and developing core competencies required in becoming knowledgeable individuals to think analytically and critically. Subject experts are invited to deliver value-added learning leading to better employability.

  ➢ Courses are restructured to strengthen the job orientation to suit the needs of the industry and service sectors.

  ➢ The curriculum design through an equitable proportion of hands-on practical training for skill acquisition and sound theoretical knowledge serves to equip the students to face real-time situations and societal needs. The curriculum attempts to address the needs of various stakeholders such as Industries, Government agencies, Banking sector, Corporate, IT industry, Insurance sector, etc.

- **Innovation**

  The University through Centre for Emerging Areas in Science and Technology and Centre for Emerging Areas in Social Sciences provides the right ambience for introducing several innovative interdisciplinary programmes. The University gives a great deal of academic freedom enabling the introduction of new and innovative courses.

  Some of our PG programmes provide an interdisciplinary approach to viewing issues and finding solutions. The students are exposed to various real life settings through offering courses that enhance the creative thinking and entrepreneurial ability of students and by inviting various experts (entrepreneurs, researchers, etc.) to interact with our students.

  The list of Innovative Interdisciplinary Courses is:

  ➢ Emerging Areas in Science & Technology

  - o M.Sc. Nuclear Medicine
  - o M.Sc. Nuclear Physics
  - o M.Sc. System biology & Bioinformatics
  - o M.Sc. Microbial Biotechnology
  - o M.Tech. Nano Science and Nano Technology
  - o M.Sc. Masters in Public Health
  - o M.Sc. Stem Cell & Tissue Engineering

  ➢ Emerging Areas in Social Sciences

  - o M.A. Police Administration
  - o M.A. Social Works
  - o M.A. Human rights & Duties

  ➢ Other Emerging Areas

  - o B.Com. LL.B.
  - o B.A. LL.B.

- o 1-Year Law
- **Research**   (For details, refer to Criterion-III)
  - ➢ In many of the PG programmes offered by all the faculties, subjects on 'Research Methodology' and 'Statistics' are included as mandatory courses in the curriculum.
  - ➢ Many of our PG programmes also have a mandatory component of research projects / dissertations.
  - ➢ PG students in professional programmes are oriented to research through participation in minor and major projects.
  - ➢ PG students are encouraged to enhance their research knowledge through mechanisms which encourage working on empirical data, writing term-papers, field-based research, working on live projects, etc.

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

  ➢ The recommendations of the regulatory bodies like University Grants Commission (UGC), All India Council for Technical Education (AICTE), Medical Council of India (MCI), Dental Council of India (DCI), National Council for Teacher Education (NCTE), Bar Council of India (BCI), Pharmacy Council of India (PCI), Medical Council of India (MCI), etc are given vital importance while framing the curriculum.

  ➢ The University follows the Semester Based Credit through elective options within a course and semester pattern. However, School of Communication Studies has introduced Choice Based Credit System from the academic session 2014-15.

  ➢ The university over the years has introduced new need-based programmes of study and revised the curricula to suit the needs of society and the local and global demands.

  ➢ The curriculum developed by the University is well regarded in academic circles and has also been followed by other institutions.

  ➢ The MPhil programme in Defense Studies, PG Diploma in Disaster Management & Security, B.Ed, (Special Education in learning disabilities), Post MA Diploma in Professional Counseling & Psychotherapy, MBA (Retail Management/ Banking & Insurance/ Telecom & I.T./ Infrastructural Management/ Pharmaceutical Management/ Hospital Management) etc, first of their kind, try to bridge the gap between academia and the world of practice.

  ➢ The MBA programme, with a focus on Applied Management, is a departure from the conventional Business Administration programmes offered in the university and elsewhere in the country.

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

Yes, the university interacts with various stakeholders such as academia, practitioners, government and non-government agencies, research bodies, the civil society, industry and others in the curriculum revision process through the following well-established centres on the campus:

1. Centre for Industry Institute Partnership Programme (CIIPP)
2. Centre for Policy Research (CPR)
3. University Innovation Centre (UIC) in biotechnology.

In the year 2013, an important initiative has been taken by Panjab University to foster and sustain close academic alliances between institutions of higher education and research in the Chandigarh region to facilitate innovation and knowledge creation and for achieving

excellence in all academic spheres. This initiative resulted in the formation of "**Chandigarh Region Innovation and Knowledge Cluster (CRIKC)**".

Panjab University along with CRIKC hosted 79th annual meeting of Indian Academy of Sciences from November 8th to 10th at PU Campus with the activities on 9th and 10th held in other institutions associated with CRIKC, viz., CSIR-IMTECH and IISER Mohali.

Several proposals amongst the CRIKC's institution are in the offing as given below:

- ➢ Bio-Agro proposal submitted by NABI and DBT.
- ➢ Centre for excellence in detonic (CED) by TBRL, Mohali.
- ➢ Creation of cold room facility by Snow and Avalanche Study Establishment, (SASE - DRDO).

Some of the recent CRIKC activities are mentioned below:

1. Lecture by Sam Pitroda entitled, 'Importance of Information Technology Infrastructure in Growth and Development of the Nation' 23rd January, 2013.

2. Lecture by Shri Pawan Agarwal, Advisor Higher Education Planning Commission' entitled, Higher Education in the 12th Plan and Beyond: Strategy and Approach'

3. Prof. Yehiam Prior, a Distinguished Professor in Chemical Physics at Weizmann Institute of Science Israel visited P.U. Campus, PGIMER and IISER, Mohali and gave two lectures at P.U. and IISER.

4. Professor Richard Jones, a Distinguished Professor at Oxford University, U.K. and President Physiological Society, U.K., was hosted by CRIKC at PGIMER as a one stop interaction point for all the institutions in the region. He delivered a lecture entitled: Spatial Ca^{2+}/H^+ ion coupling in the heart: a key substrate for arrhythmia?

5. National Technology Day lecture on May 11, 2013 at P.U., Chandigarh by Dr Girish Sahni, Director CSIR Institute of Microbial Technology, 'Challenges and Opportunity for Translation of Science for Public Good'

6. Visit by Japanese delegation from AIST at P.U., Campus to explore collaboration in Biological Sciences.

7. Director British Council in India, Mr. Rob Lynes, has already visited PU to explore CRIKC as a facilitator to promote interaction between British Universities and Chandigarh region institutions. This was followed by another visit of Mr. Rob on 24th July 2013 to Chandigarh. CRIKC delegation has also visited British Universities in June 2014.

8. CRIKC participation in workshop held at IIT Ropar on 2nd July, 2013. The theme of the workshop "Eradicating the problem of open field burning in India: turning agricultural waste into energy", emerging out of in IIT Ropar - Aston University U.K. initiative.

The interaction with various stakeholders leads to the following inputs:

- ➢ Suggestions/ opinions in line with developments in other Universities are drawn.
- ➢ Survey and interactions with stake holders and alumni.
- ➢ Interactions by inviting representatives of concerned employer.
- ➢ Feedback by industries through interaction meetings.
- ➢ Obtaining opinions of the experts on various fields.
- ➢ Feedback from the students about the curriculum.

The way the university has benefitted through the interactions with the stakeholders is given below:

i. The globally standard and regionally relevant courses are introduced in the curriculum to develop multi tasking skills and to offer career training through

internships.

ii.   The syllabus is categorized into core and optional subjects, so as to give adequate representation for multidisciplinary courses like computer applications, mathematics, statistics etc. The major benefit is the ability to balance theory and practice / application and nurture research aptitude.

iii. The semester based credit system with elective options is introduced and it offers the students to choose courses of their choice in all the programmes offered.

iv.   Signing of MoUs with government and non-government agencies resulting in sharing of state-of-the-art equipment, funding etc.

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

➤ The University has facilitated the development of its affiliated colleges as research centres with the respective PU department serving as their nodal agencies so that there is a 'capacity building' through which a larger research community gets distributed to these research centres and will eventually go on to contribute at universities and colleges. These colleges will be able to conduct MPhil and PhD courses at these centres.

➤ According to the guidelines framed by the University, the research centres will be set up for a term of two years and these colleges should have at least three PhD teachers (among them one should be of the rank of associate professor) in a particular subject to conduct PhDs in specific subjects and should have adequate infrastructure for the same. Post graduate programmes in these subjects should also have been running in the college for a minimum of five years, besides teachers publishing two research papers or books in four years.

➤ The University has facilitated the introduction of pre-PhD course work followed by examination in those colleges that have been identified as research centres by Panjab University (PU).The enrollment to a PhD programme in these colleges is being done on the basis of an entrance test conducted by PU. The aim is that each college with research centers should get students for research.

➤ The University has facilitated the setting up of 'Community Colleges' in the UT and Punjab State to impart skill-oriented education of Diploma level with multiple futuristic opportunities for preserving and upgrading traditional skills.

➤ In order to facilitate the introduction of new academic programme of studies in affiliated colleges, the office of Dean College Development Council (DCDC) has laid down the well-defined procedure to be followed by affiliated colleges and the same is available on the website of DCDC.

➤ Colleges, who wish to introduce new programmes in their colleges, apply on prescribed format to the University. Inspection Committees duly constituted by the Vice-Chancellor visit the colleges, give its recommendations/report on the basis of teaching staff, infrastructure, books, labs, etc. as per the prescribed parameters.

➤ There can be an initiative by the college to come up with new curriculum to be passed by Board of Studies, Faculties, Academic Council and Senate. For instance, university has allowed the start of vocational courses in colleges.

The following colleges of Panjab University are running Research Centres:

✓ D.A.V. College,Sector-10, Chandigarh

✓ G.G.D.S.D. College, Sector-32, Chandigarh

✓ Post-Graduate Govt. College for Girls, Sector-42, Chandigarh

✓ Chandigarh College of Engineering & Technology, Sector-26, Chandigarh

✓ Post Graduate Govt. College, Sector-11, Chandigarh

1.1.7 **Does the university encourage its colleges to provide additional skill-oriented programmes relevant to regional needs? Cite instances.**

Yes, the University encourages its affiliated colleges to provide additional skill-oriented programmes relevant to regional needs.

The colleges are encouraged to introduce add-on courses and vocational courses with funding support from the UGC. The affiliated colleges have introduced add-on courses with funding support from the UGC during the period 2009-2013 and the University facilitated by instituting these courses.

For instance, list of Vocational Courses and Add-on Courses running in colleges for the last five years, is given below:

List of UGC Sponsored <u>Add-on Courses</u> (Certificate, Diploma and Advanced Diploma):

Faculty of Arts: Child Psychology, Disaster Management, Journalism and Management, Mass Communication and Video Production, Mass Media and Videography, Community Development, Human Rights and Value Education, Journalism, Video Reporting

Faculty of Business Management & Commerce

Computer Based Accounting, Bank Management, Entrepreneurship Development, Event Management, Insurance Business, Portfolio Management and Security Analysis, Tourism and Travel, Foreign Trade Practices & Procedures, Advertising and Sales Management, Computer Based Business Statistics, Retail Sales Management, E-Commerce, E-Banking

Faculty of Design and Fine Arts: Fine Arts

Faculty of Education: Guidance and Counseling, Community Development, Human Rights and Value Education, Nursery Teachers Training

Faculty of Engineering and Technology: Food Preservation, Electronics Hardware Maintenance, Refrigeration and Air Conditioning, Soaps and Detergents

Faculty of Languages Chinese, Communicative English, Function Hindi, French, German, Sanskrit, Punjabi Language & Culture, Russian, Translation (English to Hindi), Translation (English to Punjabi)

Faculty of Science: Animation And Graphics, Apparel Manufacturing Technology, Bioinformatics, Biotechnology, Call Centre, Child – Care, Computer Based Business Statistics, Cosmetology, Environment Auditing, Fashion Designing, Industrial Chemistry, Industrial Microbiology, Early Childhood Care and Education, Web Designing and Multimedia, Computer Applications, Information Technology, Apparel Designing/ Dress Designing, Floriculture & Landscaping, Hardware And Maintenance, Interior Designing & Decoration

Vocational Courses Advertising and Sales Management, Principals and Practice of Insurance, Office Management and Secretarial Practice, Foreign Trade Practice and Procedure, Tax Procedure & Practice

1.2 **Academic Flexibility**

1.2.1 **Furnish the inventory for the following:**

- **Programmes taught on campus**

The University offered a total of 308 programmes during the academic year 2013-14 through its departments. This includes 1 D.Litt., 56 Ph.D., 1 LL.D., 141 PG including M.Phil., 11 Integrated 5-year, 51 UG, 12 PG Diploma, 23 Diploma and 12 Certificate programmes. The PG programmes are mainly of two years duration except MCA, which is a three-year course. B.A. L.L.B. is a five year integrated programme. The University introduced about 50 new programmes during the last five years. [Refer 1.3.2]

<u>Details of courses being offered on the University Campus</u>

1. **Ph.D. Courses**

   i. **Faculty of Arts**

   Ancient Indian History, Culture & Archaeology, Economics, Geography, Defense & National Security Studies, History, Human Rights and Duties, Mass Communication, Psychology, Police Administration, Political Science, Public Administration, Social Work, Sociology

   ii. **Faculty of Science**

   Anthropology, Botany, Biochemistry, Biophysics, Chemistry, Computer Science, Environment Studies, Geology, Human Genome Studies & Research, Microbiology, Microbial Biotechnology, Nanoscience & Nanotechnology, Nuclear Medicine, Physics, Statistics, Stem Cell and Tissue Engineering, System Biology and Bioinformatics, Zoology

   iii. **Faculty of Law**
   Laws

   iv. **Faculty of Languages**

   English & Cultural Studies, French, Hindi, Persian, Punjabi, Russian, Sanskrit, Tibetan / Buddhist Studies, Urdu

   v. **Faculty of Design & Fine Arts**
   Fashion and Technology, Fine Arts, Indian Theatre Music

   vi. **Faculty of Business Management and Commerce**
   Business Management & Commerce

   vii. **Faculty of Pharmaceutical Sciences**
   Pharmaceutical Sciences

   viii. **Faculty of Education**
   Community Education and Disability Studies, Education

   ix. **Faculty of Engineering and Technology**
   CSE, IT, Electronics, Mechanical, Electrical, Civil, Biotechnology, Food Technology, Chemical Engineering

2. **Postgraduate, Graduate and Diploma courses at the PU Campus**

1	M. Phil.	Ancient Indian History, Culture & Archaeology (AIHCA), Botany, Defense & National Security Studies, Economics, English, Gandhian and Peace Studies, History, Music, Philosophy, Physical Education, Police Administration (Centre for Emerging Areas in Social Sciences), Political Science, Public Administration, Punjabi, Sanskrit, Statistics, Sociology and Zoology. Pol. Sci and Pbi (PURC, Muktsar), Sanskrit at VVBIS (Hoshiarpur)
2	M.Sc. (Two Years Course)	Human Genomics, Environment Science, Statistics, System Biology & Bioinformatics, Medical Physics, Nuclear Medicine, Public Health, Stem-Cell & Tissue Engineering and Microbial Biotechnology.
3	M.A.	Ancient Indian History, Culture & Archaeology, Defense and National Security Studies, Economics, Education, French, Geography, Hindi, History, Panjabi, Philosophy, Political Science, Psychology, Public Administration, Sociology, Urdu, English &

		Cultural Studies, Gandhian and Peace Studies, History of Art, Indian Theatre, Music (Instrumental and Vocal), Sanskrit, Journalism and Mass Communication, Police Administration, Social Work, Human Rights & Duties, Remote Sensing & GIS, Disaster Management.
4	M.Ed.	M.Ed. (General), M.Ed. (Guidance and Counseling) and M.Ed. (Educational Technology).
5	M.Com.	M.Com. (Hons.)
6	M.Tech/ME:	Instrumentation, Microelectronics, Nanoscience & Nanotechnology, Polymer, Chemical Engg., Electronic and Communication Engg., Information Technology, and Computer Science Engg.
7	M.Sc.(Hons. School)	Anthropology, Biochemistry, Biophysics, Biotechnology, Botany, Chemistry, Computer Science and Applications, Geology, Mathematics, Mathematics and Computing, Microbiology, Physics, Physics & Electronics, Zoology, and 5 yr Integrated Course in Fashion & Life Style.
8	B.Sc. (Hons. School)	Anthropology, Biochemistry, Biophysics, Biotechnology, Botany, Chemistry, Geology, Mathematics, Mathematics and Computing, Microbiology, Physics, Physics & Electronics, Zoology, and 5 yr Integrated Course in Fashion & Life Style.
9	(B.E.)	Chemical Engineering, Food Technology, Biotechnology, Electronics & Communication Engg., Information Technology, Computer Science & Engg., Mechanical Engg., Electrical & Electronics Engg.,
10	Five Years Integrated BE with MBA	Chemical Engineering, Biotechnology, Electronics & Communication Engg., Information Technology, Computer Science & Engg., Mechanical Engg., Electrical & Electronics Engg
11	Other Professional undergraduate and postgraduate courses	BDS, LL.B., LL.M., B.Ed (4 yr. Integrated), B.Pharma, M.Pharma, M.Lib. & Information Science, M.A. Physical Education, M.B.A. (Executive), M.B.A. (Bio-technology), M.B.A. (Retail Management), M.B.A. (Telecommunication and IT), M.B.A. (Infrastructural Management), M.B.A.(Pharm. Mgt.), M.B.A. (Hospital Administration), B.E. (Chemical) with MBA -5 yr Integrated Course, M.Pharma. in Drug Discovery & Drug Development, M.Pharma. in Pharmaceutical Analysis & Quality Assurance.
12	Postgraduate Diploma Courses	Remote Sensing and Geographic Information Systems. Disaster Management & Security, Hindi Journalism, Punjabi Journalism, Advertising & Public Relations, Executive Course in Disaster Management & Security
13	Advanced	Chinese, French, German, Proficiency in Interpretership for

	Diploma Courses	Tibetan, Persian, Russian and Urdu.
14	Diploma Courses	Chinese, French, Forensic Science and Criminology, German, Panjabi Language and Culture, Persian, Russian, Tibetan, Urdu, Heritage Tourism
15	Certificate Courses	Chinese, French, Functional Punjabi, German, Persian, Russian, Tibetan, Urdu. Art Appreciation
16	Department of Evening Studies	BA, B.Com. and MA in English, Economics, History, Political Science and Punjabi

3. **UNIVERSITY SCHOOL OF OPEN LEARNING:**
   The present study programmes consist of the following courses:

   1. Bachelor of Arts (Three Year Integrated Course), Bachelor of Commerce (Three Year Course) and Bachelor of Library & Information Science (One Year Course).

   2. Master of Arts (Four Semester Course) in English, Hindi, Punjabi, Economics, History, Political Science, Public Administration, Sociology.

   3. Master of Commerce (Four Semester Course), Master of Finance & Control (MFC) (Two Year Course). Master of Education (M.Ed.) (For in-service teachers) (Two year Course).

   4. One year Diploma/Certificate Courses:

      i. Post Graduate Diploma in Health, Family Welfare and Population Education, Statistics, Mass Communication, Computer Applications, Human Rights and Duties, Library Automation and Networking

      ii. Advanced Diploma in Naturopathy and Yoga

      iii. Diploma in Creative Photography

      iv. Certificate Courses in Vivekananda Studies, Women Studies

   5. Bachelor of Education (B.Ed.) (For in-service teachers) (Two year Course).

   6. MBA (Off Campus) (Four Semester Course).
      To maintain its cutting-edge status, the University launched in 2008, off-campus Management Programmes.

- **Overseas programmes offered on campus: Nil**

- **Programmes available for colleges to choose from**

   List of programmes approved for affiliated colleges for 2013–2014:

   1. B.A./B.Sc. (Agriculture/Bio-Informatics/ Fashion Design / Bio.Tech./ Home Science) ./ B.Com/BCA/BBA Course

   2. B.Ed., D.P.Ed., B.P.Ed., M.P.Ed., M.Sc. (I.T), PGDCA

   3. M.A./M.Sc. in Hindi, Punjabi, English, Mathematics, Physics, Chemistry, Zoology, Economics, Public Administration, History, Political Science, Geography

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

➢ **Core / Elective options**

The academic programmes are well structured in terms number of credits required. A programme consists of two types of courses – core and electives and a student has to earn a

minimum number of credits. The core courses emphasize on fundamental aspects together with design methodologies and throw open avenues for applications.

An academic year consists of two semesters. Odd semester (I and III semesters): July to November and even semester (II and IV semesters): December to April. A semester normally extends over a period of 15-18 weeks. Each week has 30 working hours spread over a 5 day week.

The curriculum includes industrial/field training as part of the programme. Further, students are expected to carry out mandatory project work in the IV semester. There are many electives and the student can choose any elective depending upon his/her interest, related to main course and student's ability to **cope with the course.**

➢ **Enrichment courses**

The Advanced Diploma, Diploma and Certificate programmes are offered as add-on programmes for enriching the students further with relevant specializations and learn additional foreign languages. Under this system the University provides an opportunity to get one UG/PG degree and Advanced Diplomas / Certificates within a period of two/ three years of stay at the University.

The curricula of both the professional undergraduate and postgraduate programmes include enrichment courses that enable the students to adapt to the needs of stakeholders. The enrichment courses include allied subjects, soft skill courses such as communication and computer applications, managerial skills and industrial visits.

➢ **Courses offered in modular form**

The National Institute of Technical Teachers Training and Research (NITTTR) Chandigarh, is offering M.Tech. programmes in modular form for the faculty of Polytechnic colleges.

The syllabus for each course in a large number of programmes is drawn up in a modular fashion with each sub-module pertaining to a specific aspect of study and each sub-module in turn related to each other.

➢ **Credit accumulation and transfer facility: No**

➢ **Lateral and vertical mobility within and across programmes, courses and disciplines**

1. B.Sc./M.Sc. Hons. School Programmes in Faculty of Science
2. Five-year integrated courses in Faculty of Law
3. B.E. with M.B.A. in UICET and UIET
4. B.A. (Hons. School) followed by M.A. (Hons. School) in Economics,
5. Four year integrated course of B.A. B.Ed.

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

The University has framed a new policy to attract foreign students, which include single window facility through Dean International Students (DIS), on-line entrance test wherever applicable, waive-off Ph.D. entrance test for all courses and construction of state-of-the-art International Hostel (near completion). The foreign applicants will be admitted under 10% supernumerary seats of the permitted intake.

A significant number of students enroll in a variety of programmes to pursue their career prospects. The curriculum does meet the requirements of such student in terms of employability and suitability to work in their own countries on their return.

The Foreign Students admitted during the last 5 years are given below:

Year	University	Colleges	Total
2009-10	**124**	**66**	**190**
2010-11	**108**	**166**	**274**
2011-12	**104**	**184**	**288**
2012-13	**124**	**284**	408
2013-14	**140**	**251**	391

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

Many special lectures have been arranged in the last three years to expose overseas students to the requirements of Indian Examination System and to make them aware about the Indian culture and society.

These special lectures have been very successful at overcoming overseas student misconceptions about courses, examinations and other day-to-day issues.

Scholastic Assessment Test (SAT) for an overseas student has been abolished in Dr. H.S. Judge Institute of Dental Sciences and Hospital for admissions to **BDS** Programme, BA LLB and BCom LLB.

1.2.5 Does the university facilitate dual degree and twinning programmes? *No*

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

The list of partially self-financing courses in the University is given below:

Sr#	Name of the Department	Name of the Programme
1.	University Institute of Legal studies	5-Year integrated B.A.LL.B. (Hons), B.Com. LL.B.
2.	University Institute of Engineering & Technology	a) 4-Year B.E. (CSE, IT, Electronics, Mechanical, Electrical, Biotechnology) b) 5-Year integrated B.E. (CSE, IT, Electronics, Mechanical, Biotechnology, Electrical) + MBA
3.	Dr Harvansh Singh Judge Institute of Dental Sciences & Hospital	4-Year B.D.S.
4.	University Institute of Emerging Area in Science & Technology	a) M.Sc. (Microbial Biotechnology) b) Master in Public Health c) M.Sc. (System Biology & Bio-Informatics) d) M.Sc. (Nuclear Medicine) e) M.Sc. (Medical Physics) f) M.Tech. (Nano Science & Nano Technology) g) M.Sc. (Stem Cell & Tissue Engineering)

5.	Computer Science & Applications	3-Year MCA (Evening)
6.	Dr S S Bhatnagar Institute of Chemical Engineering & Technology	5-Year integrated B.E. (Chemical) + MBA
7.	Physics	a) B.Sc. (Honors School) in Physics and Electronics b) M.Sc. (Honors School) in Physics and Electronics
8.	Arts History & Visual Arts, A.I.H.C. & A.	Certificate in Arts Appreciation Diploma in Heritage Tourism
9.	English	Proficiency in English (IELTS) & Spoken English
10.	Community Education & Disability Studies	a) M.A. in Community Education b) B.Ed. Special Education in Learning Disability
11.	Centre for Defense & National Securities	a) Year PG Diploma in Disaster Management & Security b) Month Executive Certificate Course in Disaster Management & Security c) 1-Year PG Diploma in Home Land Security
12.	Institute of Forensic Science & Criminology	M.Sc.(Forensic Science & Criminology)
13.	School of Communication Studies	a) PG Diploma in Advertising & Public Relations b) PG Diploma in Hindi Journalism c) PG Diploma in Punjabi Journalism
14.	University Institute of Applied Management Sciences	M.B.A. in Retail Management, Banking & Insurance, Telecommunication & IT, Infrastructural Management, Pharmaceutical Management, and Hospital Management
15.	University Institute of Pharmaceutical Sciences	a) M.Pharmacy (Drug Discovery & Drug Development) b) M.Pharmacy (Pharmaceutical Analysis) c) Ph.D. in Pharmaceutical Sciences
16.	University Institute of Hotel Management & Tourism	a) B.Sc. in Hospitality & Hotel Administration b) B.Sc. in Tourism Management
17.	University Institute of Fashion Technology & Vocational Development	a) B.Sc. in Fashion & Life Style Technology b) M.Sc. in Fashion & Life Style Technology
18.	Institute of Educational Technology & Vocational Education	4-Year Integrated B.A. (Hons) (Education) B.Ed.
19.	University Centre of Instrumentation &	M.Tech. in Instrumentation

	Microelectronics	
20.	Geography	a) Masters in Remote Sensing & GIS b) Masters in Disaster Management
21.	Psychology	a) 1-Year Post M.A. Diploma in Professional Counseling and Psychotherapy b) 1-Year Post M.A. Diploma in Psychological Testing
22.	University Institute of Emerging Areas in Social science	M.A. in Social Work M.A. in Police Administration M.A. in Human Rights & Duties

Policies for partially self-financing courses regarding admission, teacher qualification and salary are at par with the aided programmes. However, there is a variation in the fee structure.

For instance, for the MCA (Morning) and MCA (Evening) programmes at the Department of Computer Science & Applications, policy regarding admission, teacher qualification and salary are exactly the same but for the fee structure.

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

For some academic programmes, if a student gets employed before completing a course in conventional face-to-face mode, then he/ she can continue his/ her studies for the remaining Semesters through the Distance Mode of Education via University School of Open Learning (USOL).

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

In an attempt to provide students the freedom to choose what they want to study according to their interests and abilities, Panjab University is moving forward to introduce choice-based credit system (CBCS) in all its programmes of the study.

The system has been introduced in **School of Communication Studies** on a pilot basis from the academic session 2014-15 and is running successfully. Education imparted under the system will be more student-centric and will provide enhanced learning opportunities to match the students' scholastic needs and also their aspirations.

Efforts are being made to adopt Choice Based Credit System (CBCS) in the Faculty of Engineering & Technology, Pharmaceutical Sciences, and Sciences etc.

Recently, a detailed presentation was made by **Professor Karamjeet Singh** of University Business School to the Chairpersons of various teaching departments highlighting the need of introduction of CBCS at UG/PG programmes. He elaborated the Programme Outline for Master's Degree Programmes and explained a typical week (5-Days) in a Semester.

1.2.9 What percentage of programmes offered by the university follow:

➢ **Annual system in University**

UG Programmes in University: 0%

(BDS Course offered by Dr. H.S. Judge Institute of Dental Sciences and Hospital follows annual system)

PG Programmes in University: 0%

- ➢ **Semester system in University**

  UG Programmes in University: 100%

  PG Programmes in University: 100%

  All UG and PG Courses including Honors School Courses in the Faculty of Science on the Campus follow Semester System.

- ➢ **Annual system in Colleges**

  UG Programmes in Colleges: 100%

  PG Programmes in Colleges: 0%

  From the session 2014-15, all Undergraduate courses have been switched to Semester System from Annual System in the colleges.

- ➢ **Semester system in Colleges**

  UG Programmes in Colleges: 0%

  PG Programmes in Colleges: 100%

- ➢ **Trimester system   Nil**

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

The University offers inter-disciplinary programmes on diverse fields of study in different departments to promote arts, commerce, management, applied sciences etc. The list of inter-disciplinary programmes offered by different departments is given below:

M.Sc. (Physics and Electronics), M.Sc.(Environmental Science), B.E. M.B.A. , B.A. LL.B., B.Com. LL.B, B.Sc. (Hons. School) in Mathematics and Computing, M.A. in Police Administration, M.A. in Human Rights and Duties, Vivekananda Studies, Guru Nanak Sikh Studies, Gandhian Studies, Women Studies, M.B.A. in Banking & Insurance, Telecommunication & IT, Infrastructural Management, Pharmaceutical Management, and Hospital Management, M.Sc. (Microbial Biotechnology), Master in Public Health, M.Sc. (System Biology & Bio-Informatics), M.Sc. (Nuclear Medicine), M.Sc. (Medical Physics), M.Tech. (Nano Science & Nano Technology), M.Sc. (Stem Cell & Tissue Engineering)

1.3 Curriculum Enrichment

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

Typically, the review of course curriculum is undertaken annually and the major revision is undertaken once in three years, after receiving feedback from various stakeholders – academia, government bodies, alumni and potential recruiters. Apart from this, regular feedback from current students helps in better dissemination of the course. Different programmes and courses also have internal review mechanisms and any change goes through the Board of Studies and the Academic Council.

The meeting of the Board of Studies is held periodically to keep track of the changes and identifies the necessary changes to make the curriculum socially relevant and job oriented. The curriculum is revised in order to remove obsolescence and introduce a new direction to the courses such that it retains its knowledge intensive trait and addresses the emerging needs. In every faculty, the courses are tailored with the objective of providing development and trained manpower to the needs of industries. The modifications in the existing courses is done keeping in view the guidelines of regulatory bodies and taking into account the recommendations of the members of the Board of Studies who are experts in the courses concerned.

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

Inter-disciplinary

B.E. M.B.A. , B.Com. LL.B, B.Sc. (Hons. School) in Mathematics and Computing, M.A. in Police Administration, M.A. in Human Rights and Duties, Vivekananda Studies, M.B.A. in Banking & Insurance, Telecommunication & IT, Infrastructural Management, Pharmaceutical Management, and Hospital Management, M.Sc. (Microbial Biotechnology), Master in Public Health, M.Sc. (System Biology & Bio-Informatics, Nuclear Medicine), M.Sc. (Medical Physics), M.Tech. (Nano Science & Nano Technology), M.Sc. (Stem Cell & Tissue Engineering)

Programmes in Emerging Areas

M.Sc. (Microbial Biotechnology), Master in Public Health, M.Sc. (System Biology & Bio-Informatics), M.Sc. (Nuclear Medicine), M.Sc. (Medical Physics), M.Tech. (Nano Science & Nano Technology),M.Sc. (Stem Cell & Tissue Engineering)

List of New Courses started w.e.f. the session 2009-2010

Sr #	Name of the Department	Course	Duration
1.	Geology	M.Sc.(H.S.) Petroleum Geology	2 years
2.	Adult Education	Diploma in Preschool Education(	1 year
3.	Defense Studies	P.G. Diploma in Homeland Security	1 year
4.	CEASS	M.Phil.in Police Administration	1 year
5.	UIHMT	B.Sc. in Hospitality & Hotel Administration, B.Sc. in Tourism Management.	3 Years
6	Education	P.G.Dip.in Research Methodology & Stats.	1 year

List of New Courses started w.e.f. the session 2014-2015

Sr #	Name of the Department	Course	Duration
1.	UIET	M.E. Mechanical Engineering	2 years
2.	UIET	M.E. Electrical Engineering (Power System)	2 years
3.	UIET	M. Tech Material sciences and Technology	2 years
4.	UICET	M.E. Chemical with specialization in Environmental Engineering	2 years
5.	UICET	M.E. Food Technology	2 years
6.	CEDS	M. Ed Special Education (Learning Disability)	1 year

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

The necessary feedback about the curriculum is obtained from students, alumni, employer, community, and industry and is then discussed in the meetings of the Board of Studies and due weightage is given to the feedback in framing the curriculum. The feedback given by students and stakeholders is the basic matrix for identifying shortfalls in curricular content and reinforcements needed therein. The experts analyze the syllabus and any significant modifications suggested are incorporated in the curriculum. The syllabus is periodically revised to cater to the modern employment opportunities of the job market. The syllabi of almost all the programmes of study continue to be revised in a phased manner. Most of the courses are subject to revision across a specific timeframe to keep pace with developments in those fields. The extent of revision ranges from 50- 100%. 100% of courses undergo minor revisions every year and 50-100% courses undergo major revision every three years.

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

Since most of the academic programmes are from emerging areas of study, the courses in these programmes are designed to add value to the existing knowledge base and enrich the conceptual and practical basis. Even in traditional discipline areas such as History, Economics and Mathematics, the programme and courses are innovatively structured and reflect new directions.

Some of the specific value added courses being offered in different Departments are: Soft Skill Development, Environment Education, Human Rights & Duties, Traffic Rules, Women's Studies, Vivekanand Studies, Gandhian and Peace Studies, Research Methodology, Writing Seminar, Dissertation Workshop, Computer Applications, Project Management, Foreign and Indian Regional languages. These courses are open to all students and the admission is based on merit. Few of these courses are mandatory like Environment Education.

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

Yes. The University has already introduced higher order skill development programmes in consonance with the National Requirements as required by National Skill Development Corporation., like, B.Sc. in Hotel Management and Catering, B.Sc. in Tourism Management, B.Sc. in Fashion Technology and Design, B.Sc. (Hons. School) in Mathematics and

Computing and Master of Mass Communication, etc. We are also in the process of developing many courses which are relevant to the present need of the nation, like, Certificate Course of Vivekananda Studies, Certificate Course in Yoga and Medication, Postgraduate Diploma in Statistics, etc.

A pattern of equal weightage is ensured for pure and applied aspects for the various programmes in the University. Wide opportunities are given to students to develop their proficiency in theory, to gain practical knowledge in their courses of study, to acquire computer skills and to improve their I.Q. The University tries to impart multiple skills such as learning skills, computer skills, technical and managerial skills and marketing skills to the students. Online material is used to supplement classroom teaching and students are given problems that call for reasoning and logical thinking.

List of higher order skill development Courses to be introduced from 2014-2015

Sr#	Department	Course	Duration
1.	UIET	M.E. Mechanical Engineering	2 years
2.	UIET	M.E. Electrical Engineering (Power System)	2 years
3.	UIET	M. Tech Material sciences and Technology	2 years
4.	UICET	M.E. Chemical with specialization in Environmental Engineering	2 years
5.	UICET	M.E. Food Technology	2 years
6.	CEDS	M. Ed Special Education (Learning Disability)	

1.4 Feedback System

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

The feedback from the students regarding curriculum both on the course content and teaching methodology is being taken by the faculty on informal and periodic basis at the end of every Semester.

The University has prepared formal student feedback system and it is being introduced from the current session 2014-15. The format of the feedback form is given in picture.

This feedback form is distributed to the students in the class by the concerned teacher. The students at the end of each semester submit a proforma detailing the merits and demerits of each course.

STUDENT FEEDBACK FORM

Students having minimum 75% attendance and no re-appear are eligible to submit this feedback to their respective teacher.

Class/Semester…………………………………………………………
Subject/Paper……………………………………………………..

Communication : ……………………………………………………
……………………………………………………………………………

Punctuality/Regularity: ……………………………………………
……………………………………………………………………………

Response to queries ………………………………………………
……………………………………………………………………………

Curriculum Improvement, if any ………………………………
……………………………………………………………………………

Write a paragraph about the teacher ……………………………
……………………………………………………………………………
……………………………………………………………………………
……………………………………………………………………………
……………………………………………………………………………

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

Regarding curriculum from different forums (national and international), many departments such as Political Science, University Business School, University Institute of Engineering and Technology, University Institute of Chemical Engineering and Technology, Department of Computer Science and Applications conduct workshops, webinars and other discussions to compare the information received from different sources – academia, government bodies, alumni and potential recruiters, regarding the curriculum to enrich our existing syllabi.

Impact of above mentioned methods to obtain feedback on the curriculum is given below: 1. Receive suggestions, exchange views and review academic programmes, 2. Design of rigorous academic programme geared in the direction of generating future scholars, teachers, practitioners, researchers and trainers.

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

Curriculum enrichment is an ongoing process, which is done at the course level by the course teacher and at the programme level by the programme team. The University courses enrichment and evaluative system receives regular feedback from the affiliated institutions through the formally instituted Board of Studies in each faculty and disciplines from time to time. Board of Studies meet on regular basis, where such issues are discussed threadbare with the representatives of affiliated colleges

1.4.4 **What is the quality sustenance and quality enhancement measure undertaken by the university in ensuring the effective development of the curricula?**

The University allows major changes in the curriculum every three years and minor changes annually. This system facilitate quality sustenance & quality enhancement at different intervals. However, in addition, efforts are also being made to seek input from the stakeholders such as alumni, industry, employer, etc.

Curriculum aspects are strengthened by revision of syllabi on par with emerging trends and to meet global demand by giving thrust on application oriented subjects. An Internal Quality Assurance Cell is in force and under the aegis of the MIS Cell, periodic meetings are held with the Heads of the Departments and other members.

The following measures are undertaken to ensure quality sustenance in the curricula:

1. Planning well in advance about the course content and organization

2. Undertaking a comprehensive review inclusive of student feedback towards the end of the semester and bringing it up for discussions in the Board of Studies.

CRITERION II: TEACHING-LEARNING AND EVALUATION

2.1   Student Enrolment and Profile

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

The University ensures wide publicity in the admission process in the following ways:

a) Placing an advertisement in Regional/National Newspapers as well as hosting on University web-site http://www.puchd.ac.in

b) Making available on-line admission prospectus using the University web-site (http://admissions.puchd.ac.in), thereby providing information for the courses, fees, Departments/Institute of Studies, eligibility, distribution of seats under the different categories, meticulously designed transparent system of merit and other relevant information.

The University ensures transparency in the admission process by:

a) Outlining the detailed description of admission process in the on-line prospectus on the web-site

b) Following the Seat reservation policy of the Government of India

c) Carrying out B.Sc. (Honors School)/B.Pharmacy (Credit Based Semester System)/B.E. admissions through single window counseling process, during which, the availability of seats are displayed on real time basis using LCD thereby ensuring total transparency in the admission process; so that the parents and wards can go for their options based on the availability of seats. During counseling, vacancy positions are displayed every evening through the website for the benefit of prospective rank holders.

d) Preparing the merit on the basis of standard criteria designed by the University

e) Declaring the merit list of all applicants on the university web-site http://results.puchd.ac.in before admissions are made

f) Displaying the merit list of all applicants on the Notice Boards of respective departments.

g) Keeping hard copy of the result in the Enquiry Office of the University

For some academic programmes such as B.Com.,B.E., B.Sc. (Honours School), BALLB, BComLLB, MA(Through USOL), the admission Process at PU is completely online and includes the following:

a) Submission of application form for admission to any academic programme

b) Paying application fee

c) Printing admit card showing Roll Number for Examinations

d) Preparation of merit list

e) Admitting students by online counseling

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

Admission process put in place by the university is:

a) Call for applications by the University

b) Submission of application form by the candidates for admission to an academic programme along with application fee

c) Scrutiny of application form and generating admit card showing Roll Number for

Entrance Examination

d) Question Paper setting and Answer Key preparation

e) Conducting an Entrance Exam for some of the academic programmes

f) Preparation of merit list

g) Admitting students by offline/online counseling

The admission to various academic programmes in the University teaching departments is based on (i) merit based on qualifying marks only, (ii) merit based on academic marks and entrance test marks, (iii) merit based on University level common entrance test marks, or (iv) merit based on national level entrance test marks conducted by IIT/IIM/any other National agency.

The List of courses offered and their criterion for admission being followed in the University are given in Table below:

S #	Name of the Course	Criteria for admission
1.	LL.M., M.C.A., M.A. Journalism and Mass Communication, Master in Public Health, M.A. (English), M.Tech. (Instrumentation), M.Tech. (Nanoscience and Nano Technology), M.E. (Chemical), M.Tech. (Polymer), M.Sc. (Industrial Chemistry), M.E. Electrical Engg. (Instrumentation & Control), M.E. (Electronics and Comm. Engg.), M.E. (Computer Science and Engg.), M.E. Civil Engineering (Construction Tech. & Mgt.), M.E. Mechanical Engineering (Manufacturing Tech.), M.B.E., M.E.F.B., M. Com (Hons.), M.Com (Business Innovation), MBACIT, M.P.Ed (Master of Physical Education), B.P.Ed (Bachelor of Physical Education) M.Sc. (Hons. School) in Biochemistry/ Biophysics /Computer Science/ Mathematics/ Microbiology and Geology, M.Sc. (Two Year Course) in Bioinformatics (being offered in the colleges affiliated to P.U.), Environment Science/ Human Genomics /Nuclear Medicine/ System Biology & Bioinformatics and Microbial Biotechnology/ Medical Physics/Physics & Electronics M.Sc. (Hons. School / Two year Course) Biotechnology/Botany/Chemistry/Physics /Zoology	Merit + Common Entrance Test (CET-PG) conducted by PU The final merit list is prepared based on: ➢ Qualifying Examination: 50% ➢ PU-CET(PG)Entrance Test: 50% However, for LL.M. , it is 20%+80%, for M.E.F.B. and M.Com. (Hons), it is 15%* + 85% *(7.5% marks Group discussion and 7.5% marks for personal interview)
2.	B. Pharmacy and B.Sc. (Honors School) in Anthropology, Biochemistry, Biophysics, Biotechnology, Botany, Chemistry, Geology, Mathematics, Physics Mathematics & Computing, Zoology,	Common Entrance Test (CET-UG) conducted by PU ➢ Qualifying Examination (+2): 25% ➢ PU-CET (UG) Entrance Test: 75% Foreign Nationals/ Persons of Indian Origin (PIO) / NRI candidates, those

	Microbiology, Physics & Electronics,	living abroad at the time of entrance test are exempted from the entrance test.
3.	5-Year Integrated B.A./B.Com. LL.B. (Hons	Entrance Test conducted by PU ➢ Qualifying Exam (+2): 50%+other admissible weightages ➢ PU Entrance Test: 50%
4.	B.E. in Chemical, Food Technology, Computer Science and Engineering, Information Technology, Electronics & Communication Engineering, Biotechnology, Electrical & Electronics and Mechanical Engineering	JEE(Main) Test conducted by IIT ➢ Qualifying Exam(+2): 40% ➢ JEE (Main) Score: 60%
5.	M.Tech. in Computer Science and Engineering, Information Technology, Electronics & Communication Engineering, Polymer, Microelectronics, and Chemical Engineering	All India GATE entrance examination conducted by an IIT ➢ Qualifying Exam: 50%+other admissible weightages ➢ GATE Score: 50%
6.	M.B.A.(general), M.B.A. (International Business), M.B.A. (Human Resources), M.Com. (Hons.)	Common Admission Test (CAT) conducted by an IIM each year + Group Discussion + Interview: 85% + 7.5% + 7.5%
7.	M.B.A. in Retail Management, Banking and Insurance Management, Hospital Management, IT & Telecommunications Management, Infrastructural Management, Pharmaceutical Management,	Management Entrance Test (MET-PU) conducted by PU + Group Discussion + Interview: 85% + 7.5% + 7.5%
8.	B.Sc. in Hospitality and Hotel Administration and Tourism Management	Tourism and Hospitality Aptitude Test (PUTHAT) conducted by PU The final merit list is prepared on the basis of marks secured in the PUTHAT only.
9.	M.Ed. (Regular & Correspondence) (Offered in PU Campus, Colleges & USOL) In Education Technology & guidance Counseling	M.Ed. Entrance Test conducted by PU ➢ Qualifying Exam: 50%+other admissible weightages ➢ PU M.Ed. Entrance Test: 50% ➢
10.	LL.B. (Bachelor of Laws) (offered in PU campus and regional centres)	LL.B. Entrance Test conducted by PU ➢ Qualifying Exam: 50%+other admissible weightages ➢ PU LL.B. Entrance Test: 50% ➢

11.	Ph.D. in Computer Science and Engineering, Information Technology, Electronics & Communication Engineering, Polymer, Microelectronics, Chemical Engineering, Computer Science & Applications, Anthropology, Biochemistry, Biophysics, Biotechnology, Botany, Chemistry, Geology, Mathematics, Physics , Zoology, Microbiology and subjects in faculties of Arts, Languages, Law, Education and Fine Arts, Business Management and Commerce,, Medical Sciences, and Pharmaceutical Sciences	The Merit is based on Ph.D. Entrance Test score conducted by PU
12.	B.A./B.Sc./B.Com./BCA/BBA, B.Sc. (Bio. Info., Bio-Tech., Fashion Design, Home Science), B.Sc.(Agri.), D.P.Ed., B.Ed., B.P.Ed., M.P.Ed.. M.Sc.(IT, Nuclear Medicine, Medical Physics), PGDCA	The final merit list is prepared on the basis of marks in the qualifying examination + other admissible weightages. B.Com admission is completely online.
13.	M.A. in Economics, Geography, History, Philosophy, Political Science, Psychology, Public Administration, Sociology	The final merit list is prepared on the basis of: Academic Weightage + Departmental Test: 60% + 40% The break up of 60% is: 10th+12th+Graduation+Grad.in Hons: 10%+10%+25%+15%
14.	For courses other than in 1-13 above	The final merit list is prepared on the basis of marks in the qualifying examination + other admissible weightages.

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

There are as many as 185 Colleges affiliated to the University. The colleges are broadly categorized into Government, Aided Colleges, Self Financing Colleges, and Constituent Colleges.

Every year, the University sends a copy of Instructions for admission to various courses in the affiliated colleges. All admissions are required to be made by the Colleges strictly in accordance with the Regulations/Rules contained in latest University Calendars/Guidelines/any other Instructions which have been issued/may be issued by the University, from time to time, for the respective Courses/Examinations. The list of all such candidates selected for admission/waiting list is displayed on the Notice Board of the respective College.

Where the numbers of the seats are fixed, the total number of students admitted to a particular class must not exceed the number of seats sanctioned by the University.

The admission is made according to the schedule of dates approved by the University and circulated by the Deputy Registrar (Colleges) from time to time.

The University monitors the admission process of colleges by asking Registration Returns, which is used for matching the number of seats (reservation policy), course affiliation, criteria of admitted students etc. Therefore, after the admissions in the affiliated colleges are made, it is mandatory for the colleges, to send the Student Registration Return in computerized form to the university within the prescribed period. The Registration Returns is not accepted without affiliation of Colleges/classes/courses/subjects.

The details about Registration & Continuation Return (Under PUPIN System):

1. Registration/Continuation Return is an official document submitted by all the Affiliated Colleges of PU to the Registration Branch (R&S Branch).

2. Registration Return has all the information related to newly Registered Candidates in the First Year Course under various streams (e.g. BA/BSc/BCom/BBA/BCA/BTE/BMF).

3. Continuation Return holds data of already registered continuing students of 2nd and 3rd year courses under different streams.

4. Candidates are registered in the PU under various categories (e.g. Normal/Compartment/Migration/NRI-Foreign Category etc.)

5. Both Registration and Continuation Return is received in a Computer Software.

6. PUPIN Software is provided by the University to all the affiliated colleges. The respective college enters required information in the said software and submits the CD/DVD back to the University along with hard-copy of Registration & Continuation Return duly signed and attested by the College Principal.

7. Registration Return holds the data of all the newly registered candidates (1st Year Students) and the Continuation Return holds the data of all the continuing students of 2nd & 3rd Year.

8. The College also provides PS-Forms (Photo Signature Form) for the newly admitted 1st Year students, which has candidate Photo and Signature in the prescribed format.

9. PUPIN (Panjab University Permanent Identification Number) is allocated to the registered candidate's in the respective college. All the newly registered eligible candidates are issued a PUPIN Card which has candidate's Photo-Signature and Registration details.

10. Computerized Registration No. (PUPIN) is allocated to the entire candidate's of the College and the data is made available under the "College Information Module", a Web based application that works at PU-VPN (Virtual Private Network).

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

The University has a mechanism to review the admission process. The University reviews the admission process looking at the student profile and their performance annually.

The university authorities review the admission process annually for modifying eligibility criteria as per government norms, if any, and analyses student profile by organizing meetings with Heads of the Departments. Every year, review meeting of the Admission Committee is held wherein the entire admission process is reviewed and innovative ideas are welcomed and incorporated to refine the admission process in order to make the mechanism student-friendly.

Over the years, such an analysis has contributed in a big way in the form of complete online admission process for various academic programmes.

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

- **SC/ST, OBC, Women, Persons with varied disabilities, Economically weaker**

sections

- **Outstanding achievers in sports and other extracurricular activities**

    1. Seats reserved for SC/ST/BC/Women/Persons with varied disabilities/Economically weaker sections and sports categories are given due space in the advertisement.

    2. The minimum eligibility criterion is relaxed for students admitted under the SC and ST quota.

    3. In addition, the University through its Centre for the study of Social Exclusion and Inclusive Policy and Department of Community Education and Disability Studies attempt to enhance the access for students belonging to SC/ST, BC, persons with disabilities, economically weaker sections, outstanding achievers in sports and other extracurricular activities.

    4. The University organizes Seminars and Social Network Workshops, Awareness programmes, etc. regarding admission on the basis of such categories.

    5. The University has also created additional seats for Single Girl Child, Cancer, Aids and Thalassemia Patients.

    6. Special Scholarships are made available to support students from economically weaker sections and other reserved categories.

    7. The University has also created additional seats for extraordinary sports persons in a teaching department as well as hostel. Cash awards are given to sports persons as well as managers/coaches. Special Incentives for the outstanding Sports persons such as the following are given:

        ✓ free education (exemption from tuition fee + other fee except exam fee)

        ✓ Free hostel accommodation except mess and canteen charges

        ✓ Free Swimming Pool and Gym facility

Information about Cash Awards to be given to University Players is given below:

Category-A1: Performance in Olympic, World Championships, World Cups, World University Games, Asian Games, Commonwealth Games, World University Championship

Position	Cash Award
First Position holder in individual event	Rs 2,00,000/-
First Position holder team games	Rs 1,75,000/-
Second Position holder in individual event	Rs 1,75,000/-
Second Position holder team games	Rs 1,50,000/-
Third Position holder in individual event	Rs 1,50,000/-
Third Position holder team games	Rs 1,25,000/-
Participation in individual event	Rs 1,00,000/-
Participation in team games	Rs 75,000/-

Category-A2: Performance in Champions Trophy, Commonwealth Championships, Davis cups, Wimbledon, US, French & Australia Open Tennis Championships, Uber Cup, All England badminton Tournament, World University Championship, Cricket Test matches including one day match, International Athletic Meet, SAF Games

Position	Cash Award
First Position holder in individual event	Rs 1,00,000/-
First Position holder team games	Rs 75,000/-
Second Position holder in individual event	Rs 75,000/-
Second Position holder team games	Rs 50,000/-
Third Position holder in individual event	Rs 50,000/-
Third Position holder team games	Rs 30,000/-
Participation in individual event	Rs 25,000/-
Participation in team games	Rs 20,000/-

Category-B: Performance in National Games, National Championships, National Sports Festival for Women by National Sports federation

Position	Cash Award
First Position holder in individual event	Rs 11,000/-
First Position holder team games	Rs 7,500/-
Second Position holder in individual event	Rs 7,500/-
Second Position holder team games	Rs 5,000/-
Third Position holder in individual event	Rs 5,000/-
Third Position holder team games	Rs 3,100/-

Category-C: Performance in All India Inter-University Competitions

Position	Cash Award
First Position holder in individual event	Rs 11,000/-
First Position holder team games	Rs 7,500/-
Second Position holder in individual event	Rs 7,500/-
Second Position holder team games	Rs 5,000/-
Third Position holder in individual event	Rs 5,000/-
Third Position holder team games	Rs 3,100/-

Additional Achievement at International Competitions: If a Player wins more than one

position/event, additional amount of award for additional achievement will be as under irrespective of the category-A1 and A2.

Position	Cash Award
First Position holder in individual event	Rs 10,000/-
First Position holder team games	Rs 10,000/-
Second Position holder in individual event	Rs 7,500/-
Second Position holder team games	Rs 7,500/-
Third Position holder in individual event	Rs 5,000/-
Third Position holder team games	Rs 5,000/-

Additional Achievement at Intervarsity/National Competitions: If a Player wins more than one position/event, additional amount of award for additional achievement will be as under:

Position	Cash Award
First Position holder in individual event	Rs 5,000/-
First Position holder team games	Rs 4,000/-
Second Position holder in individual event	Rs 3,000/-
Second Position holder team games	Rs 3,000/-
Third Position holder in individual event	Rs 2,000/-
Third Position holder team games	Rs 1,500/-

New Record at National and All India Intervarsity Competitions:

     1.   with Gold Medal   : Rs 15,000/-

     2.   with Silver Medal   : Rs 10,000/-

     3.   with Bronze medal : Rs 7,500/-

New Record in Individual event Inter-College Competitions: Rs 2,100/-

2.1.6   Number of students admitted in university departments in the last four academic years:

Categories	2010-11		2011-12		2012-13		2013-14	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	**Male**	**Female**
SC	1638	1155	1702	1424	1852	1485	2001	1736
ST	342	244	401	247	447	322	469	323
BC	548	257	657	437	907	523	880	642
General	16016	10993	15655	11838	17736	13316	17712	13980
Others	84	39	69	38	83	75	129	95
Total	18628	12688	18484	13984	21025	15721	21191	16776

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

University Teaching Departments

Programmes	Number of students admitted				Demand Ratio
UG ➢ 2010-11 ➢ 2011-12 ➢ 2012-13 ➢ 2013-14	19542 20041 22421 23039				2:1 approx.
PG including Integrated Masters ➢ 2010-11 ➢ 2011-12 ➢ 2012-13 ➢ 2013-14	10035 10772 12511 12857				1.5:1 approx
M. Phil ➢ 2010-11 ➢ 2011-12 ➢ 2012-13 ➢ 2013-14	175 149 179 149				1:1 approx.
Ph.D. ➢ 2010-11 ➢ 2011-12 ➢ 2012-13 ➢ 2013-14	542 511 554 538				1:1 approx.
	Number of students admitted				
	Session 2010-11	Session 2011-12	Session 2012-13	Session 2013-14	
Certificate	356	385	386	740	
Diploma	119	212	263	174	
PG Diploma	547	398	432	470	

Affiliated Colleges

Programmes	Number of students admitted				Demand Ratio
UG ➢ 2010-11 ➢ 2011-12 ➢ 2012-13 ➢ 2013-14	116490 123023 141431 156708				1:1 1:1 1:1 1:1
PG ➢ 2010-11 ➢ 2011-12 ➢ 2012-13 ➢ 2013-14	14391 16756 19178 22329				1:1 1:1 1:1 1:1
	Number of students admitted				
	Session 2010-11	Session 2011-12	Session 2012-13	Session 2013-14	
Certificate	-	192	198	98	
Diploma	11	13	14	16	
PG Diploma	1573	1437	1431	1491	

Admissions through Entrance Test in University and Affiliated Colleges

Programmes	Number of applicants	Number of students admitted	Demand Ratio
B.Com-I	6500	2230	2.91 : 1
BA/BCom LLB	2000	180	11:1
UG ➢ 2011-12 ➢ 2012-13 ➢ 2013-14 ➢ 2014-15	8847 12315 15013 19119	940 943 1095 1095	9.41:1 13.06:1 13.71:1 17.46:1
PG ➢ 2011-12 ➢ 2012-13 ➢ 2013-14	16147 17761	2379 2325	6.79:1 7.64:1

| | 2014-15 | 19185 | 3380 | 5.68:1 |
| | | 21501 | 3390 | 6.34:1 |

Ph.D./M.Phil.				
➢ 2011-12		2010	639	3.15:1
➢ 2012-13		1693	684	2.48:1
➢ 2013-14		3054	--	--
➢ 2014-15		2990	--	--

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

Yes, the list of programmes that were discontinued during last five years (Faculty-wise) is given below:

Faculty	Year	Courses
Commerce & Business Management	2011-12 2013-14	MBA Sectoral MBA (Executive) Evening Studies
Education	2012-13	1. M. Phil in Yoga (Semester System) 2. Post Graduate Diploma in Computer Education (Teacher Education) 3. Certificate/Diploma/Advanced Diploma course in Nursery Teacher Training (Add-on Course)
Engineering & Technology	2013-14	The Syndicate at its meeting held on 18.5.2014 has resolved that no admission be made in BE+MBA courses and their sanctioned seats be converted to BE Courses at UIET from the session 2014.
Science	2012-13 2013-14	M.Sc. (Hons. School) Petroleum Geology Advanced Diploma in Child Guidance and Family Counseling
Faculty of Dairying, Animal Husbandry & Agriculture	2009-10 2012-13	1. Dip. In Vocational Agriculture 2. B.Sc. (Four Year Agriculture) Add-on Course in Floriculture & Landscaping.

Language	2012-13	i.	One Year Intensive Course in Russian
		ii.	Elementary Course in Russian Language for Ph.D degree in Science
		iii.	Certificate/ Diploma/ Advance Diploma Course in Slovak
		iv.	All courses under Malayalam, Tamil, Kannada, Telgu, Arabic, Bengali
		v.	Certificate Course in Japanese
Design and Fine Arts	2013-14	Certificate Course in Art Appreciation	

2.2 Catering to Student Diversity

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

Yes. Every teaching department of the University organizes introductory session of about 2-3 hours duration for the fresher's at the very first day of the academic session in the department to generate sensitivity towards the marginal spaces some of the students occupy.

Head of the department and the senior faculty in the department are the experts involved during interaction with the new students and brief them about the salient features of the department. Interactions are also facilitated among junior and senior students.

Students are also familiarized with staff in the department, programme schedule, courses and assessment structures, Computer Laboratories, facilities of scholarships and fee waivers, presence of placement cell, anti-ragging policies etc.

Feedback is always encouraged in order to make sure that all students are addressed through the introductory session. In some departments, interaction of new students with Industry experts is also arranged.

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

The introductory session conducted at each department on the first day of the academic session helps in understanding and assessing the knowledge base and skills of the students.

During admission counseling and introductory session, differential requirements are analyzed after admission and before the commencement of classes, through informal discussion in the department with the students by the Head, Course coordinators and mentors.

The key issues that have been identified most often are lack of prerequisites for a course and lack of communication skills, Computer Skills and Quantitative Aptitude. Extra inputs are provided to students in order to make up these deficiencies and bring them to a desired level of proficiency.

The performance of students in the first and second internal tests which are a part of continuous internal assessment also helps in getting an understanding of the requirements of the student population.

Scholarships are also granted to students from the economically weaker sections.

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

Yes. Given below are courses that are being offered to the students of all the departments during evening hours on specific days:

- Special coaching classes for UGC-NET
- Short-term courses for Communication and soft skill development
- Short-term courses for Computer Fundamentals, Application Software and Internet
- Certificate course in Foreign Languages and Regional Languages

The above mentioned courses do not interfere with the academic time-table of the department.

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

It has been observed that many students from the disadvantaged section of society lack communication skills, computer skills and presentation skills and hence, they require improvement in the analytical and logical capabilities. Different departments take care of the need of the students in different ways, formally/informally.

A steady improvement in their academic growth has been observed in the last few years, for instance, scholarships for disadvantaged sections of society/economically disadvantaged and conduct of special classes/ short tern courses facilitated the academic growth.

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

The University does not follow any formal system to identify and respond to learning needs of advanced learners. Identification of learning needs of advanced learners is done based on their meaningful discussion/ interactions/performance in the theory/ practical/ seminar classes by the class teacher and course coordinator during each semester.

The learning needs of advanced learners are responded to as follows:

- Advanced learners are assigned additional project work in Industry and Research organizations dealing with advanced methodologies and approaches during semester breaks and vacations.
- Special coaching for competitive examinations (IAS, IPS and IFS) and UGC-NET are offered to advanced learners through IAS Coaching Cell of the University.
- Advanced learners are encouraged to participate in workshops, conferences, seminars and symposia conducted by the University and other institutions and motivating them to publish their work in reputed journals.
- They are given enough representations in different programmes like IQAC seminars, campus placements to enhance their confidence levels.

2.3 Teaching-Learning Process

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

Every year, the Vice-Chancellor constitutes a committee prior to start of each academic session for finalization of the Academic Calendar for teaching, learning and evaluation schedules for the Teaching Departments of the University and its affiliated Colleges and the Syndicate of the University approves this Academic Calendar.

Each department also prepares a detailed course schedule (time-table, mid-term exams, final exams etc.) after inclusion of special needs of students, special lectures and enrichment courses for advanced learners. Many departments also plan extracurricular activities by way of constituting various committees with student participation there in.

The schedule of lectures and detailed syllabus for every subject is defined precisely while developing course curriculum and incorporated in the scheme of the particular course.

The allotment of courses and allocation of teachers for specific academic programme is well defined even before commencement of semester.

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

Academic Calendar comprises schedule of activities of University Teaching Departments having Semester System of Examinations consists Summer Vacation, date of opening of Teaching Departments after Summer Vacation, Admission Schedule viz. dates of normal admissions for ongoing and new classes (except for those classes in which admission is through CET), dates of late admission (for ongoing and new classes to be allowed by the Chairperson of the University Teaching Department with late fee, dates of admission for classes (ongoing, new admission classes (other than those admitted through CET), for classes admitted through CET) tentative Teaching Starts, dates of late Admission in the University Teaching Departments to be allowed by the Vice-Chancellor with late fee, dates of Academic Term-I (1st, 3rd, 5th and 7th Semester), Autumn Break, University reopens after Autumn Break, dates of End Semester Examinations, Semester Vacation (Winter Break), dates of Academic Term-II (2nd, 4th, 6th and 8th Semester), University reopens after Semester Examination, dates of End Semester Examinations, Summer Vacation (tentative) for the next year, Total Teaching days of academic terms I & II, also mentions that the departments are free to fix the dates of test/sessional as per their convenience. Adjustments, if any, in the Semester schedule of certain university teaching departments be allowed by the Dean of University Instruction in special cases. Saturday is working during admission days.

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

Course outline, scheme of examination and course schedules (time-table) are provided to the admitted students for a course prior to the commencement (on the first day) of the academic secession ensuring effectiveness of the teaching-learning process. This course format is shared with the students at the beginning of the semester.

The allotment of courses and allocation of teachers for specific academic programme is well defined even before commencement of semester.

The classes are conducted as per the lecture schedule prescribed in the time-table and this system is very effective in covering the syllabus within the time frame prescribed for a semester.

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

University does not face any challenges in completing the curriculum within the stipulated time frame and academic calendar. In case of contingencies, concerned Faculty members take extra classes or external experts are arranged to take advanced topics. An Academic and Administrative committee of each department monitors the effective implementation of the time-table and academic calendar.

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

The learning is made student centric through active participation by the students in the entire teaching-learning process. For instance, Personal Contact Programme (PCP) of various distance-mode courses offered by University School of Open Learning (USOL) promotes students-centric approach in teaching-learning process through question, answer and interactive discussions.

Student-centric learning is ensured by laying more emphasis on interactive learning, collaborative learning, hands on experimental learning, independent learning and by

deploying/ adopting variations in teaching methodology suited to the learning abilities of the students. It is always seen by faculty that lecturing method along with interactive sessions, group discussion, tutorials, practical, demonstrations, case studies and illustrations suits to the level of understanding of the student. Teachers conduct revision lectures for slow learners.

The University provides ample scope through state-of-the-art IT equipment, powerful Internet facility, well equipped and enriched central library, departmental libraries and reading rooms for independent learning.

The following is a list of participatory learning activities adopted by the faculty that contributes to holistic development and improved student learning, besides facilitating life-long learning and knowledge management:

1. Co-curricular activities such as workshops / seminars / competitions / quizzes organized by the University and other institutions.

2. Extra-curricular activities – NCC/NSS camps, Blood Donation Camp, AIDS awareness, etc.

3. Live projects at group and individual level, where self-learning by students form the core.

4. Cultural activities organized by University (Youth Festivals), private and government organizations.

Most of the courses have fieldwork, project work; internship training, mini research project and an outreach / extension activity which facilitate skills oriented learning, are open to a larger audience for collective scrutiny, and are mandated as part of curriculum across the University. Visits to the industries and research institutes help the students to know more about the upcoming technologies and the prospects of building their career.

A Placement Brochure is brought out every year and it is a platform for the students to bring out their writing skills, artistic activities, innovations, creativity etc.

Students participate in seminars regularly by accessing information through books, journals and the internet and present the same within a stipulated time frame. This entire process makes the teaching learning method participative and Student-centric.

Learning through involvement in such areas as sports, cultural activities, hobbies, and recreation and volunteer activities leads to lifelong learning in an active form.

Flexible pacing, one of the Tools/teaching strategies of holistic education, is put into practice by the faculty, that allows students to feel that they are not rushed in learning concepts studied, nor are they held back if they learn concepts quickly.

Learning is also made student-centric through Web-based seminars (Webinars). The list of Webinars (8 in number) is given below:

Sr#	Date	Title of Webinar
1.	26-03-2014	The Mobile Device in the Big Data World
2.	20-03-2014	Image Processing Made Easy: MATLAB
3.	18-03-2014	What is Really Happening on Your Network?
4.	05-02-2014	IBM Connections
5.	16-01-2014	Infrastructure Matters
6.	16-01-2014	Infrastructure Matters
7.	15-01-2014	PureFlex Systems
8.	09-01-2014	Mathematical Modeling with MATLAB Products

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

University's policy on inviting experts/ people of eminence/ academicians of repute to deliver lectures and/or organize the workshops/ seminars for the benefit of the students is extremely liberal and has separate budget heads (under improvement of education grant/ UGC unassigned research grant/ higher education grant).

Almost all University Departments organize a large number of guest lectures and visits of eminent personalities from time to time and are drawn from both industry and academics. Some UGC-SAP departments have provision (UGC-SAP visiting fellow grants) for inviting people of eminence as visiting fellows for longer durations ranging from one week to three months.

The University's colloquium series draws outstanding speakers from around the country and abroad, as well as providing an opportunity for faculty and students to have a meaningful interaction with the speakers.

Recently, Professor Dinesh Singh delivered a talk on "From the Indus Valley to Srinivasa Ramanujan: A History of Indian Mathematics" to the students on February 19, 2014. Honorarium up to Rs. 5000 has been permitted for eminent experts of high national standing along with the travel and boarding expenses.

University permits and encourages teaching staff to organize national / international seminars, conferences, workshops etc. which offers a platform to invite experts / people of eminence to deliver lectures and share their experiences.

The University also organizes public events like the Technology Day, World Environment Day, and Teacher's Day etc, in which the luminous alumni who have excelled in various fields share their experiences with the students in an interactive forum organized by alumni association.

Twenty one (21) colloquium talks were organized under the colloquium series of lectures. The list is available at Q.1.3.5 of Criterion-III. 103 conferences were also held from Nov-2010 to Sep-2014.

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

Yes, in 1997 Panjab University established fiber backbone network connecting all academic building including Administrative Block and A.C. Joshi Central Library on the Campus with a mission to blend e-learning resources with the face to face mode of teaching.

The University formally encourages blended learning by using e-learning resources in the following ways:

- The Computer Centre of the university provides assistance to educate the students free of cost in acquiring computer skills such as Use of Internet, E-mail, MATLAB, Microsoft Excel, SPSS package, etc. Webinars are held at Computer Centre through NKN programme.

- The University has a central digital library (AC Joshi Library) which provides for the digital and e-learning resources and is virtually open 24 hours with special skilled staff to guide whenever necessary. Various e-learning resources such as online Journals, CDs and online data bases through INFLIBNET/ Web of Science are used by the students to enhance their knowledge.

- Faculty members provide references to printed books, the links of web tutorials, web resources and e-books to the students as e-learning resources.

- The free access intranet/internet connection in the University offers an interactive facility among the departments of study to share and support each other's needs. It provides an impetus to inter-disciplinary research and availing the database for investigative exercises

in each other's domain. The students can enjoy the benefits of open source learning materials, online educative resources and special purpose software.

- Most of the departments are having subject specific databases, interactive learning software and e-learning resources for the benefit of the students and the faculty. Students are also exposed to open source reference materials and online educative resources.

- Computer aided presentation of the Science/ Engineering lessons as provided by NPTEL of IIT and Sakshat of MHRD.

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

Technologies and facilities that are available in the University and are used by the faculty for effective teaching are given below:

- Each department is provided with necessary number of computers and peripherals including printers, scanners etc. with current configuration for supporting academic and co-curricular activities, community outreach, collaborative, and administrative activities and is connected through LAN, WAN and Wi-Fi.

- Full-fledged computer centre extends support for high-speed internet path for better access as well as for training and maintenance of ICT facilities. There are about 2500 PCs and about 500 computer peripherals with good number of laptops and servers are available. Computer Centre provides excellent academic computing facilities (SPSS, MATLAB, and MATHEMATICA) for effective teaching.

- The Computer Centre provides DNS, Web, Mail, Database Services, e-resources and e-journal access to the Faculties and Students of the University. The Centre also updates and uploads the day to day University information like tenders, results, seminars, workshops, conferences, admissions, appointments, department information, course syllabi and time tables with the help of the website (www.puchd.ac.in).

- The University has set up Virtual Class Room (ViCR) and Video Conferencing facilities at Computer Centre for organizing Webinars leading to effective teaching. 1GB National Knowledge Network (NKN) Broadband line is installed in the Computer Centre of the University.

- At the beginning of every academic year, orientation programmes are arranged by the library staff. In addition to orientation programmes, sensitization/awareness programmes and hands-on training are also arranged for the optimal use of INFLIBNET facilities. All the PG students, research scholars and the faculty members make optimum utilization of these resources for teaching-learning process and research work.

- Educational CDs and DVDs are made available as a learning material. Various e-learning resources such as e-Journals, CDs and online data bases through such as UGC-INFONET/INFLIBNET/ Web of Science are used by the Faculty for effective teaching and to enhance their knowledge. Open-source software such as 'Linux', 'Apache', 'MySQL', 'PHP', 'OpenOffice, 'GIMP', 'SAGE', 'SCILAB', 'gcc' and Java' are also being used by the faculty for effective teaching.

- The open educational resources such as NPTEL/ Sakshat available through web are assessed by every course teacher and are recommended to the students for further reference after considering its authenticity.

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

Yes. There is a group of faculty members in the Department of Computer Science & Applications who are performing as well as guiding research to explore and monitor the trends and issues regarding Open Source Software (OSS) development. A study was carried

out to determine the impact of Defect Management on Open Source software quality that proposed a process to distribute roles and responsibilities among volunteer participants which can help OSS projects to improve the effectiveness and efficiency of Defect Management and hence assure better quality of OSS Projects.

As OSS development activities are recorded in various tools and code repositories during its lifetime, longitudinal data is available for study. Currently another study is being carried out that intends to explore the impact of the different types of coordination and communication tools on the progress of the OSS projects across various project categories over a longitudinal span of time. Another study is being planned to leverage the benefits of OSS in education among colleges and University departments by widespread adoption.

The faculty involved in preparing the curriculum attempt to regularly incorporate open source software developments in the various fields in the syllabi of the different courses to shed light on the recent trends and bestow on the students its influence in understanding the concepts better.

The faculty members discuss the lecture notes made available as open source material from eminent professors with the students leading to enhancement in knowledge.

2.3.9 **What steps has the university taken to orient traditional classrooms into 24x7 learning places?**

The University is making use of the latest information and communication technologies for teaching and learning processes.

Each department is provided with necessary number of computers and peripherals including printers, scanners, LCD projectors etc. with current configuration and powerful Internet with Wi-Fi facility for supporting academic and collaborative, activities, to orient traditional classrooms into 24x7 learning places.

As a part of its intention to make class room in to 24x7 learning places, the University has incorporated lectures on computer training, use of digital library, use of internet, web surfing etc. as a part of curriculum for the students and teachers.

The use of modern multimedia teaching aids like LCD projectors, CD-ROMs and computer systems are usually employed in classroom instructions. In some departments, computer-based packages are used to elucidate abstract knowledge and virtual instruments through computer animation. Students are also encouraged to use computer software packages for meaningful analysis of the experimental data collected/acquired by them. Students view lecture series and popular videos of topic of their concern in the class rooms.

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

Yes, there is a provision of counsellors / mentors/ advisors for group of students in a class for academic, personal and psycho-social guidance.

A faculty member in each department is made in-charge of a class of students, functioning as a mentor and providing academic, personal and career guidance to the students on all academic matters besides personal counselling and to enhance the potentialities of the students.

The teacher in-charge will assist the students to cope with the curriculum, understand the University's expectations of its students, participate in co-curricular and extracurricular activities, solve personal issues, as well as groom their skills and aid in personality development.

This practice has led to a better sense of belonging and purpose for the students as evidenced by the declining trend of absenteeism, and a perceivable proactive involvement in the academic and other activities in the department. For the teachers this has provided feedback and introspective review of academic transactions.

For instance, there are three are about 300 students distributed in 8 different classes in the department of Computer Science & Applications and one faculty is assigned each class. Hence, on the average there is one mentor for every 25 students in the department.

Career Guidance and Counseling Cell is functioning in the University from the year 2012 under the UGC Plan to give Psycho-socio guidance to the student community. It runs from 9 am to 5 pm on all the working days.

It also has a Career Guidance and Counseling Student Committee that has been duly approved by the Vice-Chancellor of the University. It provides a good platform for students to represent their career developmental needs in their respective departments and fields. It facilitates the process of planning and executing appropriate interventions that will address those needs. The committee also serves the purpose of bringing a better or a more direct connection between the cell and the student community. Currently the committee has volunteers from 12 out of the 75 departments in the University. The number is expected to increase as the existing volunteers plan to make use of social networking sites and other forms of media to create awareness.

Irrespective of the figure, it is believed that with the evolution of such a committee, the Career Guidance and Counseling Cell will be able to give more inputs for the career development of the students. The current members of the committee range from students pursuing their graduation to Ph.D scholars. Besides contributing to their community, the involvement of students enhances the personality and skills of the volunteers in the form of an unshakable confidence, planning and organizing skills, creative mind, leadership, team spirit etc.

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

The following innovative teaching approaches/methods are put to use by the faculty in the university:

Industrial Visits, Webinars, Seminars, Role Play, Presentation, City Visits, Educational Tours, on the job trainings and field works as different methods of teaching have improved the delivery and understanding of the students.

Digital technologies like LCD are used to provide a real time animation and present the concept in a most attractive and acceptable way. In addition, internet based discussions are encouraged by directing the students to present a relatively new advancement in the subject concerned. Video lessons are also used.

Students are supplemented with e-resources by the course teacher through e-mail. Video-conferencing and Continuing Education programs are used consistently for the past few years with good results.

Students are assigned live projects as case studies that are aimed at testing the application of theoretical concepts to industry situations. Students are divided into groups to work on projects and make class presentations to collectively work with team spirit and share their knowledge.

These innovative practices help the students to bring out the hidden talents, to better understand the subject, to augment inclination towards subject and to enhance active learning process.

The effectiveness of these innovative practices is assessed by comparing the student's performance in examinations and other academic practices with previous teaching methods.

Feedback mechanism is used to evaluate the impact of such teaching practices, wherein the students are asked to provide feedback through a well-designed FEEDBACK PERFORMA to understand how to impart education in a better way.

To enhance involvement of teachers in such teaching practices, the teachers are given in-service training. The teaching aids like CDs, Pen drives, computers, projectors, etc. are also made available to the teachers. The innovative methodology adopted by a teacher is considered as an important criterion to assess the performance of teacher in his/her Career Advancement.

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

Various academic activities like webinars, seminars, debate, extempore speaking, essay competition, group discussions, symposia, poster presentations, field survey, making models and practical exercises of curriculum are conducted from time to time, to nurture creativity, critical thinking, and scientific temper among students.

Each department of the University organizes Inter departmental Cultural Programme for the students. The Dean of International Students maintains close liaison with the Indian Council for Cultural Relations (ICCR) in regard to their Programs for the International Students. He also maintains liaison with Dean of University Instruction, as well as Principals of Affiliated Colleges in Chandigarh in regard to the welfare of International students.

The office of the Dean of International Students helps International students in organizing their cultural functions/sports etc. and organizes various activities such as educational trips, Orientation-cum-Cultural Exposure Programme, English Soft Skills Workshop, Annual-cum-Farewell Function, various social functions etc.

The University promotes participation of Students in research activities. Student's participation in research is encouraged in all departments through research projects that are a part of the evaluation process. For the PG curriculum, research thesis is submitted to University for the master degree. The faculties are promoted to enroll for Ph.D. and are also encouraged to conduct their research. Students also attend training programs in research methodology. Students are encouraged to undertake small research projects to be submitted to funding agencies.

The University promotes and support financially for good paper presentation, poster presentation in national and international conferences and also publication in national/ international journals of repute.

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

Yes, the University considers student projects mandatory in most of the PG programmes. That is, student projects are mandatory in most of the programmes offered by the University.

Student projects are an essential aspect of student output and progress. They are tracked by the dissertation process which begins in the third semester of the MA/M.Sc./M.Tech./M.Lib./MCA/LL.M. programmes; the projects are evaluated along with the dissertations at end of the programmes i.e. in the fourth semester.

- Number of projects executed within the university : 10-20% of a given course
- Names of external institutions associated with the university for student project work
    - Post Graduate Institute of Medical Education & Research
    - Central Scientific Instrumentation Organization
    - Institute of Microbial Technology
    - Indian Institute of Science Education & Research
    - National Institute of Pharmaceutical Education & Research
    - National Agri Food Biotechnology Institute

- Terminal Ballistic Research Laboratory (TBRL)
- Indian School of Business
- Punjab Engineering College of Engineering and Technology
- Indian Institute of Technology, Ropar
- National Institute of Technical Teachers' Training and Research
- Government Medical College & Hospital
- Institute of Nano Science & Nano Technology
- Centre for Agro Processing
- IT Companies such as InfoSys, TCS, Infogain, Arricent etc.
- Himachal Pradesh University, Simla
- Guru Nanak Dev University, Amritsar

Much of the field-based project work is carried out in collaboration with external agencies / institutions in the development sector, NGOs, industry, community based organizations and State bodies, like NCERTetc.

- **Role of faculty in facilitating such projects**

The Faculty plays a role of guide in the research projects. If the research is carried out of the institution then a co-guide is appointed for the same.

The guide and co-guide help the students in identifying the research topic and complete the research project.

The faculty is primarily responsible for helping students develop viable project ideas that satisfactorily meet the requirements of internships and dissertations and work with the students continuously to ensure optimal learning and quality.

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

Yes, the teaching faculty of the University comprises specialized fraternity in different fields to address the requirements of the curriculum. However, resources and faculty of other departments support the inter-disciplinary aspects of each department.

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

The faculty uses the department computers and LCDs for preparing power point and other teaching materials. Facilities such as audio visual aids, microphone, LCD projector, high resolution cameras, digital document camera, language speech lab, LCD, tape recorder and television are available in this perspective.

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

Evaluation feedback is received from students regularly for all the courses. The pointers raised serve to improve the existing teaching methodology and better teaching practices. The alumni are regularly contacted to identify the strengths and weaknesses in the curriculum and the necessary changes are incorporated periodically in the curriculum.

The feedback from the students regarding curriculum both on the course content and teaching methodology is being taken by the faculty on informal and periodic basis at the end of every Semester.

The University has prepared formal student feedback system and it is being introduced from the current session 2014-15. The format of the feedback form is given in Q-1.4.1 of Criteria-I on Page 57.

This feedback form is distributed to the students in the class by the concerned teacher. The students at the end of each semester submit a proforma detailing the merits and demerits of each course.

2.4 Teacher Quality

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

Faculty through self-learning and specialized external training (Academic Staff College, Faculty Development Programmes or any other), as and when possible meet most of the needs of the changing requirements of the curriculum.

Academic Staff College regularly organizes orientation, refresher, short term skill development programmes for the faculty members. The University administration encourages faculty members to attend these academic training activities in our University as well as in other institutions.

The University is pro-active in facilitating faculty members to attend/ organize conferences, workshops, lectures, webinars and seminars. These academic activities keep the faculty abreast with the latest in the world. This also helps to meet the changing requirements of the curriculum. Peer-reviews and learning are also part of the process.

The University always emphasizes on improving teaching-learning resources by offering various facilities to the teaching staff such as

(a) Providing state-of-the-art IT equipment including Larger Internet Bandwidth, Computing software etc

(b) Providing rich library resources including e-resources

(c) Providing financial support / research grant to carry out research, publish papers in scholarly journals

(d) Undertake consultancy assignments as per the rules of Centre for Industry-Institute Partnership programme (CIIPP) of the University

(e) Collaboration with other departments in the University that encourages human resource to travel across Programmes and Departments and collaborations with other institutions for development and conduct of courses

(f) Organizing periodic workshop by prominent experts and practitioners

(g) Arranging Consultative meetings with external experts

(h) Inviting Guest faculty wherever required.

2.4.2 Furnish details of the faculty

Highest Qualification	Professors		Associate Professors		Assistant Professors		Total
	Male	Female	Male	Female	Male	Female	
Permanent teachers							
Ph.D.	103	94	45	37	101	120	500
M.Phil.&PG	03	01	06	11	84	78	183

Temporary teachers							
Ph.D.	00	01	00	00	16	14	31
M.Phil.&PG	00	00	04	01	57	66	128
Part-time teachers							
Ph.D.	00	00	00	00	01	00	01
M.Phil.&PG	00	00	00	00	08	15	23

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

Yes.

Department / School	% of faculty from the same university	% of faculty from other universities within the State	% of faculty from universities outside the State	% of faculty from other countries
Whole University	54%	13%	33%	--

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

Qualified faculty is appointed for new programmes in emerging areas of study as per the norms of the UGC, which takes into consideration API score of the candidates.

The following procedure is followed systematically for the appointment of experienced, young, dynamic, and well trained faculty:

(1) An advertisement is given in the National Newspapers as well as on University web-site (http://jobs.puchd.ac.in) indicating the number of vacancies, essential/desirable qualifications and experience & expertise requirements.

(2) The received applications are screened based on well-defined criterion for computing the API score and shortlisted applicants are called for an interview on the basis of the University Notifications.

(3) As per the norms, a Selection Committee is constituted consisting of Vice-Chancellor, Dean of concerned Faculty, Chairperson of the Department, Three Subject Experts and a Nominee of the Chancellor. They conduct the interview for the candidates on the particular day with prior intimation.

(4) Selected candidates are intimated through a letter of appointment.

More than 100 Assistant Professors have been appointed to teach new programmes during the last four years.

Faculty Strength Information as on 10.09.2014

1.	Total number of sanctioned posts:	1594
2.	Total number of filled up posts on regular basis:	732
3.	Total number of filled up posts on adhoc/temporary basis:	154
4.	Total number of vacant posts:	708

Category-wise No. of teaching Staff as under:-

Category	Female	Male	Total
SC	40	52	92
ST	4	3	7
OBC	0	0	0
PWD	0	9	9
General	331	293	624
Total	375	357	732

No. of teaching staff recruited during the last five years:

Year	Recruited/Filled faculty		
	Professor	Associate Professor	Assistant Professor
2008-09	2	3	43
2009-10	4	-	17
2010-11	3	11	28
2011-12	1	0	52
2012-13	2	2	29

2.4.5 How many Emeritus / Adjunct Faculty / Visiting Professors are on the rolls of the university?   *Adjunct   : None   Visiting: None*

Emeritus   :   2010-11: 37

2011-12: 44

2012-13: 40

2013-14: 41

2014-15: 39

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

The University encourages teachers to regularly attend orientation / refresher / Faculty Development programmes for in-service training in new technologies in emerging fields through Academic Staff College of UGC.

The University also has a provision to provide financial assistance and special study leave to teachers for attending national / international workshops / conferences / seminars and organising national / international conferences.

The University encourages teachers to apply for research grants and supports the implementation of such proposals with adequate infrastructure facilities. The teachers are permitted to avail study leave for pursuing research in their field of study.

The University allows departments to procure state-of-the-art equipment to upgrade their existing laboratories and for the establishment of new labs.

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

Many faculty members have received awards / recognitions for excellence in teaching at the state, national and international level during the last four years.

The following Table depicts the number of faculty who received awards/recognitions for excellence in teaching.

Table: Awards/recognitions for teachers

Year	State Level	National Level	International Level	Total
2009-10	--	**14**	**04**	**18**
2010-11	--	**25**	**04**	**29**
2011-12	--	**24**	**04**	**28**
2012-13	--	**08**	**03**	**11**

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

The following table shows the number of PU faculty who underwent staff development programmes during the last four years:

Academic Staff Development Programmes	2010-11	2011-12	2012-13	2013-14
Refresher courses	156	153	165	143
Summer and Winter Schools	-	-	-	40
Orientation programmes	73	72	76	68
Staff training conducted by the university	-	-	-	71
Staff training conducted by other institutions	-	-	-	-

2.4.9 What percentage of the faculty have (for 2013-14)

- **Been invited as resource persons in Workshops/Seminars/Conferences organized by external professional agencies?**

  International=34 National=291 State= 154

- **Participated in external Workshops/Seminars/Conferences recognized by national / international professional bodies?**

International=171   National=783   State= 194

- **Presented papers in Workshops / Seminars / Conferences conducted or recognized by professional agencies?**

  International=133   National=511   State=96

- Industrial engagement? Some faculty members are involved in industrial research projects and Rs 17.62 lacs were generated through CIIPP.

Detail of Extension Lectures Delivered by the Faculty

Sr.	Year(Session)	No. of Lectures
1.	2012-13	1021
2.	2011-12	727
3.	2010-11	642
4.	2009-10	430

Detail of Extension Lectures Organized by the Department

Sr.	Year(Session)	No. of Lectures
1.	2012-13	627
2.	2011-12	400
3.	2010-11	356
4.	2009-10	252

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

The Board of Studies in each department meets periodically to discuss and finalize qualitative changes in the curriculum for different courses through detailed discussions with internal faculty, external experts and practitioners. The deliberations also make recommendations on question paper setting and other possible examination reforms.

In addition to these formal initiatives, there has been a constant emphasis to instill in a spirit of auto-critique and self-reflection. This has translated into deliberations among faculty around philosophy of pedagogy, rationale underpinning the assessment policy, interdisciplinary, and accountability and student vulnerability at University level. In this spirit, general meetings involving all faculty members have been organized annually.

Curriculum development:

Autonomy has provided space for including and framing the curriculum as per the advancement in technology and the need of the society. All faculty members in a Department are the members of Board of Studies. Board of Studies meetings are conducted periodically (4-6 times a year) with experts from subjects as well as industry. The suggestions are carried out in the curriculum by introducing new papers, hands-on-training like practical, projects, internships and so on.

Teaching-learning methods:

(a) Apart from class room teaching seminars, quiz and invited lecturers are arranged.

(b) Participative learning and other ICT methods of learning are provided to students.

(c) Field works, Workshops, Internships and Project presentations are some of the methods of Teaching and Learning.

(d) In-house and Collaboration projects are also encouraged.

Examination reforms:

(a) Compulsory Question consisting of Short-answer question, Multiple Choice Questions and True/False for all the papers.

(b) Supplementary exams for reappear candidates are conducted along with regular exams in odd as well as even semesters

Content / knowledge management:

(a) The University encourages all the departments to organize workshops / seminars / conferences at National and International level.

(b) Leading experts in the field concerned are invited for guest lectures in almost all departments.

2.4.11 Does the university have a mechanism to encourage

- Mobility of faculty between universities for teaching?

- Faculty exchange programmes with national and international bodies?

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

The University permits and encourages faculty to accept invitations for delivering lectures in colleges, universities and research institutes within India and abroad.

The university constantly enters into MoUs to have tie ups at regional/national and international levels for exchange of knowledge and expertise and for the purpose of keeping pace with the latest technological advancements in different fields. The faculty gain experience by undergoing training through exchange programmes with institutions within India and abroad

Twenty seven (27) MoUs have been signed during the last four years.

2.5   Evaluation Process and Reforms

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

Each Department of the University conducts an Orientation session for newly admitted students at the beginning of the academic year to familiarize them with the Academic and University system, teaching-learning process, laboratory and library facilities and the evaluation techniques that are in place.

The details of the semester pattern, code of conduct, examination and evaluation methods are communicated to the concern stakeholders from time to time through Academic Calendar, Regulations, and the Prospectus and by Circulars and Display on Notice Boards and University website.

Students are also informed and trained during the classroom and teaching sessions by their faculty regarding internal and University examination format.

1. The University introduced the spot evaluation of all the answer books for Under Graduate and Post Graduate classes

2. Provision of rechecking of answer books is also available.

3. In case of re-evaluation of answer books if difference of evaluation is more than 15% after re-evaluation the same answer book is passed on to third examiner to ensure the best transparency of Re-evaluation.

4. There is accessibility of photocopy of marked answer books as per provision.

5. All the answer books are shown to the students after evaluation of answer books before declaration of result in all Teaching Departments of University.

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

The University has initiated many important reforms in examination system as mentioned below:

(a) Implementation of Examination Grievance Monitoring System (EGMS)

The purpose of EGMS is to help the students to file examination related grievances which in turn are sorted out by the University in a time bound manner and this step adds another dimension to the convenience of the students.

The facility is available to all the students of PU Campus and its affiliated colleges. For availing the facility, the candidates would have to just post their grievance through e-mail examgrievances@pu.ac.in in a prescribed format, in which one would have to give their roll number, name, class, session, grievance type, brief description and contact number.

PU students having grievances related to roll number not received, DMC or degree certificate not received, result related enquiry, re-evaluation result enquiry, fee related enquiry, correction in form, wrong subject, problem in examination form, submission of documents and any other examination related issue can email their enquiries to the examination branch.

(b) Adoption of Online submission of forms for UG/PG examinations

The facility has been introduced as part of PU's initiative to introduce examination reforms, and allows students to get their roll numbers online and access information regarding examination centres and results for various courses offered by the university.

Under the first phase of the project, the facility is extended to all PG students in the campus and those studying in various affiliated colleges of the university in Punjab and Chandigarh, including students of University School of Open Learning (USOL) and private candidates.

The second phase will include all the under-graduate students of PU, its affiliated colleges and four constituent colleges in Punjab/

PU's official website includes details regarding the procedure of filling the form and deposit of fees (http://pgexam.puchd.ac.in) as given below:
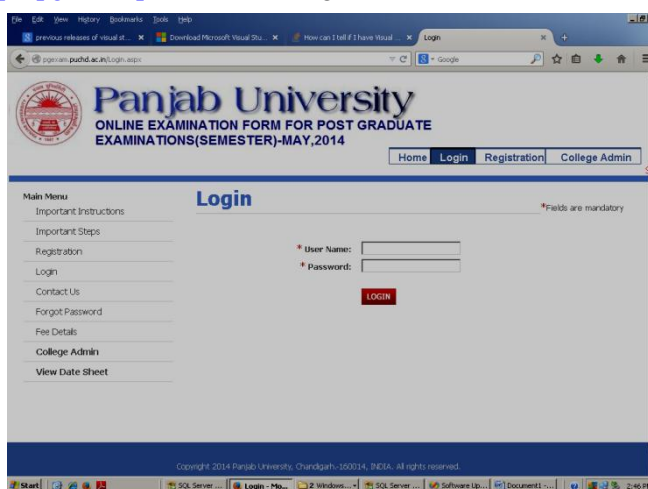
(c) Introduction of innovative evaluation system based on continuous assessment of the students, rather than the single examination system

For each course being offered, a minimum of two/three assessment tests are presented to the students and this assessment carries a total of 20% weightage for PG courses and 10% weightage for UG courses. These assessment tests comprise a variety of modalities, including individual and group exercises, quizzes, simulations, viva-voce, audiovisual presentations, term papers and case discussions. Each assessment test is thus meant to aid the process of teaching and learning based on continuous assessment. The University has instituted a system of student feedback after each assessment in which the answers are discussed and the marking system shared. All examination-related activities are handled by the Academic Committee of the department.

(d) The implementation of RTI Act has brought out the most effective and student friendly reform in regard to the examination system. The University has now made students entitled to see their evaluated answer books and get the photocopies of them by paying a nominal fee. This single reform has improved the quality of evaluation process by making it completely transparent

(e) Supplementary exams are introduced in the last semester within one month of the publication of the results and this helped the students to go for higher studies without wasting one year.

(f) Online system of processing re-evaluation forms

In a move that is likely to benefit around 15,000 students, who seek re-evaluation of their examination answer-sheets and are disappointed by the delay in declaration of results, the varsity has now decided to do away with the long process of manual processing of application forms for re-evaluation. It has now shifted to the online system of processing.

However, with the implementation of the online system, the data of the candidate, which is put online, will be available to all branches like the Computer Unit, Conduct, Secrecy or the Examination branch through INTRANET.

(g) Adoption of OMR based Form/ Answer sheets for timely processing of forms and declaration of results

OMR based form enables faster processing of examination application of the candidates and also error free updating of students information viz., name, date of birth, address for communication, community and subjects for which they are appearing etc.

Based on this information, the nominal roll, seating arrangement and hall ticket are prepared and sent to the respective departments/colleges online. Further, it helps the University in getting actual number of candidates appearing for each subject and this in turn enables setting and printing of question papers.

The practical marks and internal assessment marks are also obtained online from the University departments and affiliated colleges. This system has reduced malpractice and saved a lot of time in creating the data.

The OMR based method of evaluation is being used to avoid mistakes in coding and decoding of answer sheets at UG/PG levels to ensure unbiased and error-free evaluation and to save time

The University communicates the outcome of the evaluation promptly by publishing results on the internet through the University website. This is apart from the publication of detailed results displayed on University/department notice boards.

A sample of Answer-script with OMR based cover is given below:

Summary:

Online submission of examination forms, E- admit Card, Single Window Enquiry ,Online Submission of Assessment , Data received through on line system is accurate as student and as well as college fill themselves and eligibility is also updated by the college and External Practical. Direct submission of form and admit card available to the students at the distance level. All the discrepancy regarding to the Examination Forms is updated in the on line system for example +2 certificate required, SC category certificate required etc.

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

The University results are generally declared within 45 days in the case of UG annual examinations (in UG classes results of all the colleges are also included). The PG results of semester based examinations are declared within 3-4 weeks, depending upon the strength of students.

The various examination reforms such as the computerization of the exam and result related process have helped the University to improve the process and the results are also prepared in-house by University Computer Unit in the Administrative Block. So far, there has been no delay in the publication of results during the last many years.

The University communicates the outcome of the evaluation promptly by publishing results on the internet through the University website (http://results.puchd.ac.in). This is apart from the publication of detailed results displayed on University/department notice boards.

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

Internal assessment system has been introduced in most of the teaching departments of the university wherein every student is shown his/her evaluated answer sheet before the finalization of the result.

Appointments of evaluators are recommended by concerned Board of Studies and are duly approved by the Vice-Chancellor. The evaluation process is supervised by the Head Examiner in each course at UG and PG level. Evaluation is supervised by the Co-coordinator or Observer. All the answer books are in OMR format with bar code as well as with Security features.

Each faculty member explains the course assessment scheme, schedule and the various criteria for evaluation for a course with the students at the beginning of the semester and this is strictly adhered to.

Moreover, individual course in-charge lends themselves to answering queries that come their way. There are systemic structures in place such as the Academic and Administrative Committees to address any grievances in relation to teaching, learning and evaluation.

There is full-fledged confidential section with Assistant Registrar, Deputy Registrar and Controller of Examination. The section maintains strict confidentiality. Paper setters, appointed by BoS, himself/ herself prepare set of question papers and these question papers are put in a sealed and signed envelope by the paper setter himself/herself. Full confidentiality and secrecy is ensured with reference to examination.

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

- Pre-examination processes – Time table generation, OMR, student list generation, invigilators, squads, attendance sheet, online payment gateway, etc.
- Examination process – Examination material management, logistics, etc.
- Post-examination process – Attendance capture, OMR-based exam result, auto processing, generic result processing, certification, etc.

Yes, the University has an integrated examination platform for Pre-examination, Examination and Post-examination processes handled by System Managers and Programmers and headed by the Controller of Examinations.

Pre-examination process: The students register themselves for examinations through an online procedure/OMR based form. Arrangement for Invigilators, Flying Squad, Centre-wise/subject-wise Student cut-list, demand preparation, Fee Checking report, Attendance sheet and Roll Number Slips are made well in advance. The University has recently made a provision for online payment of fees through SBI (https://www.onlinesbi.com and click on SBI Collect) by using either SBI Internet Banking or by ATM Debit Card / Credir Card of any Bank.

Examination process: All the examinations are held at examination centres identified by the University to check the malpractices and to ensure transparency. The centre schedule and other arrangements for students are well prepared and announced in advance. The examination materials related to conduct of examination and logistics are centrally provided by the office of the Controller of Examination involving secretarial staff whereas invigilation is taken care of by teaching staff.

All the University results are processed after scanning of OMR answer books. Computerized result preparation and computerized certificate/degree printing with photo are also in place.

The University has introduced some 5-8 years ago, the system of Optical Marking recognition (OMR) based answer scripts with OMR based cover page consisting of four parts, Part-A to Part-D and this has helped in transferring data to computers besides eliminating manual data entry operation.

Part-A and Part-D are to be filled by the candidate and consist of data fields such as Answer sheet #, PUPIN/Roll Number, Exam Code, Subject Code, Barcode etc.

Part-B and Part-C are to be filled by the Examiner and consist of Details of marks, subject code, examiner ID, Answer book Code #, signature of examiner/head examiner, Barcode etc.

OMR based answer sheets are now in use for professional course Entrance examinations to avoid human error besides hastening the process.

Post-Examination process: Part-D is taken out from the answer-scripts and scanned to capture the barcode and other data filled in by the candidate to avoid malpractices. On completion of valuation of answer papers, the scanning of these answer-scripts to capture the marks and other details and final processing of results and degrees is totally carried out using Computer Based Examination System.

Immediately after publishing the results, the Mark Sheets and Provisional Certificate are sent to the colleges for onward transmission to students. Immediately on publication of results, the students are permitted to apply for revaluation and re-totaling of their answer papers in the subjects of their choice. The revaluation process begins with assigning of dummy numbers, inviting the examiners who have not evaluated the answer papers earlier, processing of results and publishing the results within a month.

All the practical bills are submitted by the examiner/college for all UG/PG course and are punched in the computer application against the Unique ID given to the examiner by the college. Consolidated Report (examiner wise) is also sent to the Accounts Branch for the payment of bills.

Computerized Maintenance of the data of the entire paper setters is done so that seniority wise list of paper setter is generated every year.

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

- Comprehensive Ph.D. Entrance Exam

- Course work as mandated by UGC regulations 2009 is introduced in all faculties.

- Mandatory training on research methodology to inculcate best practices in research

- Assessment of research progress every 6 months by departmental research committee (DRS)

- Pre-submission presentation to research degree committee (RDC) headed by Dean of concerned faculty.

- One national and one international journal publication in the topic of research is made compulsory for thesis submission.

- All the Chairpersons/Directors/Regional Heads are requested to send the Panel of Examiners three months earlier, before the submission of Ph.D. thesis. Evaluation of thesis is done by 2-3 examiners specializing in the area of research. The period of repetition of examiner is reduced to six months from one year. At the time of submission of thesis the CD (soft copy) of the thesis is also obtained from the candidate.

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

Yes, the university has made a provision for including the name of the college in the degree certificate. A sample of the degree of certificate is given below:
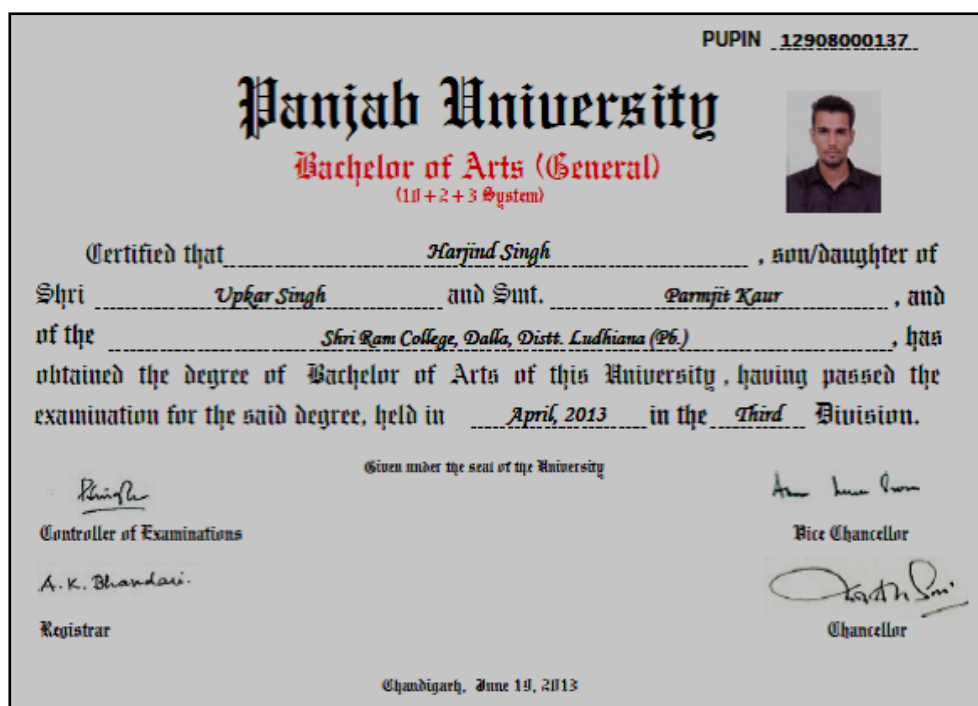
2.5.8 What is the mechanism for redressal of grievances with reference to examinations?

The University has implemented Examination Grievance Monitoring System (EGMS) for redressal of grievances with reference to examinations.

The purpose of EGMS is to help the students to file examination related grievances which in turn are sorted out by the University in a time bound manner and this step adds another dimension to the convenience of the students.

The facility is available to all the students of PU Campus and its affiliated colleges. For availing the facility, the candidates would have to just post their grievance through e-mail examgrievances@pu.ac.in in a prescribed format, in which one would have to give their roll number, name, class, session, grievance type, brief description and contact number.

PU students having grievances related to roll number not received, DMC or degree certificate not received, result related enquiry, re-evaluation result enquiry, fee related enquiry, correction in form, wrong subject, problem in examination form, submission of documents and any other examination related issue can email their enquiries to the examination branch.

Finally, these grievances are punched in the application software and passed on to the concerned dealing official and the time taken in resolving the grievances are three to four days and 90% of the grievances are resolved by the dealing official.

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

The University has already introduced online registration of candidates for the semester examinations as well as entrance. The objective is to reduce the time of the processing of the examination applications of the candidates and also to ensure error-free updating of student information and generation of various lists such as attendance chart, cut-list etc. The University has also implemented the online registration of practical and internal marks of the candidates and this enables the University in processing the examination results quickly.

The University has initiated many important reforms in examination system to streamline the operations at the Office of the Controller of Examinations and these are given at 2.5.2 above.

Computerization in the Examination Branch:

1. On line provision of receipt of Examination Form and E- Admit Card,

2. On line updation of discrepancy regarding the eligibility of the candidate

3. On line availability of centre wise pasting at the College and Department level.

4. Computerized Migration Certificate printing,

5. Computerized PUPIN allocation for College Student treated also as the Registration number

The entire provisional detailed Marks Card along with gazette is available on the University website.

2.6. Student Performance and Learning Outcomes

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

The university has articulated its graduate attributes to a productive and meaningful path by inculcating a sense of self-confidence, courage and faithfulness among the students. The University enforces these qualities through classroom teaching, off campus learning components such as rural service, industrial visits and NSS and NCC camps.

The University provides facilities for improving the soft skills of students to enhance their employability opportunities. Pre-placement training is also provided to students during their final year. Periodical tests are arranged to assess and formulate a mechanism to improve on the aptitude and subject skills.

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

The learning outcomes are given in the form of aims / objectives in the handbook for the different courses. The syllabus content and lecture schedules are designed to inculcate a complete understanding of the subject content both in theory and practical courses and pave the way to adapt to the emerging trends in different courses.

Most of the programmes offered by the University Departments are professional and technical in nature. Internship, dissertation, industry projects and seminars are integral part of the syllabi of almost all academic programmes. Faculty members guide the students and monitor their performance in these components of evaluation. Thus it is through arranging weekly interaction sessions that the performance of the students is monitored by the faculty in their respective departments. The faculty in charge carefully monitors the regularity of attendance, participation in seminars and other activities and also the performance of students in internal tests/ semester examinations.

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

The University has evolved its own teaching, learning and assessment strategies as mentioned below in order to facilitate achievement of intended learning outcomes:

- Major quality enhancement measures has been undertaken in the teaching and learning process and modernized based on the requirement of curriculum and feedback from the stakeholders.

- Modern teaching aids are employed in teaching and learning process.

- Learning activity is facilitated through Internet and virtual/smart Class rooms.

- Projects and study tours and field trips, assignments are made part of the courses.

- Interaction between successful and well placed alumni with the students in the departments is encouraged.

- Transparency in the evaluation system

- Thrust on faculty development- participation in seminars, refresher courses and workshops

- Subject experts deliver special lectures on recent trends and developments in their fields of expertise to the students.

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

The University collects and analyzes data on student learning outcomes through student feedback proforma developed by IQAC cell to assess the performance of the teachers. The feedback is used by the faculty for improving the quality of teaching.

This feedback proforma is developed by including the following guidelines:

- Communication
- Punctuality/Regularity
- Response to queries
- Curriculum improvement, if any
- A paragraph about the teacher

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

- Constant up gradation of learning and evaluation strategies with support from the Faculty of Education
- Digital resource sharing and online resources are made available for students learning.
- Certain Departments extend field training to the students

CRITERION III: RESEARCH, CONSULTANCY AND EXTENSION

3.1   Promotion of Research

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

University have Research Promotion Cell Committee to monitor and address issues related to research. Composition of the said Committee is as under:

Prof. A.K. Grover, Vice-Chancellor	… Patron
Prof. L. K. Bansal, Dean Research	… Chairman
Prof. Pushpinder Syal, English & Cultural Studies	
Prof. Ramanjit Kaur Johal, Public Administration	
Prof. C. Nagaraja. Kumar, Physics	
Prof. Sanjay Chhibber, Microbiology	… Convenor

Since inception, the committee made many crucial and research driven recommendations on regular basis, few recommendations are given below:

a.   Research Monitoring Committee (RMC):

As per the recommendation of Research Promotion Cell, Research Monitoring Committee (RMC) has been constituted in each Department/Centre/Institute to monitoring the progress of each full time or part time research scholar in the respective department/centre/institute. Each research student required to give a presentation of 10-15 minutes, twice a year, before the Research Monitoring Committee on the research work carried out by him/her during the last six months.

b.   Direct Benefit Transfer (DBT):

Implementation of Director Benefit Transfer (DBT) to provide hassle free and timely fellowship/scholarship to the Research Scholars has been initiated.

c.   Separate Research Scholars Hostel:

As per the recommendation of Research Promotion Cell Separate Research Scholar Hostel has been developed to provide better accommodation and well as constructive research atmosphere in the Hostel itself.

d.   Open Access to sophisticated Instruments:

All instrument labs of various departments are opened on Saturday and Sunday to access of Research Scholars and new instruments is being installed as and when required.

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

➢   The University has facilitated the development of its affiliated colleges as research centres with the respective PU department serving as their nodal agencies so that there is a 'capacity building' through which a larger research community gets distributed to these research centres and will eventually go on to contribute at universities and colleges. These colleges will be able to conduct MPhil and PhD courses at these centres.

➢   According to the guidelines framed by the University, the research centres will be set up for a term of two years and these colleges should have at least three PhD teachers (among them one should be of the rank of associate professor) in a particular subject to conduct PhDs in specific subjects and should have adequate infrastructure for the same. Post graduate programmes in these subjects should also have been running in the college for a

minimum of five years, besides teachers publishing two research papers or books in four years.

➢ The University has facilitated the introduction of pre-PhD course work followed by examination in those colleges that have been identified as research centres by Panjab University (PU).The enrollment to a PhD programme in these colleges is being done on the basis of an entrance test conducted by PU. The aim is that each college with research centers should get students for research.

The following colleges of Panjab University are running Research Centres:

✓ D.A.V. College,Sector-10, Chandigarh

✓ G.G.D.S.D.College, Sector-32, Chandigarh

✓ Post-Graduate Govt. College for Girls, Sector-42, Chandigarh

✓ Chandigarh College of Engineering & Technology, Sector-26, Chandigarh

✓ Post Graduate Govt. College, Sector-11, Chandigarh

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

The mechanism adopted by the university to facilitate the smooth implementation of research schemes/ projects is given below:

∗ Advancing funds for sanctioned projects.
∗ Providing seed money
∗ Simplification of procedures related to sanctions / purchases to be made by the investigators
∗ Autonomy to the principal investigator/coordinator for   utilizing overhead charges
∗ Timely release of grants
∗ Timely auditing
∗ Submission of utilization certificate to the funding authorities

3.1.4   How is interdisciplinary research promoted? a) between/among different departments /schools of the university and b) collaboration with national/international institutes / industries.

Interdisciplinary research between different departments of University is encouraged by motivating the faculty to get joint research projects sanctioned funded by the National/International funding agencies many such projects are in progress on the campus. Promotion of interdisciplinary research among different departments of the university as well as with national/international institutes/industries is strengthened by organizing various academic events on the campus.

University holds Conferences like Chandigarh Science Congress (CHASCON), Chandigarh Social Science Congress (CHASSCON) in which teachers get opportunities to interact for furthering interdisciplinary research within the University and adjoining Research Institutes of National importance "CRIKC" Attending Conference, Entering MoUs with Industries, Institutes and Universities.

173 Projects of the Panjab University departments in collaboration with other National/International institutions/ Universities are on going on the campus.

Promotion of interdisciplinary research among different departments of the university as well as with national/international institutes/industries is undertaken by organizing various academic events on the campus by inviting eminent scientists/scholars from India and aboard.

List of academic events and names of eminent scientists

1. National Seminar on "SAARC: Problems and Prospects"

2. **International Conference** on "Recent Advances in Engineering and Computational Sciences"

3. **International Seminar** on "Current Trends in Quantum Gases, BEC and Solitons"

4. **8th Chandigarh Science Congress CHASCON-2014**

5. **3rd International Conference** Biomedical Engineering & Assistive Technologies (BEATS-2014).

6. **International Conference** on "Multi-Disciplinary Aspects of Mechanical & Electrical Engineering"(MAMEE-2013)

7. **International Conference** on "Interdisciplinary Areas with Chemical Sciences"

8. *International Conference, "NanoSciTech 2014", on the theme, "Nanotechnology in the Service of Health, Environment & Society"*

9. **International Conference** on "Challenges of Electronic Environment in Academic Libraries"

10. **International Conference** on "Advances in Water Resources: Development and Management"

11. **International seminar** on "Pluralist Democracy and National Identity"

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

University organized special series of Colloquium Lecture to promote research culture in addition to various programmes specifically for the researchers.

The details of colloquium lectures are given below:

Date and Time	Department	Topic of Colloquium
22nd August, 2014 - 300 P.M.	Dr. S. S. Bhatnagar University Institute of Chemical Engineering & Technology	Life: Where All Sciences Meet
8th August, 2014 - 11:00 A.M.	Dr. S. S. Bhatnagar University Institute of Chemical Engineering & Technology	Socially inclusive growth: Theory and Indian Experience since 1990s
26th July, 2014 - 11:00 A.M.	Department of Political Science	Caste and Religion in the Era of Economic Growth
25th July, 2014 - 15:00	Department of Political Science	India's Democracy: Resilience and Inadequacies
8th May, 2014 - 12:00 noon	Dr. S. S. Bhatnagar University Institute of Chemical Engineering & Technology	Innovation Towards Meeting Challenges of Food Security/Food Safety/Environment Nexus
30th April, 2014 - 3.00pm	Dr. S. S. Bhatnagar University Institute of Chemical Engineering & Technology	Humanistic Economics: A Blueprint by Prof Pulin B Nayak
14th March, 2014 - 3:00 P.M.	Dr. S. S. Bhatnagar University Institute of Chemical Engineering & Technology	War and Peace: Conflict and Cooperation in an Insect Society
25th February, 2014 -	Dr. S. S. Bhatnagar University	Ideas of Freedom; in the Freedom

3:00 P.M.	Institute of Chemical Engineering & Technology	Movement of India
19th February, 2014 - 2:30 P.M.	Dr. S. S. Bhatnagar University Institute of Chemical Engineering & Technology	From the Indus Valley to Srinivasa Ramanujan: A History of Indian Mathematics
27th January, 2014 - 3:00 P.M.	Dr. S. S. Bhatnagar University Institute of Chemical Engineering & Technology	Aerospace Technologies and Applications: Present and Future
11th December, 2013 - 3.00PM	Dr. S. S. Bhatnagar University Institute of Chemical Engineering & Technology	Citizen's right to Vote by Prof. Virendra Kumar
7th November, 2013 - 15:00	Vice Chancellor's Office	8th PU Colloquium: Plagiarism and its Control in Academic Domain
5th September, 2013 - 3.00PM	School of Communication Studies	De-theorizing Globalization by Professor B.S.Brar
16th August, 2013 - 14:45	A. C. Joshi Library	A C Joshi Memorial Lecture by Shri Ashok Thakur, IAS - Issues of Higher Education in India
19th February, 2013 - 15:00	Vice Chancellor's Office	Lecture by Sh. Mohan Agashe
23rd January, 2013 - 3:00 P.M.	Dean University Instructions	Let's save the self from self inflicted pollution
21st January, 2013 - 12:00 Noon	Department of Chemistry	Spectrum of Creativity in Science: Some Psycho-Social Factors
27th November, 2012 - 15:00	Vice Chancellor's Office	Colloquium By Dr. Pradeep Bambery on Living with Arthritis
19th October, 2012 - 11:00	Department of Arts History & Visual Arts	Scales micrograph - photo montages an exhibition by Sukant Saran
12th October, 2012 - 9:00 a.m.	University Institute of Pharmaceutical Sciences	Regulatory issues in Nanotechnology
20th September, 2012 - 15:00	Department of Public Administration	Ways of Seeing: The World of the Indian Painter

Some of the other programmes for the researchers:

Sr. No.	Title of the workshop/training programme/symposium/seminar	Organised on
1	Two Day National Workshops on "Research Methodology, Statistical Analysis and Stress Management".	30-31 Jan. 2014
2	One day workshop "Skill Development for Workplace" SD2013	26 Sept. 2013

3	National Annual Maharishi Vishvamitra Veda-Vedanga Workshop-cum-Seminar	21-26 Feb. 2012
4	Two day Workshop on "Parallel Computing using HPCC"	02-03 Mar. 2012
5	Workshop on "Remote Sensing and GIS"	1-3 Feb. 2012
6	Workshop and Hands on Training on Cell and Molecular Biology Tools and Techniques	21-26 Mar. 2011
7	National Seminar-cum-Workshop on "Exploring New Vistas in Biodiversity Research for Sustainable Development"	22-24 Jan. 2011

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

The University facilitates the visit of researchers of eminence by inviting them to hold workshops/Labs/Lectures/demonstrations on the campus, especially, for budding researchers. The students are able to introduce newer techniques in their research work. Moreover such interactions also provide them with an opportunity to interact with these projectors and their labs for further help/guidance.

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

Total budget earmarked for research is Rs. 6845.87 lac   (Rs. 671.79 lacs Non-Plan +6174.08 lac Plans)
Total budget estimates 2014-2015 is Rs.50655.37 lacs (Non-Plan+Plan)
Percentage = 13.51 %
Actual Expenditure NON-PLAN (2013-14) -   Rs.429.07 lacs

Detail of heads of expenditure, financial allocation, and actual utilization is placed at Annexure 'R', which will be shown to the NAAC Team on their visit to Panjab University.

3.1.8 In its budget, does the university earmark fund for promoting research in its affiliated colleges? If yes, provide details.

The University has earmarked Rs 25000/- from College Development Fund for promoting research in each of the following affiliated colleges:

- D.A.V. College, Sector-10, Chandigarh
- S C D Govr Collge, Ludhiana
- Dev Samaj College for Women, Ferozpur
- D A V College Abohar
- S.G.G.S. Khalsa College, Mahilpur

3.1.9 Does the university encourage research by awarding Post Doctoral Fellowships/Research Associate ships? If yes, provide details like number of students registered, funding by the university and other sources.

The University does not directly award Post Doctoral Fellowships/Research Associates in various faculties, however, it encourages prospective candidates to apply for this from National agencies such as UGC, DBT, CSIR etc.
There are postdoctoral fellows (PDFs) working in following departments with support from outside sources as given below:

Department/Centre	Name of PDF	Source of Funding
Computer Centre	Parveen Kumar	UGC

Economics	Amandeep Kaur	ICSSR
Psychology	Kuldeep Singh	ICSSR
Public Administration	Meenakshi Madaan	ICSSR
Public Administration	Anu Jasrotia	ICSSR
Public administration	Promila Kanwar	ICSSR
Geography	Prem Chand	ICSSR
Police Administration	Moirangmayum Sanjeev Singh	ICSSR
Police Administration	Rajkumar Meiraba Singh	ICSSR

3.1.10   What percentage of faculty has utilized the sabbatical leave for pursuit of higher research in premier institutions within the country and abroad? How does the university monitor the output of these scholars?

The percentage is 0.4% Approx.

List of Faculty who has utilized the sabbatical leave for pursuit of higher research during the last five years is as under:

Sr	Name/Department	2010	2011	2012	2013
1	Prof. Deepti Gupta Dept of Eng. & Cultural Studies	--	One year w.e.f. 25/08/2011	--	--
2	Prof Anil Raina, Dept of Eng. & Cultural Studies	--	--	--	One year w.e.f. 01/08/13
3	Prof. Sanjay Chaturvedi Dept of Pol. Science	--	--	w.e.f. 14/08/12 to 13/08/13	--

The university monitors the output of these scholars by asking a report of the work done during leave period.

3.1.11   Provide details of national and international conferences organized by the university highlighting the names of eminent scientists/scholars who participated in these events.

Sr. No.	Title of the National/International Conferences organised by the Panjab University Highlighting the names of eminent scientists/scholars who participated in these events.	Organised on
1	CHASSCONG-14 4th "CHANDIGARH SOCIAL SCIENCE CONGRESS" Millennium Development Goals: Retrospect and Prospects (With special Reference to India) **Names of Eminent Scientists/Scholars:** Prof. Pam Rajput, Chairperson, GOI Committee on status of Women in India Dr. Amitabh Behar, Executive Director, NFI, New Delhi	26-27 March 2014

	Prof. Kuldip Singh, Dean Alumni Association and Former Chairperson, Department of Political Science, GNDU, Amritsar Prof. Sucha Singh Gill, Director, CRRID, Chandigarh Prof. Meeta K. Mehra, JNU, New Delhi Prof. Navsharan Singh, IDRC, New Delhi Prof. Gopal Krishan, Prof.(Emeritus) P.U. Chandigarh.	
2	National Seminar on "SAARC: Problems and Prospects" **Names of Eminent Scientists/Scholars:** Prof. Baljit Singh from University of Jammu, Prof. Karori Singh from University of Rajasthan, Prof. Matthew Joseph C. from Jamia Millia Islamia – New Delhi, Prof. Ranjani Ranjan Jha from Banaras Hindu University- Varanasi, Prof. Paramjit Kaur from Punjabi University- Patiala, Dr. Arvind Singh from Muradabad, Prof.Madhurendra Kumar from Kumaun University- Nainital , Prof.Rajpal Budhania from University of Allahabad & Dr. Rajesh Kumar form GNDU- Amritsar.	24-25 March 2014
3	**International Conference** on "Recent Advances in Engineering and Computational Sciences" **Names of Eminent Scientists/Scholars:** Prof. Jürgen Bosse, Emeritus Professor of Theoretical Physics Department of Physics, Freie Universität Berlin,Germany Dr. Anu A. Gokhale, Professor and Coordinator of the Computer Systems Technology Program at Illinois State University Prof. Ashwani Kumar, Department of Electrical Engineering, NIT Kurukshetra, Dr. Sanjeev K. Aggarwal, Professor and Head, EED, MMEC, M.M. University, Mullana, Dr. G.N. Pilliai, Associate Prof. Electrical Engineering Department, Indian Institute of Technology (IIT), Roorkee, Ms.. Pamela Kumar, Chair "Cloud Computing Innovation Council of India" Sh.. Sudhanshu Mittal, Leading team as Software Manager Freescale Semiconductor	6-8 March 2014
4	**International Seminar** on "Current Trends in Quantum Gases, BEC and Solitons" **Names of Eminent Scientists/Scholars:** Prof. Arup Banerjee (CAT, Indore) Prof. A. Bhattacherjee (Delhi Univ., Delhi) Prof. J. Bosse (Freie Univ., Berlin) Prof. B. Dey (Univ. of Pune, Pune) Prof. T.K. Ghosh (IIT, Kanpur) Prof. M. Howard Lee (Univ. of Georgia, USA) Prof. P. Muruganandam (BDU, Tiruchirapalli) Prof. Vasant Natarajan (IISc, Bengaluru) Prof. H. Ott (Kaiserslautern Univ., Germany) Prof. P.K. Panigrahi (IISER, Kolkata) Prof. A. Pelster (Kaiserslautern Univ., Germany) Prof. H. Ramachandran (RRI, Bengaluru) Prof. Umakant D. Raypol (IISER, Pune) Prof. Carlos A.R. Sa de Melo (Georgia Tech, USA) Prof. V.B. Shenoy (IISc, Bengaluru) Prof. G.S. Singh (IIT, Roorkee) Prof. W. Zhang (Renmin Univ., Beijing)	3-6 March 2014
5	**8th Chandigarh Science Congress CHASCON-2014** **Names of Eminent Scientists/Scholars:** Prof. Y.K. Chawla, Director, PGIMER Dr. Manoj K. Arora, Director, PEC Univ. of Technology Prof. N. Sathyamurthi, Director, IISER, Mohali	26-28 Feb. 2014

	Prof. (Dr.) M.P. Poonia, Director, NITTTR Dr. S. K. Shukla, Director, CFSL Dr. Manjit Singh, Director, TBRL Dr. Rajender Sangwan, Chief Executive Officer, Bio Processing Unit, An Autonomous Institute under DBT, Govt. of India Prof. Atul Sachdev, Director-Principal,GMCH Prof. K.K. Bhutani, Director, NIPER,Mohali Dr. Girish Sahni, Director, IMTECH Dr. Atam Darshan Kaul Acting Director, CSIO Dr. A. Ganju, Director, SASE Prof. Akhilesh Kumar Tyagi Executive Director, NABI Dr. A.K. Ganguli, Director, INST Mohali	
6	**3rd International Conference** Biomedical Engineering & Assistive Technologies (BEATS-2014). **Names of Eminent Scientists/Scholars:** Prof. Vinod Kumar IIT, Roorkee Prof. H.K. Verma Sharda University, Noida Prof. R.M. Rangayyan University of Calgary, Canada Prof. P.W. Macfarlane University of Glasgow, Scotland, UK Prof. U Rajendra Acharya Ngee Ann Polytechnic, Singapore Prof. V.R. Singh National Physical Lab, New Delhi Prof. Sumeet Dua Louisiana Tech University, Ruston Prof. Thomas M. Deserno RWTH Aachen University, Germany Prof. Reyer Zwiggelaar Aberystwyth University Prof. Rajneesh AroraVice-Chancellor, Punjab Technical University, Kapurthala Prof. Olaf Dössel Karlsruhe Institute of Technology, Germany Prof. Dinesh P. Mital Health Informatics Department, New Jersey Prof. Yogesh Chawla Director, PGIMER, Chandigarh Prof. Manoj K. Arora Director, PEC University of Technology, Chandigarh Prof. Girish Sahni Director, CSIO, Chandigarh	14-15 Feb. 2014
7	**International Conference** on "Multi-Disciplinary Aspects of Mechanical & Electrical Engineering"(MAMEE-2013) **Names of Eminent Scientists/Scholars:** Prof. Braham Prakash, LTU Sweden Dr. T.S. Arjun, CoE, MS University, USA Prof. Pradeep Rohatgi, Wisconsin, Milwaukee Prof. Ravindra Pandey, Michigan Technological University, Michigan Dr. Manjit Singh, Director, TBRL Dr. Lalit M. Bharadwaj, Additional Dean, R&D, LPU Prof. Sunil Pandey, SLIET Longowal Prof. Jaydev Sharma IIT Roorkee Prof. Vinod Kumar IIT Roorkee Prof. D.T. Shahani IIT Delhi. Prof. Dinesh Kumar, IIT Roorkee Prof. O.P. Gandhi, IIT Delhi Dr. Navin, IIT Ropar Prof Arun K. Lall, PEC Chandigarh Prof. V.P. Singh, PEC Chandigarh Prof. Parveen Kalra, PEC Chandigarh Dr. A. Manna, PEC Chandigarh Prof. H.C. Garg, GJUS &T, Hisar Dr. Sanjeev Kumar, PEC Chandigarh Prof. Rakesh Sehgal, NIT Hamirpur Dr. Rajesh K. Sharma, NIT Hamirpur Dr. Harlal Singh Mali, NIT Jaipur	21-22 Nov. 2013

	Prof. S. Chander, NIT Jalandhar Prof. Surjit Angra, NIT Kuruksherta Prof. B. S. Pabla, NITTTR Chandigarh Prof. R.N.Sharma NIT Hamirpur Prof. Ashwani Kumar NIT Kurukshetra Prof. L.M. Saini NIT Kurukshetra. Prof. S. Chatterje NITTTR Chandigarh Prof. Sushil Chauhan NIT Hamirpur Dr. Dheeraj Khatod IIT Roorkee Prof. Ratna Dahiya, NIT Kurukshetra Prof. P. C. Tiwari, NIT Kurukshetra	
8	**International Conference** on "Interdisciplinary Areas with Chemical Sciences" **Names of Eminent Scientists/Scholars:** Prof. C.N.R. Rao (India) Prof. T. Ramasami (India) Prof. S.K. Brahmachari (India) Prof. B.N. Jagtap (India) Prof. S. Sevov (USA) Prof. M. Gradzielski (Germany) Prof. N. Sathyamurthy (India) Prof. G.H. Findenegg (Germany) Prof. D.W. Bahnemann (Germany) Prof. A.K. Sood (India) Prof. K.N. Ganesh (India) Prof. G. Sahni (India) Prof. S. Bhattacharya (India) Prof. M. Aratono (Japan) Prof. Y. Masuda (Japan) Prof. Martin Gijs (Lausanne)	30 Oct. -1 Nov. 2013
9	**International Conference**, "NanoSciTech 2014", on the theme, "Nanotechnology in the Service of Health, Environment & Society" **Names of Eminent Scientists/Scholars:** Sh. Ajaz S Hussain, Director, Insight, Advice & Solutions, LLC, Frederick, USA Sh. Alberto Vomiero, Sensor Lab CNR-IDASC, Brescia, Italy Sh. Anton Liopo, Senior Scientist, TomoWave Inc., Houston, USA Sh. Antmisiaris Sophia, Director –Pharm Technology, University of Patras, Greece Sh. Ashish Ranjan, Oklahoma State University, USA Prof. Bernard Deconihout, Normandie University, France Prof. Diane J Burgess, Pharmaceutics, University of Connecticut, USA Prof. Frederic Guittard, University of Nice, Antropolis, France Sh. Gilberto Brambilla, Researcher-Optoelectronics Research Centre, University of Southampton, UK Sh. Gilles Divita, Research Director, Molecular Biophysics & Therapeutics, Montpellier, France Prof. Jagat R Kanwar, Deakin University, Geelong, Australia Prof. Kamalinder K Singh, School of Pharmacy and Biomedical Sciences, University of Central Lanchashire Perston, UK Sh. Mandip S Sachdeva, Head, Pharmaceutics & Nanotechnology, Florida A & M University, USA Associate Prof. Martin C Garnett, University of Nottingham, UK Sh. N Sriranganathan, Director, Center for Molecular Medicine & Infectious Diseases, Virginia, USA Associate Prof. Pradeep K Karla, Howard University, Washington D.C, USA Prof. Rajendra Rathore, Marquette University, Milwaukee, USA Sh. Umesh Banakar, President, Banakar Consulting Inc., Indianapolis, USA	13-15 Feb. 2014

	Sh. Jagmohan Bajaj, Expert, UNESCO, Republic of Kosovo	
10	**International Conference** on "Challenges of Electronic Environment in Academic Libraries"	29-30 Oct. 2013
11	**International Conference** on "Advances in Water Resources: Development and Management" **Names of Eminent Scientists/Scholars:** Sh. Sushil Gupta, Chairman, Central Ground Water Board Sh. Arun Kumar, Member, SML and Member Secretary, CGWA	23-27 Oct. 2013
12	**International seminar** on "Pluralist Democracy and National Identity" **Names of Eminent Scientists/Scholars:** Dr. W. Frederic Shaw, Chief Executive Officer, Indigenous Resources, USA Sh. Consul General, Canada Sh. P.S. Sahai, Ambassador , IFS	22-23 Oct.2013

3.2   Resource Mobilization for Research

3.2.1   What are the financial provisions made in the university budget for supporting students' research projects?

Financial Assistance to the student for innovative work/Project is Rs.10.00 lac. Many research scholars are working presently in various departments as fellows of UGC-JRF, ICSSR, Rajiv Gandhi Fellowship, Inspire fellowship etc.

3.2.2   Has the university taken any special efforts to encourage its faculty to file for patents? If so, how many have been registered and accepted?

Yes, the special efforts have been undertaken by Panjab University to encourage its faculty to file patents by

- Organizing workshops to make the researchers aware about patent searching, patent drafting and patent filing procedures.

- Providing financial assistance for ₹ 30,000/- for patent filing.

- Celebrating the World IP day on April 26 every year, with a special lecture by an expert and to felicitate the patent holders/ filers of the University.

- 9 patents have been granted while 44 have been filed/published/examined. The detail is given here below

List of Patents Granted to the Inventors from Panjab University

S.No.	Inventors	Title	Application no.	Filed/ Granted	Year
1.	O. P. Katare, B Kumar, R. Agarwal	A Novel Inter and Intra Multilamellar Vesicular Composition.	Australian Patent No. 2006/225991	Granted	2010
2.	O. P. Katare, B Kumar, R. Agarwal	A Novel Inter and Intra Multilamellar Vesicular Composition.	Russian Patent No. 2007/138829	Granted	2010
3.	V.R. Sinha	A process of preparing a directly compressible delayed release matrix formulations of Aceclofenac and product there of	Patent No 1238193	Granted	2010
4.	Ranju Bansal	Novel series of	European Patent	Granted	2012

	Sheetal Guleria, Gaurav Narang, Rolf W Hartmann	Imidazolyl substituted steroidal and indan-1-one derivatives	no. EP 1 934241B1, 2012		
5.	Ranju Bansal, Sheetal Guleria, Gaurav Narang, Rolf W Hartmann	Novel series of imidazolyl substituted steroidal and indan-1-one derivatives	US 8,361,996 B2, 2013	Granted	2013

List of Patents Filed by the Inventors from Panjab University

Sr #	Inventors	Title	Filed/ Granted / Published	Year	Application no.	Indian/ International
1.	Shishu Nidhi aggarwal Ranjit Khurana Manu Sharma	Colloidal Composition Of Griseofulvin	Filed	2009	208/DEL/2009	Indian
2.	Rohit Sharma, J Kaur, Vl Thakur, S K Rana, N K Birkeland	Lipase/esterase-catalyzed synthesis of alkyl esters by transesterification.	Filed	2009	Indian Patent Application no. 2562/ DEL/2009	Indian
3.	Indu Pal Kaur, Cheena Rana, Gautam Bakshi	Pharmaceutical Nanoelastic Vesicular Systems	Published	2010	2390/DEL/2008	Indian
4.	Indu Pal Kaur, Cheena Rana, Shilpa Kakkar, Gautam Bakshi	A Method for Preparation of Nanoelastic Vesicular Systems. Patent of addition	Published	2011	1447/DEL/2010	Indian
5.	Rohit Sharma, S. Sharma, M. Sharma, E. Khullar, K. Bansal, A. Sharma.	Nitrile hydrolyzing microbes for industrial use.	Filed	2011	Indian Patent Application No. 2883/ DEL/2011	Indian
6.	Rohit Sharma, S. Sharma, M. Sharma, E.	Low cost culture medium for nitrile hydrolyzing	Filed	2011	Indian Patent Application No. 2882/	Indian

	Khullar, K. Bansal, A. Sharma.	microbes.			DEL/2011	
7.	M Sharma, S. Khanna, S. Sharma, J. Kaur, Rohit Sharma.	Anti-carcinogenic extract from Pithecellobium dulce.	Filed	2011	Indian Patent Application No. 2972/ DEL/2011	Indian
8.	Indu Pal Kaur, T. Geetha, Meenakshi Kapila, Gautam Bakshi	Pharmaceutical Topical Composition Comprising Sesamol Solid Lipid Nanoparticles	Filed	2010	428/DEL/2010	Indian
9.	Indu Pal Kaur, Rumjhum Agrawal	Topical Curcumin Formulation	Filed	2010	2335/DEL/2010	Indian
10.	Indu Pal Kaur, Gautam Bakshi, Pramod Kumar Singh	Probiotic Containing Triforked Pharmaceutical Compositions	Filed	2010	3052/DEL/2010	Indian
11.	Manoj Kumar Sharma	Electronics Preferential Voting Machine (EPVM)	Filed	2010	854/DEL/2010	Indian
12.	Jagdeep Kaur Pushpender Kumar Ranvir Singh	Engineering of the metagenome derived lipase	Filed	2010	1279/DEL/2010	Indian
13.	Praveen Rishi, C. Raman, Manu Chaudhary	Rapid Detection of Gram Negetive Bacterimia Using Novel Nano Bio-Probe	Filed	2011	3788/DEL/2011	Indian
14.	Indu Pal Kaur, Rohit Bhandari	Solid lipid nanoparticles entarpping hydrophilic/amphiphilic drug and a process for preparing the same	Filed	2012	127/DEL/2012	Indian

15.	Indu Pal Kaur, Rohit Bhandari	Solid lipid nanoparticles entarpping hydrophilic/amphiphilic drug and a process for preparing the same	Filed	2012	PCT/IN2012/000154	PCT
16.	Indu Pal Kaur, Manoj Kumar Verma.	Solid Nanolipidic particulates of retinoic acid and vitamin D_3	Filed	2012	79/DEL/2012	Indian
17.	Karan Vasisht, Maninder Karan, Mahaveer Dhobi	Novel compounds as memory enhancers.	Filed	2012	1650/DEL/2012.	Indian
18.	Maninder Karan, Karan Vasisht, Meenakshi Verma	Novel polyherbal composition for prevention and treatment of inflammation and arthritis.	Filed	2012	1651/DEL/2012.	Indian
19.	O. P. Katare	Stabilised mucoadhesive neon-vesicular combinatorial vaccine formulation.	Filed	2012	1564/DEL/2012	Indian
20.	Indu Pal Kaur, Manoj Kumar Verma.	A process for preparing solid lipid sustained release nanoparticles for delivery of vitamins	Filed	2012	PCT/1B2013/050169	International
21.	Indu Pal Kaur, Harinder Singh	Preparation of Solid Lipid Nanoparticles of Rifampicin to improve bioavailability and limiting drug interaction with Isoniazid	Filed	2012	3356/DEL/2012	Indian

22.	Indu Pal Kaur, Manoj Kumar Verma, Mandeep Singh	Oral nanocolloidal aqueous dispersion (NCD) of streptomycin sulphate	Filed	2012	3093/DEL/2 012	Indian
23.	Renu Chadha	A new Plymorphic Form of Telmisartan	Filed	2012	833/DEL/20 12	Indian
24.	Indu Pal Kaur	Topical preparation containing drug in solid lipid nanoparticles for anti psoriatic use	Filed	2012	3850/CHE/2 012	Indian
25.	Sanjay Chhibber, Saloni Singla, O.P. Katare, Kusum Harjai, Ms. Sheetu Wadhwa	Lipoidal Delivery System for Delivery of Bacteriophages	Filed	2013	3301/DEL/2 013	Indian

3.2.3   Provide the following details of on going research projects of faculty:

173 ongoing research projects approved during last four years worth Rs. **319541826**

Summary of Ongoing Projects

Ongoing Projects	
UGC	21267133
DST etc	237612398
DAE AICTE etc	60662295
Total	319541826

Further details are given below:

AGENCY	NUMBER OF PROJECTS
AICTE	6
CSIR	16
ICSSR	7
DAE	8
ICAR/ICAR DOCTROAL FELLOWSHIP	7
INSA	3
ISRO	1
GOI	6

PB. GOVT.	1
HARYANA GOVT.	1
DRDO	4
DBT	10
DST/SERB(DST)	48
ICMR	7
UGC	38
Others	**10**
TOTAL	**173**

The details are available at an Annexure 'H' which will be shown to the NAAC team on their visit.

3.2.4 **Does the university have any projects sponsored by the industry / corporate houses? If yes, give details such as the name of the project, funding agency and grants received.**

Yes, the university does have a few projects sponsored by the industry /corporate house. The detail is given here below:

Sr.No	Description	Sponsoring Agency	Amount
1.	Petrographic Analysis of silt and water sample	M/s Satluj Jal Vidyut Nigam Ltd, Rampur	₹ 177638
2	Pilot Plant studies for producing ethanol from biowaste	M/S Krofta Engineering Ltd, New Delhi	₹ 905600
3	Study and Energy & Environment Testing for Tepp Project powdered Bio-mass fired burner at Navodya Vidyalaya Chd.	M/s Technology Information Forecasting & Assessing Council, New Delhi	₹ 20000
4	1) Development of some Novel Formulations of Isotretinoin, Etodolac, Methotrexate 2) Development of Novel Formulation – Acylovir and EMLa	M/S IPCA Laboratories Ltd.	₹ 1200000 ₹ 420000
5	Isolation and Production of lipase for the synthesis of biologically active and enantiomerically pure isomers	M/s Bioage Equipment and Services	₹ 73200
6	Trial of project using Liquid- Liquid Extractor from the pilot plant	M/s Ind. Swift Laboratories Ltd.	₹ 20000
7	Screening and Formulation development of Novel Phytochemical Drugs for Various CNS Disorders	Advance Physiotherapies Pvt.	₹ 400000
8	Anti diabetic activity of Fenugreek Extract	M/S Chemical Resources, Panchkula,	₹ 210100

9	Aromatase inhibitors and adenosine kinase inhibitors	M/S Sanative Therapeutics Pvt. Ltd	₹ 138650
10	Genotoxicity studies on impurities of Active Pharmaceutical Ingredients	M/s Jubiliant Organosys Ltd., Noida	₹ 327034
11	Development and scale up of liposomal preparation"	M/S Lifecare Innovation, Gurgaon	₹ 377880
12	Evaluation of the efficacy of subgingival irrigation in patients with moderate to severe chronic periodontitis otherwise indicated for periodontal flap surgery	M/S Waterpik Inc, USA	₹ 507628
13	Citizen Centric Services GAMADA in Mohali	GMADA, Mohali	₹ 370000
14	Nitrile hydrolyzing enzymes(s) from novel extremophile their production, purification & applications	Span Biotech, Panchkula.	₹ 79200
15	Competency mapping and Performance Management System in Tynor	M/S Tynor Orthotics Pvt Ltd, Mohali.	₹ 54000
16	Analysis of plant samples	M/S Chemical Resources	₹ 197424
17	Petrographic Analysis of Silt Samples	M/s Kathua Sub Division,Malikpur	₹ 64608
18	To develop a formula for a medical paste"	M/S Medical System, Chandigarh	₹ 144383
19	Evaluation of Goneflex in Arthritis &Diabetes	Dr. DOZO Laboratories	₹ 503016
20	Acute Toxicity Testing of Satcon and Goniflex	Dr. Dozo Laboratories, Mohali	₹1,71,686/-
21	To act as an expert witness towards a patent litigation	M/s Goodmans L.L.P, Toronto, Ontario, Canada	₹10,43,640/- ($ 18736)
22	Petrographic Analysis of rocks on the bank of Chakki River	M/s Water Irrigation, Gurdaspur	₹34,494/-
23	Royalty for commer-cialization of Products	M/s Life Care Innovations Pvt. Ltd.	₹15929/-
24	Consultancy to review of all XRD and DSC data from previous study	M/s Sentiss Research Centre	₹20,000/-
25	Petrographic analysis of water sample	M/s Binwa Power House Division, HPSEB, LTD.	₹21,570/-
26	Area of English for Specific Purposes (ESP) and Soft Skill Development	Ghubaya College of Engineering Technology	₹51,680/-

27	Nano Particle Preparation Project	M/s Murali Krishna Pharma Pvt. Ltd.	₹2,48,878/-
28	Development of expression platform using yeast for Human Papilloma Virus (HPV)- expression, fermentation, harvest, purification and process scale-up	M/s Biobridge Healthcare Solution Pvt. Ltd. Pune	₹90,000/-

3.2.5 **How many departments of the university have been recognized for their research activities by national / international agencies (UGC-SAP, CAS; Department with Potential for Excellence; DST-FIST; DBT, ICSSR, ICHR, ICPR, etc.) and what is the quantum of assistance received? Mention any two significant outcomes or breakthroughs achieved by this recognition.**

SAP/CAS = 9 SAP/DRS=11   DSA=1   FIST=7

	UGC-SAP,CAS And Centre with potential of Excellence in particular area						
Sr. No.	Project Name	Period	Grant received in 2010-11	Grant received in 2011-12	Grant received in 2012-13	Grant received in 2013-14	Total Grant received
1	DRS in Zoology	1.04.06 to 31.03.11	575971	727607			1303578
2	DRS in Zoology	01.04.07 to 31.03.2012	519049				519049
3	CAS -VI in Geology	01.04.06 to 31.03.2011	907168				907168
4	DRS Economics SAP	01.04.2007 to 31.03.12	444201	304529			748730
5	SAP under CAS Pharmacy	2006-2011	505455				505455
6	DSA in Bio-Physics	01.04.09 to 31.03.14	347939	452209	4631464		5431612
7	CAS in Chemistry	01.04.07 to 31.03.12	435894	460358			896252
8	DRS-III Education	01.04.07 TO 31.03.12	113307	113815			227122
9	DRS-II Botany	01.04.07 TO 31.03.12	470170	330901	464984		1266055
10	CAS-I Physics	01.04.8 to 31.03.13	431503	441303	459904		1332710
11	CSSEIP	1.4.2007 to extended up to 12th plan 31.3.2017	0	0	0	0	0
12	DSA-I Biotech	01.04.07 TO 31.03.12	358988	343749			702737
13	CAS-I Sociology	01.04.07 TO 31.03.12	609284	364370			973654
14	DRS-I Bio-Chem	01.04.09 to 31.03.14		277885	1172305		1450190
15	DRS-I	01.04.09 to 31.03.14	575257	412537	899761		1887555

	Microbiology					
16	DSA-III Pol. Sci	01.04.09 to 31.03.14	335234	1807797			2143031
17	CAS-I Geography	01.04.09 to 31.03.14		605523	5600000	341685	6547208
18	CAS-V, Maths	01.04.10 to 31.03.16	725000	486444	572500	5750000	7533944
19	CAS-I, Anthropology	01.04.11 to 31.03.16	475000		359358		834358
20	DSA Statistics	01.04.10 to 31.03.15		1756415	478291		2234706
21	DRS-I, Chemical Engg	01.04.11 to 31.03.16		5490000			5490000
22	DRS-III, UBS	01.04.11 to 31.03.16		640000			640000
23	DRS-I, English	01.04.11 to 31.03.16		1210000		447019	1657019
24	CAS VII Geology	01.04.12 to 31.03.17	0	11020000	0		11020000
25	CAS II UIPS	01.04.12 to 31.03.17		790000			790000
26	DRS-I UIET	01.04.12 to 31.03.17		3560000			3560000
27	DRS-III, Botany	01.04.13 to 31.03.18	0	0		540000	540000
28	DRS-II, Biotech	01.04.13 to 31.03.18				200000	200000
29	CPEPA under Prof. B.S. Bhoop "Application of Nanomaterials Nanoparticles and Nanocoposites"	18.01.12 to 17.01.17		17750000			17750000
30	CPEPA under Prof. Rajesh Gill "Cultural Fixation on "honour" A Gender Audit of Punjab and Haryana	18.01.12 to 17.01.17		9250000			9250000
	Total		**7829420**	**58595442**	**14638567**	**7278704**	**88342133**

3.2.6 **List details of**

i. **Research projects completed and grants received during the last four years (funded by National/International agencies).**

ii. **Inter-institutional collaborative projects and grants received**

1. **All India collaboration and 2. International**

210 Research projects approved and completed during the last four years worth Rs. **156049776**

Completed Projects	
UGC	44151590
DST etc	20804245
DAE AICTE etc	2751808
SAP CAS	88342133
Total	156049776

List attached as Annexure 'H' which will be shown to the NAAC committee on their visit.

3.3   Research Facilities

3.3.1   What efforts have been made by the university to improve its infrastructure requirements to facilitate research? What strategies have been evolved to meet the needs of researchers in emerging disciplines?

The University has been granted money by U.G.C./DST(PURSE) to inspire the infrastructure of the research labourites/departments. In fact under the PURSE grant of DST, special PURSE laboratories/ classrooms have been created in all the Science departments of the University.

Recently Panjab University has been granted additional land by the U.T. administration for the creation of space/infrastructure for carrying out research work in the emerging areas. Solar power Generation, Wi-Fi Campus, PURSE Labs, Smart Classroom for researchers, FIST, Research promotion Cell research scholars to ensure seminar on plagiarism seminar how to write a project.

3.3.2   Does the university have an Information Resource Centre to cater to the needs of researchers? If yes, provide details of the facility.

The issues related to researchers are addressed by the Dean Research. In addition to this, University has Research Promotion Cell (RPC) to deal with the issues related to research. The functions of RPC include:

- Encouraging researchers to get projects funded by National/International agencies.
- Solving their administrative problems
- Inviting eminent researchers to share their research experiences
- Informs the researchers about the availability of grants/scholarship in their respective areas.

The RPC has senior Faculty members and research scholars' representative as its members and is the contact point of sponsors and agencies for research work.

3.3.3   Does the university have a University Science Instrumentation Centre (USIC)? If yes, have the facilities been made available to research scholars? What is the funding allotted to USIC?

Yes, Panjab University has a USIC centre as a part of the SAIF facility from DST, New Delhi and is available to research scholars in and around Panjab University. It may be noted that USIC does not have any independent funding from any agencies. However, the SAIF facility is fully financed by Department of Science and Technology, New Delhi.

3.3.4   Does the university provide residential facilities (with computer and internet facilities) for research scholars, post-doctoral fellows, research associates, summer fellows of various academies and visiting scientists (national/international)?

Yes, the University provides residential facilities for research scholars, Doctoral and Post -

Doctoral Fellows in the hostels. In all hostels, Internet facility, Wi-Fi facility, newspapers and magazines, TV/DVD etc are available for the benefit of the students.

3.3.5   Does the university have a specialized research centre/ workstation on-campus and off-campus to address the special challenges of research programmes?

The university have a specialized research centres such as CIL/SAIF/RSIC/UCIM, Centre for Human Genome Studies & Research etc. In addition, all departments are working as research centres to address special challenges of any research programme.

Cluster Innovation centre in Biotechnology and Policy Research centre have become operational for research work.

3.3.6   Does the university have centres of national and international recognition/repute? Give a brief description of how these facilities are made use of by researchers from other laboratories.

Yes, Departments/Centres having national and international recognition/ repute are as:

1. CIL/SAIF/RSIC/UCIM

> The University has a DST-supported Regional Sophisticated Instrumentation Centre along with the Central Instrumentation Laboratory (CIL) and the University Science Instrumentation Centre (USIC) to serve the scientific community on the campus and in the region. The Centre also undertakes the design, fabrication and repair of electronic instruments required by students and teachers from the University and the colleges around. This facility is also made available to the industries.

2. Dept Cum National Centre for Human Genome Studies & Research

> The Centre imparts current knowledge of biotechnology, genomics, proteomics and cutting edge research both in theory and practice. NCHGSR offers post graduate and PhD research programs. The Centre aims at generating accomplished brains in different areas of molecular biology, which not only serves biotech related industries but also provides trained and motivated persons required by other institutes. The department is one of the best research institutes providing an excellent theoretical as well as hand on laboratory experience.

3. University institute of Pharmaceutical Sciences

> The institute is actively collaborating with other research institutions at the national and international level, and with the pharmaceutical industries to help evolve novel ideas and outcomes. The synergistic three tier-tie of academia- industry-medical research institutions (PGIMER, Chandigarh) has been enforced to help transfer research ideas from laboratory-shelf to the clinician's desk. The Ranbaxy Laboratory, New Delhi, Panacea Biotec Pvt. Ltd., New Delhi, Albert David Ltd. Calcutta, Himalaya Drug Company, Bangalore, Dr Reddy's Laboratory and Life Care Innovation Pvt. Ltd., Gurgaon are the some of the major Pharma players which have been collaborating. The institute is also known for its very high value research on steroids which yielded a well known molecule Candocuronium iodide, a for neuromuscular blocking agent and also commercialization of 'Thank God', a pile medicine by Panacea Biotec Pvt. Ltd., which is a rare distinction of any academic institution.

4. Department of Physics

> The department is participating in the prestigious International High Energy Research Programmes at Fermilab (USA), KEK (Japan) and CERN (Switzerland). At present the University is involved in a big way in CMS and ALICE Experiments at CERN (European Organization for Nuclear Research) Switzerland and Neutrino Programme at Fermilab, USA.

> Through the participation in the CMS Project, the Panjab University has become a

part of a major discovery of the century i.e. Higgs boson which was announced on July 4, 2012 at CERN.

5. Computer Centre (National Knowledge Network)

Ministry of HRD, Government of India has selected PU as a node to be connected to National Knowledge Commission (NKN) with high network bandwidth. The University Computer Center has established 10 Gigabit campus wide Network to provide high speed connectivity to various departments through National knowledge network (NKN). Almost all the Departments are connected through optical fiber. All Hostels have been made Wi-Fi and students can access internet free of cost with hardware fire-wall installed at Computer Centre with three wide area network links of 1 Gbps (NKN), 1 Gbps (NME-ICT), 155 Mpbs STM1(1:1)(Reliance).

6. University School of Open Learning (USOL)

The objective was to take university based education beyond the four walls of the University. It is the consistent Endeavour of the USOL to introduce new and relevant courses and explore and adopt e-learning in order to reach more and teach more.

3.4 Research Publications and Awards

3.4.1 Does the university publish any research journal(s)? If yes, indicate the composition of the editorial board, editorial policies and state whether it/they is/are listed in any international database.

Yes. University publishes the following research journals:

1. Journal of University Institute of Legal Studies

2. Journal of University School of Open Learning

3. Journal of Arts

4. Journal of Social Sciences

5. Journal of Science

The composition of the editorial board, editorial policies for the above mentioned journals is placed at Annexure 'I' which will be shown to the NAAC Team on their visit.

3.4.2   Give details of publications by the faculty:

No.of papers published (national)	3649
No.of papers published (International)	371
Monographs	27
Chapters in books (national)	368
Chapters in books (international)	11
Edited books	105
Books with ISBN no.	162
No. listed in Inter-national Database	1405
Citation	0-8136
SNIP	0-10.53
SJR	0-12.003
Impact factor (range/average)	0-10
h-index	0-27

3.4.3   Give details of

- **faculty serving on the editorial boards of national and international journals:** 108
- **faculty serving as members of steering committees of international conferences recognized by reputed organizations / societies:**

    136 National and 61 International

3.4.4   Provide details of

- **research awards received by the faculty and students**
- **national and international recognition received by the faculty from reputed professional bodies and agencies**

    No. of teachers getting awards for research work during the last four years:
    • National: 63
    • International: 26

Table: Awards/recognitions for teachers

Year	State Level	National Level	International Level	Total
2009-10	--	14	04	18
2010-11	--	25	04	29
2011-12	--	25	04	29
2012-13	--	10	03	13

3.4.5 **Indicate the average number of successful M.Phil. and Ph.D. scholars guided per faculty during the last four years. Does the university participate in *Shodhganga* by depositing the Ph.D.theses with INFLIBNET for electronic dissemination through open access?**

A total of 1027 Ph.D. Scholars have been awarded Ph.D. degrees during the last four years. The university participates in Shodhganga programme and has deposited 11 Ph.D.theses with INFLIBNET for electronic dissemination through open access.

In addition, the University through its web-site (http://www.puchd.ac.in) publishes the summary of Ph.D. thesis.

3.4.6 **What is the official policy of the university to check malpractices and plagiarism in research? Mention the number of plagiarism cases reported and action taken.**

Panjab University has procured Anti Plagiarism Software i.e. Turnitin. Its access is available to all the Departments with login and password for checking the malpractices and Plagiarism in the research. The software is used before submitting any thesis or research papers for publications to journals for knowing the similarity index with already published work, internet resources and to be published/submitted work.

As per the Panjab University policy no thesis can be submitted for the evaluation without going through the Anti Plagiarism software wherein supervisor and the candidate has to certify that no part of the thesis is plagiarized.

3.4.7 **Does the university promote interdisciplinary research? If yes, how many interdepartmental / interdisciplinary research projects have been undertaken and mention the number of departments involved in such endeavours?**

Yes, University promotes interdisciplinary research among different disciplines in the University. Many ongoing projects funded by different agencies are being run in collaboration in the following departments:

- ➢ Pharmaceutical Sciences
- ➢ Microbiology
- ➢ Bio-Chemistry
- ➢ Bio-Physics
- ➢ Microbial Technology
- ➢ Botany
- ➢ Zoology
- ➢ Geology
- ➢ Punjabi
- ➢ Gandhian Studies
- ➢ Public Health
- ➢ Anthropology
- ➢ Sociology
- ➢ Law
- ➢ Public Administration Management
- ➢ English

The collaboration between these departments is directed towards achieving desired goals by utilising the infrastructure & faculty expertise.

3.4.8 **Has the university instituted any research awards? If yes, list the awards.**

As such, no particular research award has been instituted by the University. However, University has instituted two awards, i.e., Udyog Rattan and Vigyan Rattan for recognising contribution of eminent personalities. These contributions carry a cash award of Rs 1 lakh besides citation.

The Panjab University Teachers Association honoured about 75 teachers on 5th September, 2013 to recognise their research contribution and encourage the young faculty.

3.4.9 **What are the incentives given to the faculty for receiving state, national and international recognition for research contributions?**

The contribution of the faculty receiving state / national and international recognition for their research contribution is appreciated by the University in meeting of its highest Governing bodies, i.e., Syndicate and Senate.

3.5 **Consultancy**

3.5.1 **What is the official policy of the University for Structured Consultancy? List a few important consultancies undertaken by the university during the last four years.**

The official policy for consultancy work is placed at Annexure 'J' which will be shown to the NAAC Team on their visit.

DETAIL OF CONSULTANCY PROJECTS FOR THE SESSION: 2010 - 2011

S.No	Name of the Researcher	Description	Sponsoring Agency	Amount (in Rs.)
1	Dr Kanwaljit Chopra, UIPS	Anti diabetic activity of Fenugreek Extract	M/S Chemical Resources, Panchkula,	210100/-
2	Prof A.R. Rao, UIPS	Aromatase inhibitors and adenosine kinase inhibitors	M/S Sanative Therapeutics Pvt. Ltd	138650/-
3	Dr Indu Pal Kaur ,UIPS	Genotoxicity studies on impurities of Active Pharmaceutical Ingredients	M/s Jubiliant Organosys Ltd., Noida	327034/-
4	Dr Naresh Tuli Prof G.S.Gill, Deptt of Geology	Petrographic Analysis of silt and aggregates and chemical analysis of water sample	M/s Himachal Pradesh Power Corporation	14900/-
5	Prof O.P. Katare, UIPS	Development and scale up of liposomal preparation"	M/S Lifecare Innovation, Gurgaon	377880/-
6	Dr Ashish Jain, Dental College	Evaluation of the efficacy of subgingival irrigation in patients with moderate to severe chronic periodontitis otherwise indicated for periodontal flap surgery	M/S Waterpik Inc USA	507628/-

DETAIL OF CONSULTANCY PROJECTS FOR THE SESSION 2011- 2012

Sr.No	Name of the Researcher	Description	Sponsoring Agency	Amount
1	Dr. Suveera Gill, UBS	Citizen Centric Services GAMADA in Mohali	GMADA, Mohali	370000/-
2	Dr Rohit Sharma Deptt of Microbial Biotechnology	Nitrile hydrolyzing enzymes(s) from novel extremophile their production, purification & applications	Span Biotech, Panchkula.	79200/-

3	Dr. Gunmala Suri,Deptt. of UBS	Competency mapping and Performance Management System in Tynor	M/S Tynor Orthotics Pvt Ltd, Mohali.	54000/-
4	Prof. Karan Vashisht, UIPS	Analysis of plant samples	M/S Chemical Resources	197424/-
5	Dr. Ramanjit Kaur Johal, Dept. of Public Admnistration	Common Wealth Youth Programme,	M/s Asia Centre, Chandigarh	116382/-
6	Dr.Suveera Gill, UBS	Citizen Centric Services	M/s GMADA, Mohali	370000/-
7	Dr. Rohit Sharma, Deptt of Microbial Biotechnology	Isolation and Production of Lipase for the synthesis of Biological Active and Enantiomerically pure Isomers	M/s Bioage Equipments Pvt. Ltd., Mohali	79200/-
8	Dr. Kanwaljit Chopra, UIPS	Evaluation of Goniflex ® in Arthritis & Diabetes	DOZO Laboratories	350000/-

DETAIL OF CONSULTANCY PROJECTS FOR THE SESSION - 2012 - 2013

Sr.No	Name of the Researcher	Description	Sponsoring Agency	Amount (in Rs.)
1	Dr. Naresh Tuli , Deptt of Geology	Petrographic Analysis of Silt Samples	M/s Kathua Sub Division,Malikpur	64608/-
2	Dr. Indu Pal Kaur,UIPS.	To develop a formula for a medical paste"	M/S Medical System, Chandigarh	144383/-
3	Dr. Kanwaljit Chopra	Evaluation of Goneflex in Arthritis &Diabetes	Dr. DOZO Laboratories	503016/-
4	Dr. Naresh Tuli , Dept. of Geology	Petrographic Model of River bed material	Govt. of India, Central Water Commission	55225/-

DETAIL OF CONSULTANCY PROJECTS FOR THE SESSION 2013 - 2014

S.No	Name of the Researcher	Description	Sponsoring Agency	Amount (Rupees)
1	Prof. Indu Pal Kaur, UIPS	Acute Toxicity Testing of Satcon and Goniflex	Dr. Dozo Laboratories, Mohali	1,71,686/-
2	Prof. Indu Pal Kaur, UIPS	To act as an expert witness towards a patent litigation	M/s Goodmans L.L.P, Toronto, Ontario	10,43,640/-

3	Dr. Naresh Tuli, Department of Geology	Petrographic Analysis of rocks on the bank of Chakki River	M/s Water Irrigation, Gurdaspur	34,494/-
4	Prof. O.P. Katare	Royalty for commercialization of Products	M/s Life Care Innovations Pvt. Ltd.	15929/-
5	Prof. Renu Chadha, UIPS	Consultancy to review of all XRD and DSC data from previous study	M/s Sentiss Research Centre	20,000/-
6	Prof. Tankeshwar Kumar, Computer Centre	Consultancy project for conducting test for clerks	Department of Social Welfare, Chandigarh	42,135/-
7	Prof. Naresh Tuli	Petrographic analysis of water sample	M/s Binwa Power House Division, HPSEB, LTD.	21,570/-
8	Mr. Rajesh Kumar Mishra, Asstt. Prof. PU Regional Centre, Muktsar	Area of English for Specific Purposes (ESP) and Soft Skill Development	Ghubaya College of Engineering Technology	51,680/-
9	Prof. Indu Pal Kaur	Nano Particle Preparation Project	M/s Murali Krishna Pharma Pvt. Ltd.	2,48,878/-
10	Dr. Rohit Sharma	Development of expression platform using yeast for Human Papilloma Virus (HPV)-expression, fermentation, harvest, purification and process scale-up	M/s Biobridge Healthcare Solution Pvt. Ltd. Pune	90,000/-

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

Yes, the university has a university-industry cell, which is called the Centre for Industry Institute Partnership Programme (CIIPP). With a view to bridging the gap between theory and practice and to sensitize university towards needs of the industry , CIIPP was set up in 1996 as a separate entity as a self sustaining centre on Strategic Business Unit concept.

Aims & Objectives of CIIPP

- Create awareness about the Industry Institute Programme and devise strategies for the promotion of synergistic interface with industry.

- Develop methodology for creation of endowment funds and promotion of consultancy/case studies/technology transfer to cater to specific need of the industry.

- Find out ways &means to optimally utilize resources available in industries and institutions.

- Generate R&D programmes and technical components for industrial need.

- Identify specific themes for mutual interest with relevance to present day need.

- Recommend need based courses to industry and prepare learning materials relevant to industries.

Vision of CIIPP

- To bring industry closer to the academia and vice-versa
- To make the curricula particularly the technical courses more relevant to users.
- To generate resources in the form of industry supported projects and consultancy programmes.
- To organize placement interviews on the Panjab University Campus for the graduates of the University.

Mission of CIIPP

- To generate adequate intellectual and financial resources for the mutual benefit of industry and society by focusing on integrated research, planning, curriculum development and instructional software preparation in the areas of science, technology and humanities.
- To organize and promote formal, non-formal, flexible, modular, training programmes in the emerging areas of knowledge and research and in Rural Development, Educational Planning, Information and Management Sciences.
- To organize need-based workshops/symposia in order to promote self-employment among the students (both . General and the marginalized minorities).
- To create environment for fostering close liaison with industry.

3.5.3 What is the mode of publicizing the expertise of the University for Consultancy Services? Which are the departments from whom consultancy has been sought?

The mode of publicizing the expertise of the University for Consultancy Service is by sending the database of the technical expertise collected from the faculty members of the University to different industries. The experts also have the liberty to show case their expertise to different industries at their own level as well. University also organizes specific Industry interaction sessions with various industries for one to one interaction with technical experts with university so that the industry may prepare suitable MOU after mutual agreements.

Departments involved in enriching the university with their consultancy work

- University Institute of Pharmaceutical Sciences
- Department of Geology
- University Institute of Chemical Engineering and Technology
- Department of Chemistry
- Centre for Microbial Biotechnology
- Computer Science
- University Institute of Engineering and Technology
- University Institute of Dental Sciences
- Department of Microbiology

3.5.4 How does the university utilize the expertise of its faculty with regard to consultancy services?

University utilizes the expertise of the faculty members through CIIPP, which generally establishes a linkage with various industries by taking their feedback in terms of their specific requirements in technical consultancy. The same is then circulated among the experts of the University for utilizing their expertise as per the university policy for consultancy work. The CIIPP also organizes specific Industry interaction session with various industries with one to one interaction with technical experts with university so that the industry may prepare a suitable MOU after mutual agreements.

3.5.5 List the broad areas of consultancy services provided by the university and the revenue generated during the last four years.

The broad areas of consultancy are

- o Pharmaceutical Sciences
- o Geological Science
- o Chemical Engineering and Technology
- o Computer Science
- o Public Health
- o Human Resource Management

Year	Amount Generated
2010	2367738
2011	2255945
2012	1761521
2013	4613596

3.6   Extension Activities and Institutional Social Responsibility (ISR)

3.6.1   How does the university sensitize its faculty and students on its Institutional Social Responsibilities? List the social outreach programmes which have created an impact on students' campus experience during the last four years.

The student's participation in academic activities such as departmental seminars, Workshops and extra curriculum activities and relating to student council social cause, Extra Curriculum students' council activities such as Annual elections, youth festival celebration and departmental functions have created an impact on students campus experience.

The department of Life Long Learning organized awareness generation programmes on the concept emerging from the present situation by celebrating days and interface with the students and the community on the themes of National Integration, Literacy Day, Environment Day, Population Day, World Health Day, Human Rights Day, Women's Day, HIV/AIDS etc. , by involving faculty and students from different departments of Panjab University, especially Education, Psychology, Sociology, Social Work, Police Admn. , University Institute of Fashion Designing and Vocational Development and Human Right. This would help to inculcate the sense of social responsibility of the faculty and the students towards the society. Extension as an third dimension of the University, these programmes would help to generate awareness amongst the faculty, students and community at grass root level.

List of the Important Social Outreach Programmes for the Community including Govt.Schools/ University Depts. etc.

- Reproductive Health and Reproductive Right of Women
- Life Skills and Adolescents.
- Guidance and Counseling for +2 students
- Nutrition and Health
- Adolescent Education.
- Safe Drinking water and Health
- Role of Life skills and Adolescents.
- Managing Stress Guidelines for Adolescents.
- Enhancing the Performance Level of the Students By Managing Stress and Time.
- Role of Life Skills in everyday Life.
- Women Empowerment
- Save Environnent.
- Women and AIDS
- Sexual harassment at work place
- Management of waste
- Environment Education

- Population and Development

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

The students participate in seminars organised by the departments of Social sciences of neighbouring universities. Research scholars also participate in conferences organised by State and National level social science organization.

(i)   University-Neighborhood Network

The Department constantly involved Punches, Surpanches, NGOs, Govt. Officials and MC Officials for organizing programmes for the community and organized programmes for their improvement in their day to day life. These programmes includes Remedial Coaching for SC/ST Students, UGC/NET Coaching, Research Methodology, Basic course in Computer Science, Vocational course in Beauty Culture and Fashion Design and tie and dye for the community and Soft Skills Development Course for SC/ST students and vocational workshops on life skill education etc.

(ii)   Social Initiative undertaken by the students :

✓ Camp by community student of Beauty Culture on the eve of Karva Chouth at Student Centre, Panjab University, Chandigarh.

✓ Literacy Classes for slum children

✓ Rallies for Literacy, Environment Protection

✓ Poster making competitions.

(iii)   List Of Collaborating Agencies

✓ Teaching Departments of Panjab University, Chandigarh.

✓ Identified colleges affiliated to the Panjab University in Punjab and Chandigarh.

✓ Identified colleges of education affiliated to Panjab University in Punjab and Chandigarh.

✓ State Departments of Health, Environment, Population Education etc.

✓ Government and Non-government organizations working in the field education and skill development etc.

✓ Universities in the state of Punjab.

✓ NGOs based in Chandigarh and Punjab.

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

The students are encouraged to participate in NSS, NCC, national level sports and Youth festivals and they are also awarded and honoured for their achievements.

The NSS wing of the University is coordinated by a faculty member of the rank of Assistant Professor and two other faculty members are deputed to assist the Coordinator.

The NSS wing of the University organized activities such as Youth for Clean and Healthy India, blood donation camp, Cleanliness drive, plantation drive, AIDS awareness, lectures on moral values and skill development.

3.6.4 Give details of social surveys, research or extension work, if any, undertaken by the university to ensure social justice and empower the underprivileged and the most vulnerable sections of society?

The following faculty members were appointed for the different posts and they have been undertaking social surveys research and extension work to ensure social justice and empowerment of under privilege section of the society.

Prof S. Sabbarwal	Director, Population Research Centre
Prof. Rajesh Gill	Co-ordinator of **Centre with Potential for Excellence in Particular Area (CPEPA) U.G.C.** Cultural Fixation on Honour: A Gender Audit of Punjab & Haryana,
Prof. Kiran Preet Kaur	1.Co-ordinator, Centre of Social Work 2. Director of Social Welfare, Haryana sanctioned project for undertaking **Survey on Backward Communities of Haryana Castes like Raisikh, Dhobi, Banjara & Nayak report for which has been submitted.**

Need based social survey has been done by the department time to time in the community to organized vocational programmes, extension lectures, seminars, workshops, orientation programmes so that the department would give contribution to the society by giving them awareness, changing their outlook towards life and vocational development amongst youth.

The following publications have been done by the department for the last four years:

List of important Research Publications of the Department:-

1. Parent Child Relationship As Cause of Adolescent's deviant behaviour; Prof. Ajaib Singh and Prof. Sween .

2. Anxiety Among Women; Prof. Ajaib Singh, Prof. Sween

3. Enhancing Youth Employability; Prof. Sween

4. "Loneliness and Ageing at Different Levels of the Aged People; A Research Study" Published in Coherence: A Multi-disciplinary Journal Vol. 3 No. 1 June, 2012. ISSN: 0976-5301 An Annual Journal.(jt)

5. "The Process of Life Long Learning and its Influence on the Teachers" Published in Challenges for Education In Knowledge Society by 21st Century Publications, Patiala. ISBN : 97893-80144-67-2. (jt)

6. "Stress, Youth and Values" Published in 21st Century Publications Awakening Youth- Swami Vivekanand's Vision and Challenges in Education in the 21st Century edited by Dr. Jagdeep Kaur, Ryat College of Education, Panjab March 2013. ISBN: 978-93-80144-35-1. (jt)

7. "Qualitative Improvement of Learners and Teachers by Capacity Building and Competitive Spirit" Published in 21st Century Publications Awakening Youth- Swami Vivekanand's Vision and Challenges in Education in the 21st Century edited by Dr. Jagdeep Kaur, Ryat College of Education, Panjab March 2013. ISBN: 978-93-80144-35-1. (jt)

3.6.5 **Does the university have a mechanism to track the students' involvement in various social movements / activities which promote citizenship roles?**

Although there is no formal mechanism to track the student involvement in different activities but opted for teaching as career (Professors in colleges & Universities) and they are working in different sectors such as health, social welfare and non-government organizations (NGOs). Some of them have been also selected for civil service examinations.

The certificates are to be provided to the students and community after completion of their course and their follow up would be done by organizing the same programmes in the community.

3.6.6 **Bearing in mind the objectives and expected outcomes of the extension activities organized by the university, how did they complement students' academic learning**

experience? Specify the values inculcated and skills learnt.

Values inculcated and skills learned by the students, analytical critical thinking and problem solving skills, Communication and leadership skill, initiating ideas& handling of projects independently, Values like innovative activities and Cross-cultural interaction.

The department has been working for propagating skill development courses for the weaker section of the society, awareness generating programmes for the students and the community, social initiating undertaken by the community students for university students would helped to improve the communication skills, increase the confidence level and mental horizon amongst students. These programmes not any help them in communication skills but also generate skills of conflict resolution, problem solving, time management, values of hard work, social work and social responsibilities and cooperation towards the community. The learning is two way process and extension activities organized by the department would help not only to the students but also community at large.

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

The Department has evolved a mechanism for outreach activities which contribute to community development which include 'Field Work' (curriculum as Master level) for which students make field visits, collect and analyse data and write reports. Students are made to visit places like slums, orphanage, Senior Citizens home etc. Students participate in extra curriculum activities within and outside University. Most of researches/ survey reports /thesis are undertaken which contribute towards community development.

The list of activities undertaken by the department according to the objectives and expected outcomes of the extension activities is given below:

List of the Important Vocational Courses for the Students and Community on yearly basis:
a. **UGC/NET Coaching Classes:** FREE UGC/NET Coaching Classes for SC and ST Students
b. **Remedial Coaching Classes**
   1. Coaching Classes for Remediation in English for 10th and 12th class Students
   2. Classes on Remediation in Hindi for +2 Students
   3. Classes on Remediation for English and Mathematics
c. **Computer Courses**
   4. Certificate Course in Computer Applications
d. **Vocational Courses**
   5. Certificate Course in Block Printing and Tie and Dye
   6. Vocational Course in Fashion Designing
   7. Certificate Course in Beauty Culture and Skin Cosmetology
   8. Vocational course on Enterpreneurship Development
   9. Certificate Course in English Speaking& Personality Development
e. **Vocational Workshops**
   10. Workshop on Bridal Makeup
   11. Certificate Course on Block Printing
   12. Course on Skin Care and Removal of Unwanted Hair
   13. Vocational Workshop on Life Skill Education.

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

One of the faculty members was honoured by the Department of Forest Govt. of Haryana for undertaking project on Community Forest. Another faculty member was awarded and appointed as Co-ordinator for **Centre with Potential for Excellence in Particular Area (CPEPA) U.G.C.** Cultural Fixation on Honour: A Gender Audit of Punjab & Haryana, for undertaking research for Community Development. Another member is Co-ordinator Course for **E-Pathshala.**

➢ Best Social Worker Award to Mrs. Renu Gandhi, the faculty member of the department by YWCA, Sector 11, Chandigarh in the year 2011.

➢ Best Teacher in Non-formal Education to Mrs. Renu Gandhi, the faculty member of the department by Inner Wheel Club Midtown, Chandigarh in the year 2013.

➢ Dr. Prabha Vig, nominated as an Indian Scholar to visit Mauritius under 5th UGC-TEC Consortium Agreement for the year 2012.

3.7   Collaboration

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

The university has benefited from the collaborations as the researchers from the university have been able to raise the standard of their research by incorporating newer techniques, ideas generated through mutual interaction between researchers and utilizing the facilities available at two institutes. This mutual collaboration has helped them to publish their work in journals of repute with high impact factor making their work visible to scientific community globally. This has earned the scientists a good citation on their work. On the basis of these achievements the university:

• **Ranked No.1** in **India** and **32nd in Asia**, as per Times Higher Education Asian University rankings 2014.

• **Number one in India and in the bracket 226-250 internationally in the Times Higher Education World University Rankings, 2013-2014, powered by Thomson Reuters.**

• 141-150 in QS University Ranking: BRICS 2014

• Number one in India and 13th internationally in the Times Higher Education BRICS & Emerging Economies Rankings 2014.

• **ASSOCHAM, 2014:** Adjudged Best Government University in the Country

• **Career 360, 2014:** 2nd amongst Universities, 7th amongst Institutes of Higher Education

• **Center for University World Rankings, 2014:** 5th in the Country; 543rd in world

Its world ranking has also seen an upswing. Financially also the university has benefited from these collaborations as it was awarded DST PURSE grant during 2009-2013. In a recent ranking of different universities of India by DST on the basis of quality of research carried by them, Panjab University was placed next to Delhi University and Hyderabad University and it received another substantial grant for research for the next four years (2014-2018).

3.7.2   Mention specific examples of how these linkages promote

✓ **Curriculum development**: Help in developing newer courses relevant to recent advances and societal needs

✓ **Internship**: Help in teaching the applied aspect of theoretical training

✓ **On-the-job training**: Provides a platform to students to learn the actual processes and challenges on a larger scale with confidence

✓ **Faculty exchange and development**: This not only updates the knowledge of

the faculty but also gives them a chance to collaborate in their future endeavours.

- ✓ **Research**: Mutual discussions, exchange of ideas and sharing of facilities results in better research avenues.

- ✓ **Publication**: Advanced research gets published in Journals of repute on competitive basis

- ✓ **Consultancy**: Interactions among different groups help them evolve methods that can give the faculty an insight into problem solving approach. This opens the door for consultancy.

- ✓ **Extension**: The knowledge gained can also be utilized for the up-liftment of society.

- ✓ **Student placement**: Well trained and groomed students get better opportunity when it comes to getting jobs in organisations of repute in India and abroad.

3.7.3   Has the university signed any MoUs with institutions of national/international importance/other universities/ industries/ corporate houses etc.? If yes, how have they enhanced the research and development activities of the university?

Yes, the university constantly enters into MoUs to have tie ups at regional/national and international levels for exchange of knowledge and expertise and for the purpose of keeping pace with the latest technological advancements in different fields. The faculty gain experience by undergoing training through exchange programmes with institutions within India and abroad. In the last four years, the University has signed about 26 MoUs, the list of which is available at Annexure 'E' and will be shown to the NAAC Team on their visit.

3.7.4   Have the university-industry interactions resulted in the establishment / creation of highly specialized laboratories / facilities?

The Centre for Industry Institute Partnership Programme (CIIPP) facility has been established by the university to boost interaction between university and industry. An attempt is being made to establish a biotechnology incubator in the university to provide facility to the young entrepreneurs who want to try their ideas by conducting research in a conducive atmosphere. The university has earmarked money for this purpose.

CRITERION IV: INFRASTRUCTURE AND LEARNING RESOURCES

4.1   Physical Facilities

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

Our forefathers visualized self-sustaining campus in Sector-14 by ensuring well integrated infrastructure in the form of adequate availability of Academic buildings, A.C. Joshi Library, Hostels for boys and girls, Student canteens, Sector-14 market for day-to-day needs etc. Since then many new buildings in Sector-25 have come up including – UIET, UIAMS, Dr Harbans Singh Judge Institute of Dental Sciences and Hospital,   foreign students hostel (near completion) and two more hostels one each for boys and girls. Most recently Shooting range and Indoor swimming pool of Olympic size are also coming up in Sector-14 campus.

Adequate physical infrastructure is available in all the departments and is improved year by year with financial assistance from UGC (plan grants, non-SAP and SAP), ICAR, DST-FIST, Ministry of Environment, DBT etc. The Physical Infrastructure of the University was improved with the financial support through UGC-XII Plan Grant.

Vice-Chancellor and various authorities of University visualize the future requirements of infrastructure for student-support, teaching-learning, research and administrative processes in new technology driven arena and hence this vision enables the University to plan for the new physical infrastructure.

The existence of full-fledged centralized library with e-resources, University Auditorium for academic and cultural activities, Guest Houses, provision and maintenance of water supply and Electricity, Campus Wide Network with wired & Wi-Fi in all teaching departments and hostels, Internet browsing and computing facility, Class rooms with ICT facilities, use of ICT in administrative offices, Botanical Garden, standard sports fields and gymnasium complex with indoor sports facility, Daycare center, and Healthcare center are examples of visionary leadership.

The adequacy of physical infrastructure in the courses especially in new emerging areas of engineering, computer sciences, management and economics enhances teaching, learning, and research by allowing faculty, students, and staff to have participatory access to physical, information and technological resources on the campus and in the community, region, nation, and world.

Available infrastructure is optimally utilized by sharing of the physical infrastructure among the Departments and by putting in place appropriate administrative controls. Faculty members and students of other institutions are also allowed to refer books and journals in the library and other infrastructure.

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

Yes, the University creates and enhances its infrastructure on a regular basis year-by-year in order to meet the changing needs of the academic environment as well as to promote a good teaching-learning environment. A few recent initiatives in this direction are mentioned below:

- Implementation of Integrated University Management Information System (http://campus.pu.ac.in) to facilitate transparent and efficient functioning both academic and administrative tasks.

- Separate comfortable work space for the faculty, non-teaching staff, departmental library, seminar hall, and state-of-the-art laboratories in each Department.

- All academic areas, hostels, guest houses, student centre etc are Wi-Fi enabled in Sector-14 campus, whereas wi-fi facility in Sector-25 South campus is in progress and will be operational very soon.

- In some of the buildings, Classrooms equipped with internet connectivity, audio-visual facilities and air-conditioned environment.

- Access to e-resources in the Central Library through INFLIBNET to both faculty and students in addition to its regular print holdings.

- Department libraries are improved with good collection of books, back volumes and national and international journals, internet facility and subscription to electronic databases

- Provision of video-conferencing, smart classrooms, various research CDs and DVDs for the Teachers and the Students to meet their needs of research oriented programs.

- A large number of faculty members have individual laptops and desktops with necessary software for teaching and research and are always connected to the outside world through Campus Wide Network and Powerful Internet bandwidth.

4.1.3 How does the university create a conducive physical ambience for the faculty in terms of adequate research laboratories, computing facilities and allied services?

- As mentioned earlier the University provides all the required facilities in terms of research laboratories, computing facilities etc. The Computer Centre provides access to Licensed Software and Open source software through its Servers for computing purposes directly on their desktops.

- Facilities such as scanner, printer, and Xerox machines are provided in each department.

- For computations, Internet access is provided to the faculty.

- To keep the ambiance conducive for work and to maintain good work culture access to consumables, support services (electricity, water etc.) is provided uninterrupted. The round-the-clock security services (installation CCTV cameras at vulnerable locations) and onsite maintenance staff ensures a comfortable and secure working environment.

4.1.4 Has the university provided all departments with facilities like office room, common room and separate rest rooms for women students and staff?

Yes, the University is gender sensitive. All the departments have individual office room, common room and separate rest rooms for women students and staff across the offices of all the teaching departments

4.1.5 How does the university ensure that the infrastructure facilities are disabled-friendly?

The university ensures that the infrastructure facilities are disabled-friendly through:

- Provision of Ramps with Standard Slopes to approach Plinth Level/First Level of all Academic & Public Buildings.

- Availability of ramp facility in Girl's Hostel, Student's Centre, Administrative office, USOL and Dr Harbans Singh Judge Institute of Dental Sciences. Also ramp facility at the entrance of each academic building is also provided.

- Availability of lifts in Central Library, Administrative office, USOL, Dr Harbans Singh Judge Institute of Dental Sciences & Hospital and Hostels having four floors.

- Availability of security staff in each building to help the disabled persons.

- The Visually challenged students are provided with scribes and separate examination room to write their examinations.

- Provision has been made for installation of elevators in all buildings currently under construction besides the buildings recently completed.

- All new buildings /upcoming buildings/provided/planned with Toilets for special persons as per Standard design.

4.1.6 How does the university cater to the requirements of residential students? Give details of

- Capacity of the hostels and occupancy: (to be given separately for men and women)

- Recreational facilities in hostel/s like gymnasium, yoga centre, etc.

- Broadband connectivity / Wi-Fi facility in hostels.

A hostel is a home away from home. Aware of the special needs and requirements of students, who come from far-flung places to this center of learning, the Panjab University tries to provide them a safe, secure and affordable accommodation.

There are eighteen Residence Halls (17 for students and one for working women) on the campus, 8 for boys, 9 for girls and 1 for working women. These Halls, which accommodate about 6770 students (approximately 3200 boys, 3500 girls & 70 Working Women), are named after eminent men and women, historical personalities and personages: Bebe Nankee, Mehr Chand Mahajan, G. C. Chatterji, Shanti Swaroop Bhatnagar, Vallabh Bhai Patel, Lala Lajpat Rai, Justice Teja Singh Samundari, Vivekananda Hall, Mata Gujri, Laxmi Bai, Sarojini Naidu, Kasturba Gandhi and Savitri Bai Phule, which played an important role in shaping the destiny of world and left footprints on the sands of time.

The University Hostels take pains to give its students a neat and clean environment and a comfortable place to live in. There are Wardens and attendants on duty round the clock. Each hostel has a dining hall and canteen, several desert and water coolers, a visitors' lounge, and invariably an outdoor court for badminton, volleyball etc. A cricket kit is also made available in each hostel. The mess provides a balanced diet at reasonable rates. The Common Room is fairly well equipped with current magazines and newspapers. There is provision for indoor games, LCD TV and music system. More recently 24 hours internet connectivity through Wi-Fi has been provided in each hostel. In case of emergencies, doctors, medical facilities, and transportation are also provided.

Architecturally, the hostels are aesthetically laid out with plenty of open space and a lot of greenery. The rooms are comfortable, fitted with fan, lights and hard furniture. Each wing of the hostel has several verandahs and balconies.

Comforts are important but they are not enough. Man is a social animal and needs to interact with others. The resident students are encouraged to participate in cultural and social activities. Colorful evenings of song and dance are not unusual on the campus. Talent shows, dramatics and literary events are organized from time to time. The inmates of a hostel are encouraged to live in harmony, like one big family, lending each other a helping hand whenever, mutually cooperating to make hostel life a rich and fruitful experience.

There is no doubt that during these formative years in the hostel, life-long bonds are created and friendships cemented. This is a time, which will stand out in the memory as a golden period. University experience is an important milestone in an individual's life, the stepping-stone to an adult life of responsibility and care. The hostels of Panjab University try to provide an ideal atmosphere for healthy, all round development of personality and a launching pad for glorious career ahead. The security is ensured for the students round the clock.

Capacity of the hostels and occupancy:

# of Hostels	Capacity	Occupancy
8 for Boys	3200 (400 in each)	3200

| 9 for Girls | 3500 (390 in each) | 3500 |
| 1 for Working Women | 70 | 70 |

Recreational facilities in hostel/s like gymnasium, yoga centre, etc.

The Common Rooms are fairly well equipped with current magazines and newspapers. There is provision for indoor games, LCD TV and music system.

The resident students are encouraged to participate in cultural and social activities. Colorful evenings of song and dance are not unusual on the campus. Talent shows, dramatics and literary events are organized from time to time to promote community living among the students.

Broadband connectivity / Wi-Fi facility in hostels

24 hours internet connectivity through Wi-Fi has been provided in each hostel.

4.1.7 Does the university offer medical facilities for its students and teaching and non-teaching staff living on campus?

Bhai Ghanaiya Ji Institute Of Health at Panjab University offers medical facilities for its students and teaching/non-teaching staff living inside as well as outside the campus. The health centre is serving the strong community of about 40,000(forty thousand) consisting of students, teachers & non- teaching employees (both serving and retired) along with their dependents and all the daily wagers, mess-workers and on contract employees, all university delegates, guests, visiting dignitaries etc.   The number of patients visiting Health Centre is about 300 to 350 per day on an average. The details of health centre are place at Annexure 'A' which will be shown to the NAAC Team on their visit.

4.1.8 What special facilities are available on campus to promote students' interest in sports and cultural events/activities?

Facilities for Sports Activities

The following facilities are available on the campus to promote students' interest in sports activities:

1. Budget

There is a provision of two budget heads, one budget head of Panjab University Sports Committee and other of Amalgamated Fund. These budgets are used to meet the expenses of various sports activities such as Special Incentives for the outstanding Sports persons, Purchase of Sports equipment and Uniforms, Repair, Renovation & Restoration of Sports grounds/Halls etc.

2. Playing Facilities

Sr	Name	Sr	Name
1	One Multipurpose Gymnasium Hall (Air Conditioned)	12	One Netball Ground
2	400 Mtr. Grassy Athletic track (8 Lanes)	13	One Korfball Ground
3	Two Basketball cemented courts of International standard (with flood lights)	14	Two synthetic Lawn Tennis courts
4	Four Volleyball Courts	15	Eight Grassy Lawn Tennis courts
5	One Hockey Ground	16	One Cinder Lawn Tennis court

6	Two Football Grounds	17	Swimming Pool- One
7	Two Handball Courts	18	10 Mt. Shooting Range (Centrally AC)
8	Two Kho-Kho Courts	19	All Weather Swimming Pool (under construction)
9	Two Kabaddi Courts	20	Hockey Astroturf (under construction)
10	Three Softball Grounds	21	Cricket Stadium (under construction)
11	Two Cricket Grounds	22	Two Sports Hostels (One for boys and One Girls)

3. **Awards/Scholarships/Stipends**

   ✓ Cash awards are given to outstanding sports persons at National as well as International levels. Information about Cash Awards to be given to University Players is given at Q-2.1.5.

   ✓ Special Incentives for the outstanding Sports persons such as

      i. free education (exemption from tuition fee + other fee except exam fee)

      ii. Free hostel accommodation except mess and canteen charges

      iii. Free Swimming Pool and Gym facility

4. **Advanced and Technical Coaching camps**

   The advanced and technical camps are organized in all almost all indoor and outdoor games for both men and women.

5. **Special Policy for Fee Exemption**

   The special policy for fee exemption is available to PU students for different levels of achievement in sports for the categories of Championships/Tournaments:

   Category-A1: Performance in Olympic, World Championships, World Cups, World University Games, Asian Games, Commonwealth Games, World University Championship
   Category-A2: Performance in Champions Trophy, Commonwealth Championships, Davis cups, Wimbledon, US, French & Australia Open Tennis Championships, Uber Cup, All England badminton Tournament, World University Championship, Cricket Test matches including one day match, International Athletic Meet, SAF Games
   Category-B: Performance in National Games, National Championships, National Sports Festival for Women by National Sports federation

6. **Admission in a Teaching Department on the basis of Sports Achievement**

   The University has created additional seats (5%) for extraordinary sports persons in a teaching department as well as hostel. For this, the University has a well defined procedure to grade the game performance of students for admission purposes.

7. **Diet Money to Campus Players during matches and coaching camps**

   ✓ Refreshment @ Rs 50/- per student per match/event

   ✓ Refreshment @ Rs 25/- per head per session during caching camp for Inter-College tournaments

   ✓ Refreshment @ Rs 25/- per student per match/event during Inter-Hostel, Inter

Department Open and friendly matches

✓ DA @ Rs 100/- per students per day (fixed) during Inter-College tournaments outside Chandigarh

8. **Refreshment & TA/DA to Inter-University Players**

✓ Rs 50/- per head per match/event/bout to players during Inter-University Tournaments

✓ Local conveyance and bedding allowances as per actual expenses

✓ DA to Players leaving Chandigarh for Tournaments

9. **Sports Kit/ Uniform & equipment**

✓ Two sets of Sports Kit

✓ One Tracksuit and One pair of shoe

✓ Sports equipment related to the game

10. **Conduct of Tournaments**

✓ Inter-Hostel

✓ Inter-Department

✓ Inter-College Tournaments

✓ Inter-University Tournaments

✓ Open Champioships

Facilities for Cultural Events/Activities

The university has a Law Auditorium with a seating capacity for 900 spectators and two other large Multi-purpose Halls (English Auditorium --240 capacity, Evening Auditorium--240 capacity) specially designed for organizing cultural activities with all-important amenities.

Cultural activities and youth programmes provide opportunities for the expression and development of latent potentialities of the students by encouraging them to find outlets in joyous and constructive ways. The students participate in inter-college and inter-university cultural and literary competitions, zonal youth festivals, hiking and trekking expeditions, rock climbing, mountaineering and youth leadership training camps. These programmes are organized and coordinated by the Cultural Coordinator/Director, Youth Welfare and the Dean Student Welfare.

Panjab University Student Council organizes annual events named "Jankar", "Aggaz" etc. under the guidance of Dean Student Welfare. In these events students show their cultural, intellectual and technical skills.

The annual cultural events organized by PU unfold the hidden talents among the students and inculcates the spirit of competition among them.

The performance of the campus students in various Extra-mural activities like debates, seminars, one-act play etc. is the deciding factor for award of the Extra-mural Activities Scholarship. This scholarship is a fixed amount to be decided by the Vice-Chancellor on the recommendations of the Committee and is paid out of the 'Amalgamated Fund'.

"Cyanide" the annual festival of DCET/UICET, is one of the first student festivals started in Chandigarh and has a long tradition. The festival is often host to star performers, DJ nights and other events. Goonj is the annual cultural fest and Aavishkar is the tech-fest of UIET. Both the events are marked by a lot of enthusiasm and are also two of the most awaited events in India, especially for undergraduate students of engineering and technology.

4.2   Library as a Learning Resource

4.2.1   Does the library have an Advisory Committee? Specify the composition of the committee. What significant initiatives have been taken by the committee to render the library student/user friendly?

Yes, the University has a Library Committee. Library Committee has 11 members consisting of Dean University Instruction - Chairperson, University Librarian - Member Secretary and Nine Faculty Members. The following significant initiatives have been taken by the committee to render the library services student / user friendly:

- Installation and implementation of Fully Automated Library System using SLIM 21 Software [Webopac, Self Check-in, Self Check-out, Security Gates (through RFID implementation)]

- The Committee is always working on issues related to user needs and recently, the committee has recommended an expansion plan for library in which the Project of Renovation of Outer Reading Hall is taken up.

4.2.2 Provide details of the following:

- Total area of the library (in Sq. Mts.): 12094 sq.mts.

- Total seating capacity: 1000 approximately

- Working hours (on working days, on holidays, before examination, during examination, during vacation)

- On Working Days, on Holidays, During Vacation -

  - Reading Halls: 9.00am – 9.00 pm.

  - Text Book Section: 8.00am – 10.00 pm.

  - Outer Reading Hall: 24 hrs.

- During Examination: 8.00 am – 12.00 am (Text Book Section)

- Layout of the library (individual reading carrels, lounge area for browsing and relaxed reading, IT zone for accessing e-resources)

  - ✓ Reading Carrels – For Faculty

  - ✓ Locker Facility – For Research Scholars

  - ✓ Digital Library – For accessing e- resources

  - ✓ Laptop Usage Unit

  - ✓ Newspaper Area

  - ✓ Separate space on all floors of the library for relax reading

  - ✓ Clear and prominent display of floor plan; adequate sign boards; fire alarm; access to differently-abled users and mode of access to collection

    - Digital Signage System on all Floors of the Library displaying the Floor Plan and Stack Area layout, important Notifications

    - Sign Boards for Stack Area displayed at the entrance of Reading Halls

    - Full Fledged Fire Safety Equipment Installed

    - Lift Facility for differently-abled users

4.2.3 Give details of the library holdings::

a) Print (books, back volumes and theses): 7, 38,790

b) Average number of books added during the last three years: 35,000 approximately

c) Non Print (Microfiche, AV): Not applicable

d) Electronic (e-books, e-journals)

  - ✓ E-books - World eBook Library (2,000,000 downloadable books, 23,000 audio books)

  - ✓ Lecture Notes in Mathematics (28 Vols.)

- ✓ EBSCO Engineering Books – 87
- ✓ Wiley Chemistry Books - 32
- ✓ E-journals and Databases – 188 + 15 (Subscribed) & 5000+ (Through Consortia)

e) Special collections (e.g. text books, reference books, standards, patents): Already included in a) above

f) Book Banks: Not applicable

g) Question Banks: Not applicable

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

- OPAC: Webopac [www.library.puchd.ac.in]
- Electronic Resource Management package for e-journals: NA
- Federated searching tools to search articles in multiple databases:

  Summon Discovery tool (Single search box for all the library content)

  (Under Process)

- Library Website: www.library.puchd.ac.in
- In-house/remote access to e-publications
    - ✓ In-house Access – Without Password
    - ✓ Remote Access (Science Direct and Scopus) – With Password

4.2.5   To what extent is ICT deployed in the library? Give details with regard to

- Library automation

  Library is fully Automated and uses SLIM 21 Software [Webopac, Self Check-in, Self Check-out, Security Gates (through RFID implementation)]

- Total number of computers for general access: 45 approximately
- Total numbers of printers for general access: 2
- Internet band width speed: 1 Gbps through Computer Centre
- Institutional Repository: Under Process
- Content management system for e-learning: Not applicable
- Participation in resource sharing networks/consortia (like INFLIBNET): Through INFLIBNET, DELNET

4.2.6   Provide details (per month) with regard to

- Average number of walk-ins:

  75,000 approximately per month (During Examination Days)

  60,000 approximately (Other than Examination Days)

- Average number of books issued/returned:

  10,000 approximately per month

- Ratio of library books to students enrolled:

  7, 38,790/13000=57:1 approximately

- Average number of books added during the last four years

  40,000 approximately

- Average number of login to OPAC

  1.5 lakh hits on Webopac Per month

- Average number of login to e-resources:

  All Faculty + Research Scholars

- Average number of e-resources downloaded/printed

  5, 53,967 per annum (For all the Databases)

- Number of IT (Information Technology) literacy trainings organized

  Orientation Programmes and workshops for library use are organized from time to time.

4.2.7   Give details of specialized services provided by the library with regard to

- Manuscripts
- Reference
- Reprography/Scanning
- Inter-library Loan Service
- Information Deployment and Notification
- OPACS
- Internet Access
- Downloads
- Printouts
- Reading list/ Bibliography compilation
- In-house/remote access to e-resources
- User Orientation
- Assistance in searching Databases
- INFLIBNET/IUC facilities

  All the above mentioned facilities are provided by the Library.

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

  Total Library Budget – 7 crores.

  Amount spent for purchasing Books & Journals and e-subscription - 2.5 crores.

4.2.9   What initiatives has the university taken to make the library a 'happening place' on campus?

The five-story impressive Library building in red stone and concrete is based on modern principles of architecture. Its modular and functional style fulfills the purpose of a planned Library.

Library has a rich Collection of e-resources being used by the Faculty, Research Scholars and students not only from Panjab University but from other parts of the country as well. Time to time, workshops and Orientation programmes are organized to make the Users aware of these resources.

Library organizes Book Exhibitions and thematic Display of books for the users.

The Library building is centrally air-conditioned, fully Wi-Fi, equipped with computer and communication network and has full power backup (Gen Set). A C Joshi Library is the first one in North India to implement RFID technology to support Self check in (24 x 7) and Check out of books as well as the security aspect.

Digital Signage System has been installed in the Library to make the Students aware about different aspects of Library, New Arrival of Books, Notifications and Current

Affairs etc. Special Shuttle bus service at night for Girls Students during Examination Days is made available. SMS alert service for users of the Library is in place. Face book page has been created to enhance our reach to students. E-mail alerts to teachers are sent time-to-time.

4.2.10 **What are the strategies used by the library to collect feedback from its users? How is the feedback analysed and used for the improvement of the library services?**

The strategies used by the library:

- ✓ Personal interaction with the users
- ✓ Suggestion Register kept at the entrance of Library and
- ✓ Daily review for up gradation and enhancement of services
- ✓ Ask us column on Webopac and Face book Page.

4.2.11 **List the efforts made towards the infrastructural development of the library in the last four years.**

- ✓ e-subscription facility
- ✓ New A C Plant installed
- ✓ Proper Fire Safety System installed
- ✓ New Digital Library unit created with more space for users
- ✓ Addition of more PCs
- ✓ Laptop Unit created for users
- ✓ Renovation of Washrooms
- ✓ Floor Scrubbing Machine
- ✓ UPS to support Digital Library
- ✓ 2 Water Coolers installed

Under Process:

- ✓ Renovation of Outer Reading Hall
- ✓ Installation of New Passenger Lift

4.3 IT Infrastructure

4.3.1 **Does the university have a comprehensive IT policy with regard to**

•	IT Service Management	**Yes**
•	Information Security	**Yes**
•	Network Security	**Yes**
•	Risk Management	**Yes**
•	Software Asset Management	**Yes**
•	Open Source Resources	**Yes**
•	Green Computing	**Yes**

Computer Network and Usage Policy is placed at Annexure 'K' which will be shown to the NAAC Committee on their visit.

4.3.2 **Give details of the university's computing facilities i.e., hardware and software.**

# of systems with individual	3500+ approximately

configurations	
Computer-student ratio	1:3
Dedicated computing facilities	High Performance 16 slot Blade Chassis populated with six Gen8 Blade Servers, 9 Xeon based Rack Servers and 11 Xeon based tower servers. Two (6TB, 4TB) SAN Storages, 1*4 TB NAS Storage. These servers are used to provide computing and infrastructure (Mail, Web, DNS, DHCP, and Squid etc.) services to all campus and public domain users.
LAN facility	Campus Wide Area Network with more than 3500 wired nodes and more than 12000 wireless nodes. All departments are connected to computer centre with Optical Fibre Cable at Gigabit backbone. Few departments are at 10Gigabit backbone and most of them are at 1 Gigabit backbone. The campus network has three access layers with core at computer centre and distribution and access at departments. Two core chassis i.e Alcatel 9800E with 1.4 Tbps switching capacity and Dlink 6500 with 160Gbps switching capacity are deployed at Computer Centre. Panjab University Wireless Network (Wi-Fi) is deployed using two Aruba 6000 Controllers at computer centre and 660 thin indoor access points and 140 outdoor access points across whole campus. The Wi-Fi is running on IEEE 802.11n and is upgradable to IEEE 802.11ac. The computer centre has deployed two UTMs for network and information security i.e WatchGaurd X8500e and FortiGATE 3650B with dedicated log analyzers. A dedicated VPN has been established with regional campuses and affiliated colleges for secure communications.
Proprietary software	MATLAB, Mathematica, SPSS, Windows Server 2012 R2, Windows Server 2008 R2, Windows Server 2003, MS SQL Server 2012, AVG antivirus 2103 Network edition etc.
# of nodes/ computers with internet facility	3500 plus wired nodes + 12000 plus wireless nodes
Any other (please specify)	Panjab University has three WAN Links i.e 155 STM1(1:1) from Reliance, 1 Gbps NKN, 1Gbps BSNL. Panjab University hosts all network services at computer centre. PU has its own Mail Server, Web Server, DNS Servers configured with failover and load balancing. Computer Centre has developed its own software for all PG and UG online admissions. Panjab University has set up virtual classroom which has been integrated to NIC-NKN virtual classroom facility. Panjab University has set its own webcast facility with streaming server and video portal.

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

- Creating supercomputing facility to provide a vital tool for an increasing number of researchers for biological and physical systems who need easy access to substantial computing resources.

- To upgrade all classrooms across campus to e-classrooms with latest audio/video integrations.

- Expansion of present Wi-Fi to Sector 25 South Campus academic area and up gradation to IEEE 802.11ac wireless networking standard.

4.3.4 Give details on access to on-line teaching and learning resources and other knowledge and information database/packages provided to the staff and students for quality

teaching, learning and research.

Turnitin - Anti-plagiarism software, Webinars PU Web Portal, access to Sakshat, access to NPTEL repository, all subscribed journals by PU central library and all other video/audio lectures are provided in Public domain.

4.3.5 **What are the new technologies deployed by the university in enhancing student learning and evaluation during the last four years and how do they meet new / future challenges?**

All the students are provided access to Internet resources from various academic buildings and hostels on 24X7 bases. Students can visit any web-site for downloading educational resources and same is monitored by the Computer Center.

4.3.6 **What are the IT facilities available to individual teachers for effective teaching and quality research?**

All faculty members are provided with Internet facility at their desk. Computer centre helps faculty members to build and setup hardware and software requirements for their research. Computer Centre provides licensed software such as Matlab, Mathematica and SPSS on LAN for their computational needs. Computer Centre has also made provision for network based AVG – Antivirus Software and Turnitin - Anti plagiarism Software for research.

4.3.7 **Give details of ICT-enabled classrooms/learning spaces available within the university? How are they utilized for enhancing the quality of teaching and learning?**

Panjab University has established a virtual classroom and has integrated it with NIC-NKN virtual classroom portal. Faculty can record their lecture and place at PU web portal. Students can opt for online classes/courses offered at various institutes connected to NIC virtual classroom portal. University has established 5 smart classrooms across campus. Many classrooms are provided projectors and internet facility.

In the year 2012, four smart class rooms have been set up on the campus in the following locations:

1. Department of Computer Science & Applications (DCSA)
2. University Institute of Engineering and Technology (UIET)
3. University Institute of Chemical Engineering & Technology (UICET)
4. University Business School (UBS)

4.3.8 **How are the faculty assisted in preparing computer- aided teaching-learning materials? What are the facilities available in the university for such initiatives?**

Teachers can record (audio/video), stream their lectures from virtual classroom established in the computer centre anywhere on the Internet. An online video portal is deployed at computer centre from which recorded lectures are streamed over Internet. Computer Centre conducts training programme on various packages/tools which helps teachers to prepare teaching materials.

For example, USOL has prepared audio talks for a course and made two courses online.

4.3.9 **How are the computers and their accessories maintained?**

Computer centre has technical man power which deploys, configures, handles day to day computer/network operations and maintains networking equipment. For proprietary hardware like servers, UPS, UTM, University has AMC with various vendors.

4.3.10 **Does the university avail of the National Knowledge Network connectivity? If so, what are the services availed of?**

Yes, the University has 1Gbps Connectivity effective from April 2009. Internet, Countrywide Virtual Classroom, Collaborative Research (CERN), Domain Name System, Video Portals, Video Streaming, Multipoint Control Unit (MCU) Services are being availed in the campus.

4.3.11 **Does the university avail of web resources such as Wikipedia, dictionary and other**

education enhancing resources? What are its policies in this regard?

Yes. Panjab University IT Policy (mentioned in 4.3.1 above) allows users to access any resource on web except objectionable blocked categories.

4.3.12 Provide details on the provision made in the annual budget for the update, deployment and maintenance of computers in the university.

University is providing Rs 30 lacs per year as recurring cost for Internet bandwidth procurement. University has provided Rs 1 lac for maintenance of Internet/Email Services and including up gradation of UPS for current financial year. University has further provided Rs 890,000/- for repair and maintenance of IT equipment. University has made provision of Rs 5 lacs for software/spectrum licenses.

4.3.13 What plans have been envisioned for the gradual transfer of teaching and learning from closed university information network to open environment?

✓ Panjab University is planning a state-of-the-art studio to record lectures on the lines of NPTEL of IITs to be delivered by teachers and made available to students all over the world free of cost.

✓ Lectures and tutorials in the forms of power point presentation is also being planned to host on PU web servers, so that these can be accessed in public domain.

✓ 91.2 MHz, Jyotirgamaya, the CRS (Community Radio Station) of the Panjab University is being run by the School of Communication Studies for more than a year now. It was inaugurated on 13th February, 2011 and is acting as a unifying agent amongst the university faculty, students and also the community. Having started its journey with just a half-an-hour broadcast per day, today the station proudly offers four broadcasts a day that include a total of nine programs running for over 10 hours.

✓ The aim of setting up the CRS is to impart knowledge and information related to education, health, environment, social, cultural and local issues and announcements specific to the community, and to provide a platform for showcasing the talents and expertise of the local people in the vicinity of the CRS which comprises of 30 villages. The CRS also acts as a training ground for the community and also for the students of electronic media.

✓ The University is also planning to strengthen Education Media Centre at USOL as well as an Educational Multimedia Research Centre (EMMRC) at School of Communication Studies. The EMMRC will be linked with the EMMRCs all over the country for making education more inclusive. The centre will also be able to produce socially relevant documentaries.

4.4 Maintenance of Campus Facilities

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

Yes,

i. University has a designated Estate office with its Estate officer as Registrar, Panjab University as Custodian of its Buildings & Campus. However Construction office, Panjab University, Chandigarh under the Headship of Executive Engineer maintain its Building Infrastructure.

ii. University has well maintained Parks, Lawns & sufficient formal open spaces have been provided for the Physical Fitness of its habitants.

iii. University has sufficient number of Children Parks with Playing Equipments and have been provided near each group of residential accommodation.

iv. University has well maintained Play Grounds having required Infrastructure (with modern materials) to fulfil the need of Students from the Physical Education point of View.

v. It has water features like Fountains and Pools around the specific Buildings lend Serene Environment around Major Buildings.

vi. It has well maintained Botanical Garden and Pharmaceutical Garden with required species of Plants as a Part of Campus to facilitate research work in these fields.

Executive-Engineer (Xen) office of the University manages the repair & maintenance works of buildings, open spaces including roads & lawns, class rooms and laboratories.

No approval is required from Chandigarh Administration (UT) for maintenance of its campus in Sector-14 as well as Sector-25.

The Deputy Registrar (Estate) and Registrar of University act as an Estate Officers who have been entrusted the responsibility of taking care of the University land records, campus houses and shops.

A few campus specific initiatives undertaken to improve the physical ambience are placed at Annexure 'L' which will be shown to the NAAC Team on their visit.

4.4.2 How are the infrastructure facilities, services and equipments maintained? Give details.

Panjab University's Construction Office has various wings as follows:-

a) Civil Maintenance wing.

b) Public Health maintenance wing.

c) Electrical maintenance wing.

d) Horticulture maintenance wing

e) Sanitation maintenances wing.

All the wings take care of their responsibilities efficiently under the banner of Construction office.

The University identifies the need for annual maintenance of physical infrastructure and the estimation therein is sought as budget allocation in the beginning of the financial year. Based on the need assessment for proper maintenance of equipment, furniture, laboratories and class rooms, budget provisions are optimally made. The requirements given by the Departments are considered on priority basis while making allocation.

The housekeeping and campus security have been outsourced with a limited contractual obligation. Sophisticated IT equipment and office equipment are covered by annual maintenance contract.

4.4.3 Any other information regarding Infrastructure and Learning Resources which the university would like to include.

Panjab University, Chandigarh has special privilege given by the Chandigarh Administration in which the University has been given the responsibility to create its infrastructure and services entirely of its own in Sector-14 as well as Sector-25.

Engineer Agya Ram, Architect of Excellence and Swiss Architect Pierre Jeanneret under the guidance of his legendary cousin Le Corbusier (the creator of Chandigarh), were assigned the responsibility of designing Panjab University's Architecture. The architecture of whole Chandigarh city was developed separately. Simultaneously, on the other side, the architecture of Panjab University was developed separately. This all depicts in a yellow book (Sethi Book) namely 'Panjab University – 1947-1967'.

After the year 1990, the University has made a tremendous overall growth with new constructions in Sector-14 & Sector-25 in the last twenty years namely Youth Welfare, Music, Emerging Areas in Social Sciences and Sciences. The university has a modern infrastructure, well integrated with old infrastructure. Power lines have been re-wired at selected places which were essential for Laboratories for Computers and other equipment.

There is a need of upgrading overall electrical infrastructure, power lines, electrical lining and modernisation of networking cables. In addition, power requirements of University are also increasing day-by-day. Towards this, the University proposes to have 66 KVA distribution line with a cost of Rs 22 crores of its own.

CRITERION V: STUDENT SUPPORT AND PROGRESSION

5.1   Student Mentoring and Support

5.1.1   Does the university have a system for student support and mentoring? If yes, what are its structural and functional characteristics?

The University has a well-designed structured mechanism for student support and mentoring and students receive support and guidance from a variety of sources.

The student support system comprises of Vice-Chancellor, Dean University Instructions, and Deans of various Faculties, Chairpersons of Departments, CoE and Teacher Coordinators of various committees. The support system functions through several units such as Departmental Mentoring System, Guidance and Counselling Cell, Placement and Career Guidance Cell, Grievance Redressal Cell, Women Cell, SC/ST Cell and Committees for all extra-curricular activities. These committees include staff and student representatives and carry out the activities under the supervision of the HoD.

The Dean International Students provides support for foreign students (e.g., housing, residence permits) through its office.

Apart from the above, the following are the associations functioning for the benefit of the students:

Association	Activity/Focus
NCC	To inculcate and foster discipline, leadership quality and organizational skills, sportsmanship and unity in diversity
NSS	To extend services to the community, needy and poor
ECO Club	Creation of environmental consciousness and the importance of conservation of resources

At a formal level, the University has a student council duly elected by the students which primarily acts as a buffer between the students and the administration and is headed by the Dean Students Welfare (DSW), DSW (Women) and assisted by Deputy Registrar, Dietician, and Office Assistants etc. This counsel is related with supporting students in their admission, hostel, and extra-curricular, academic activities and also involved in supporting them in other issues like financial, social and psychological issues etc.

More specifically, the office of Dean, Students Welfare facilitates the following functions in coordination with the different Departments of the University:

- Provision of advice and guidance to admission seekers
- Enabling and facilitating hostel admission
- Conduct of election to the student bodies
- Planning and organizing the cultural and extra-curricular activities on the Campus including Youth festivals and other events
- Providing scholarships, fellowships and other financial assistance to campus students
- Providing counseling, advice and guidance to students on career opportunities and further education

The Office of the DSW is located in the Student Centre. It has the following constituents to promote the general welfare of the campus students:

Panjab University Campus Students' Council (PUCSC):

Duly elected PUCSC is constituted every year for having liaison with the students of the Campus. This Council organizes various cultural functions and also helps to promote sports and extra-curricular activities on the Campus.

Activities:

The PUCSC and Departmental societies organize various kinds of Academic, Cultural, Social and Extra-curricular activities to promote students' involvement and participation in these events and to enrich the Campus atmosphere in general. Blood Donation Camps are also organized.

Campus Reporter:

This is an in-house publication printed annually for circulation amongst the campus students and the faculty members on the Campus. It aims at providing a forum for expression to the students and is published with their active cooperation. Besides giving wide coverage to the activities of the students and the personal contributions, various competitions such as short story writing, essay writing and poetry, cartoon and painting competitions are organized for the campus reporter. The winners are awarded prizes and their entries are published. The publication has sections in English, Hindi, Punjabi, Sanskrit, Urdu, Science, Persian, Law etc.

Campus Representation in Cultural & Literary Competitions:

The Campus teams are selected, trained and financed to participate in inter-College and inter-University Cultural and Literary competitions. The performance of these teams has been outstanding and they have been annexing trophies and overall best awards for the last many years. This office is also arranging Inter-college and Campus competitions.

Educational Tours:

Subsidized educational tours are undertaken by students under different educational programmes for data collection, field surveys, visits to industries, business houses, financial institutions, legislatures, libraries, laboratories, training institutes, museums, archaeological sites and places of historical importance. Most of these tours are integral part of the course structure of the departmental concerned and are guided by teachers.

Cultural and Youth Programmes:

Cultural activities and youth programmes provide opportunities for the expression and development of latent potentialities of the students by encouraging them to find outlets in joyous and constructive ways. The students participate in inter-college and inter-university cultural and literary competitions, zonal youth festivals, hiking and trekking expeditions, rock climbing, mountaineering and youth leadership training camps. These programmes are organized and coordinated by the Cultural Coordinator/Director, Youth Welfare and the Dean Student Welfare.

Students' Scholarships:

The Office of the DSW is providing the following subsidies/financial assistance/scholarships to the Campus students:-

1. **Need Based Assistance, Need-cum-Merit and Handicapped Scholarships:**

   These scholarships are paid for nine months a year to the students recommended by the Chairpersons as per conditions laid-down for the award out of 'Students Scholarship Fund'.

2. **Sports Scholarships:**

   This scholarship is awarded on the basis of the grading done by the Sports Department based on the performance of the Campus students in various sports activities. This scholarship is paid for nine months a year out of 'Students Scholarship Fund'.

3. **Extra-mural Activities Scholarship:**

This scholarship is paid out of the 'Amalgamated Fund'. The performance of the campus students in various Extra-mural activities like debates, seminars, one-act play etc. is the deciding factor for award of the scholarship. This scholarship is a fixed amount to be decided by the Vice-Chancellor on the recommendations of the Committee.

4. **Financial Assistance:**

Financial assistance is paid out of 'Poor Students Welfare Fund' to the P.U. Hostels residents.

5. **Food Subsidy:**

Food subsidy is also paid to the deserving hostel residents. The recipients of food subsidy will do some duty/work in the hostel as may be assigned by the Warden.

6. **Student Centre:**

Student Centre is housed in an attractive cylindrical building almost at the Centre of the University Campus. It has a large indoor game section on the first floor in which facilities for a number of games like carom, chess and table tennis are available. A stereo-set with adequate provision of Indian and Western discs and a colored LCD TV set are added attractions of this section. There is a spacious reading room on the second floor in which students can browse over a variety of newspapers and periodicals in cozy atmosphere. Spacious room establishing a Placement Cell for the benefit of the Campus Students exists on the 2nd floor of the Student Centre. The top floor of the Student Centre building houses a modern cafeteria, where light beverages, snacks, South Indian delicacies/dishes are available at concessional rates. A stereo-set has also been installed in the Cafeteria. The shops adjoining Student Centre are mainly run for the convenience of Campus students.

7. **Hostels:**

There are seventeen multi-storey hostels on the Campus. Seven of these are for boys and eight for girls. Girl students constitute the majority of boarders. Accommodations for girls have also been provided in Working Women Hostel which is equipped with all modern facilities. A new Sports Hostel has been built for visiting sports teams.

In addition to cubicles and dormitories, each hostel has guest room, essential services of tailor, laundry and barber. There is a special arrangement of indoor games (carom, chess, table tennis etc.), reading materials (newspapers and magazines), music system and LCD T.V. for recreation of residents. Outdoor game facilities like badminton, volleyball and basketball have been provided in the sprawling green lawns of the hostel. Recently cyber-cafe, Wi-Fi and gymnasium facilities have been added to all hostels.

With a view to ensuring food as per liking of residents, they (residents) are encouraged to run co-operative messes and the Dean of Student Welfare ensures all possible facilities in this direction. This is planned with a view to create healthy competition with the contract messes.

Modern facilities like cooking gas, fans, deep-freezers, geysers, water-coolers, desert-coolers, etc. have been provided in the hostels. Besides, cooking gas connections have been installed in all the hostels. To ensure good food for the residents, food is prepared under the supervision of a Dietician. The mess and canteen servants have been provided with summer & winter uniforms and hand-gloves to ensure hygienic conditions. The servants/contractors are extended the medical assistance in case of need.

The Dean Student Welfare reserves the right of admission to all the University Hostels. Each Hostel is administered by a Warden (Teacher) and supporting staff. Application for hostel accommodation is to be submitted by the student on the prescribed form available from the Cash Counter, S.B.I. extension counter at Panjab University, Chandigarh. The Dean Student Welfare has been entrusted with the overall responsibility of directing and functioning of the hostels and maintaining discipline.

The residents are required to observe the rules printed in the Handbook of Rules for Residents of the Panjab University Hostels for the relevant years. For instance, Sexual harassment is a serious criminal offence and the students are strictly asked to follow the code of conduct and discipline for the avoidance of this evil on the University Campus.

There is an internal complaints Committee for sexual harassment constituted by the Vice-Chancellor and headed by D.S.W. (W):

o Any student alleged to be involved in any misconduct will be liable to be suspended from the University and on proving the commission of misconduct the student shall be liable to be expelled from the University. The student aggrieved from the decision of the University shall be entitled to appeal to a Standing Committee to be constituted for the purpose by the Vice-Chancellor, of which a retired High Court Judge shall be the Chairman.

o Once a student has indulged himself in the misconduct in any manner whatsoever on the University Campus and action taken against him, he shall not be entitled to admission in any Department of the University and for this purpose a separate web-site be created by the University so that the head of the Department while granting admission is liable to check whether the student seeking admission is entitled to admission on account of his previous misconduct. The Head of the Department shall ensure checking the web-site before granting admission and shall give a certificate on the admission form to that effect.

At the departmental level, every teacher has been entrusted to act as a class-in charge/mentor for a group of students in a class. The purpose is to develop rapport with the group and to discuss both academic and non-academic issues. Students interact with the teachers usually during off hours collectively or individually. Such practice is highly beneficial to slow learners. Further various grievances are redressed at this platform and suggestions are placed before the Chairperson for developing better academic atmosphere.

The University has set up a Central Placement Cell as well as Career & Guidance Cell to support and facilitate students to find gainful engagements after their university education.

Anti-ragging committee, Prevention of Women Harassment Committee, Grievance Redressal Committee, Hostel Mess Committee etc works for students support and mentoring.

The University also has a specific Caste (SC) and Scheduled Tribes (ST) Cell that promotes the special interests of students in the reserved category. This deals with the queries/grievances of the reserved categories and facilitates the implementation of various other policies and is under the charge of an Assistant Registrar. The cell is also entrusted with the responsibility of coordinating Scholarship Schemes for the benefit of the students belonging to SCs/STs.

The office of the Dean College Development Council (DCDC) has a provision to grant some scholarships to the deserving college students every year.

Department of Alumni Relations (DAR) at the University raises various endowment funds and award stipends out of it to the deserving students on need-cum-merit basis. This department institutes and disburses scholarships, fellowships, medals, awards, etc. to the meritorious students of the university out of the corpus of the Panjab University Alumni Association (PUAA).

5.1.2 Apart from classroom interaction, what are the provisions available for academic mentoring?

Academic mentoring provides a space for students to come together in small groups, where listening and sharing of experiences can happen, and peer-learning can be facilitated.

The University's academic mentoring system provides the following academic associations functioning for the benefit of the students:

Academic Association	Activity/Focus
Colloquium Series (20 lectures have been organized in the last two years between 20-09-2012 and 22-08-2014) http://seminar.puchd.ac.in	Academic meetings at which specialists deliver addresses on a topic or on related topics and then answer questions relating to them, thereby igniting the young minds towards scientific outlook and achieving their goals.
Seminars/Webinars/Workshops/conferences http://webinar.puchd.ac.in	Academic meetings at which the students are exposed to in-depth subject knowledge.
Soft Skill Development Programmes http://cpc.puchd.ac.in/cpc-cluster.pdf	Personality development, business English, quantitative aptitude, logical reasoning etc ensuring better employability

The class in-charge closely monitors the academic progress of the students on one to one basis and identifies the slow learners and advanced learners on the basis of their performance in internal assessment and takes proper measures.

The University also organizes interactions with eminent academicians for students to gain more skills and knowledge through Workshops / Seminars with the active participation of students.

Students are exposed to in-depth subject knowledge and other multilevel tasks through association activities, seminars and workshops organized by the departments. Students update themselves on recent trends and developments in the subjects by participating in the training programmes and presenting papers in the state / national level seminars and inter-university competitions.

The University conducts short-term English proficiency courses for the students of its UG and PG programmes for better campus placements.

5.1.3   Does the university have any personal enhancement and development schemes such as career counselling, soft skill development, career-path-identification, and orientation to well-being for its students? Give details of such schemes.

Yes, the University provides personal enhancement and development schemes for students.

The Career Guidance and Counseling Cell have been established in Panjab University under the UGC Plan for the welfare of the students and provide a good platform for students to represent their career developmental needs in their respective departments and fields. Besides contributing to their community, the involvement of students also enhances the personality and skills of the volunteers in the form of an unshakable confidence, planning and organizing skills, creative mind, leadership, team spirit etc.

In most of the academic programmes of the University, Field-based/ Industry-based/Research-based projects form the part of the curriculum. These field-based/ Industry-based learning experiences acquired through internships help to critically orient students to the world of practice as part of their academic training while also placing on them the demands of working in collectives, with their peers as well as with the community.

UBS, DCSA, UIET, UIAMS, UIPS, UIHMT etc, have a structured placement cell, the functions of which are to contact and invite prospective recruiters to campus, for both summer internships and final centralized placement drives. In addition, the Central Placement Cell

regularly invites people from external agencies for guest lectures, and also organizes small workshops on career counseling and soft skills development.

The University has a Coaching Centre for the Civil Services Examination as well as other competitive examinations including UGC-NET.

The University Employment Information & Guidance Bureau provides employment information and advice to the students. There is also a unit of Information and Advisory Bureau which guides students with regard to their studies abroad.

The University has a vibrant extracurricular space for students to engage them throughout the academic year, and promote student participation in and out of class activities, literary, cultural and sports events, and community outreach services.

5.1.4 Does the university provide assistance to students for obtaining educational loans from banks and other financial institutions?

Yes, the students are provided with full assistance for obtaining educational loans from banks and various financial agencies for pursuing higher education. Education loans include loans and advances granted to only individuals for educational purposes up to Rs. 10 lakh for studies in India and Rs. 20 lakh for studies abroad.

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

Yes, the updated prospectus for admission to various academic programmes based on Common Entrance Test and handbook of information are annually published and the detailed information about each course, rules and guidelines of the University, fee structure, scholarships and other general information is given in these documents. The information is put on the website of the University for Online Access to the students and prospective applicants. The entire admission process to some of the academic programmes such as B.E./B.Sc. (Hons School)/B.A.LL.B. etc is carried out online.

For instance, University Business School provides online access to its "Handbook of Information" to enlighten those who are aspiring to join management programs at UBS through the web-site: http://ubsadmissions.puchd.ac.in/ubs-handbook.pdf

The online access to various prospectuses is also provided for the following admissions:

1. B.Sc.(Honors School)/B/Pharmacy through CET   http://cetug.puchd.ac.in
2. PG admissions through CET   http://cetpg.puchd.ac.in
3. LL.B.   http://pglaw.puchd.ac.in
4. B.A. LL.B./B.Com LL.B. (Hons)   http://uglaw.puchd.ac.in
5. MBA (Applied) at UIAMS   http://met.puchd.ac.in
6. B.Com.   http://bcomadmissions.puchd.ac.in
7. USOL   http://usoladmissions.puchd.ac.in

The online access to Handbook of Information for the last four years is given below:

http://puchd.ac.in/includes/documents/handbook-information-2014.pdf

http://puchd.ac.in/includes/documents/handbook-information-2013.pdf

http://puchd.ac.in/includes/documents/handbook-information-2012.pdf

http://puchd.ac.in/includes/documents/handbook-information-2011.pdf

5.1.6 Specify the type and number of university scholarships / freeships given to the students during the last four years. Was financial aid given to them on time? Give details (in a tabular form) for the following categories: UG/PG/M.Phil/Ph.D./Diploma/others (please specify). All financial aid to the students is released in time. Detail of number of

Scholarships/Freeships given to the students during the last four years is given below:

Year	2010-2011		2011-2012		2012-2013		2013-2014	
Categories	No. of Students	Amount (Rs.)	No. of Students	Amount (Rs.)	No. of Students	Amount (Rs.)	No. of Students	Amount (Rs.)
U.G.	494	76,35,321	555	78,28,035	707	1,08,01,645	684	1,22,00,790
P.G.	544	33,34,210	642	36,47,477	439	44,27,223	510	45,13,767
P.hd	1	18,000	2	12,800	-	-	-	-
M.Phil	1	3,000	1	3,000	1	3,000	-	-
Diploma	-	-	1	9,000	-	-	-	-
Others	-	-	-	-	1	20,000	1	15,000
Total	1040	1,09,90,531	1201	1,15,00,312	1148	1,52,51,868	1195	1,67,29,557

5.1.7 **What percentages of students receive financial assistance from state government, central government and other national agencies (Kishore Vaigyanik Protsahan Yojana (KVPY), SN Bose Fellow, etc.)?**

A total of 722 students received financial assistance. Details are given below:

Sr #	Name of the Scheme	# of Students
1	UGC Research Fellowship in Sciences for Meritorious Students (JRF/SRF @ Rs. 14,000/- 16000-/18000- p.m + 20% HRA) Physics=24 Chemistry=5 Geography=9 Zoology=12 Statistics=07 UIPS=36 Botany=24 Biotechnology=07 Pol. Sc.=03 Anthropology=05 BioChem.=05 UIET=03 MicroBio=05	**145**
2	UGC OPEN FELLOWSHIP (JRF/SRF @ Rs. 16000-/18000- p.m + 20% HRA) Anthropology=18 Botany=04 Biochemistry=03 Biophysics=05 Biotechnology=02 Env. Studies=14 Microbiology=08 Chemistry=16 Physics=12 Microbial Bio=02 Mathematics=05 Public Health=04 Zoology=02 ERC=01 Forensic Sc=04 System Bio=01 NanoSc=01 Computer Sc=01 UBS=11 Art His & Vis=03 Economics=11 Education=43 English=08	**338**

	Sanskrit=02	
	Geography=13 Gandhian Stu=08 History=02 Laws=14	
	Music=06 Mass comm.=08 Phy Edu=01 Evening Stud=01	
	Psychology=06 Punjabi=15 Pol Sc=14 AIHC=02	
	Sociology=21 Comm Edu=01 Def Stud=06 Human Rights=03	
	Pub admn=16 Hindi=07 Indian Theatre=01 GNSS=05	
	Chinese =02 Swami Viveka=01 Vedic=01 Social Work=02	
3	UGC RAJIV GANDHI FELLOWSHIP History=03 Public Admn=04 DEVS, English, Chemistry, Biophysics, Zoology, Music = 01 each Punjabi, Hindi, Physics, Political Science=01 each	**17**
4	ICMR OPEN FELLOW (Fellowship @ 16000/18000 per month + HRA)	**53**
5	DST INSPIRE (Fellowship @ 16000/18000 per month + HRA)	**49**
6	ICPR OPEN FELLOWSHIP (Fellowship @ 16000/18000 per month + HRA)	**03**
7	ICHR OPEN FELLOWSHIP (Fellowship @ 16000/18000 per month + HRA)	**08**
8	DBT OPEN FELLOWSHIP (Fellowship @ 16000/18000 per month + HRA)	**03**
9	CSIR OPEN FELLOW (Fellowship @ 16000/18000 per month + HRA)	**94**
10	ICSSR (16000/-, 13000/- 10000/-)	**10**
11	ICAR (12000/-, 8000/-)	**02**

5.1.8 Does the university have an International Student Cell to attract foreign students and cater to their needs?

Yes, the University has set up an International Students office exclusively for the well-being of foreign students and this office is headed by Dean of International Students (DIS) duly appointed by the Vice-Chancellor. The office of the Dean of International Students is located in the Students Centre (Ground Floor), Panjab University on the University Campus.

The DIS looks after the welfare of the International Students and also maintains liaison with

the university authorities and outside agencies. The DIS also maintains close liaison with the Indian Council for Cultural Relations (ICCR) and helps students in organizing their cultural functions/sports etc.

The DIS lays down guidelines for admission of International Students to all the institutions affiliated to the Panjab University in Chandigarh and maintains record/particulars of each student.

In addition to normal seats, the University has created additional seats for Foreign Nationals/NRI candidates in the courses.

The International students can approach this office for advice and assistance in finding suitable hostel or residential accommodation at Chandigarh for Govt. of India sponsored International students.

The University has taken the following initiatives to attract foreign students to the campus:

- **Ph.D. Admissions**: Foreign students are exempted from the entrance test for the admission to Ph.D. programme. The application of foreign nationals/NRIs shall be accepted on the basis of their synopsis submitted with the application form. In lieu of the entrance test, it would be mandatory for all foreign students from non-English speaking countries to pass English Proficiency Course being conducted by the Department of English & Cultural Studies at Panjab University, Chandigarh. A Nominal Fee of US $1200 per annum shall be charged from foreign national who belong to developing countries. US $2500 per annum shall be charged from those scholars from developed countries.

- **UG/PG Admissions**: 10 percent seats over and above the total number of regular seats in each course are reserved for the Foreign Nationals/NRI candidates. Foreign Nationals/NRI candidates seeking admission to the concerned course are required to compete amongst themselves for the seats reserved for them by appearing in the Entrance Test (wherever applicable) if they are in India. However those living abroad at the time of entrance test will be exempted from the entrance test.

  The candidates seeking admission to B.P.Ed. and M.P.Ed. (Physical Education) are required to undergo mandatory Physical Efficiency Test. The scores of Physical Efficiency Test are counted for determining merit.

- **State-of-the-Art Hostel:** Availability of Foreign Students Hostel with state-of-the-art facilities for comfortable stay of foreign students.

5.1.9 Does the university provide assistance to students for obtaining educational loans from banks and other financial institutions?

Refer 5.1.4 above

5.1.10 What types of support services are available for

- **Overseas Students** Refer 5.1.8 above

  A fully furnished separate hostel is available for the foreign students. Counselling is provided to overseas students regarding the courses available, scope of courses and scholarships available.

- **Physically Challenged / Differently-abled students**

  a) 3 % of seats are reserved for this group of students in admission.

  b) Visually Challenged students are provided with scribes and extra time to complete the exam and their special needs are addressed too.

  c) Ramp and lift facility is provided in the Administrative Block, Hostels and Departments.

- **SC/ST, OBC and Economically Weaker Sections**

a) SC/ST Cell headed by Assistant Registrar

b) 15% for SC and 7.5% for ST seats are reserved

c) Meticulous efforts are made by the University to claim the Scholarships offered by the state and central Governments for the welfare of SC / ST and OBC students. Remedial coaching to improve the academic performance and special coaching classes for IAS, NET / SET and other competitive examinations are offered to SC / ST and OBC students by the IAS Coaching Cell. Free study materials and term fee / bus fee / examination fee / mess fee concessions are provided to the economically weaker sections.

d) Scholarships are awarded as given below:

- ✓ Post Matric Scholarship for OBC Students who belong to a family having income not exceeding Rs. 1 lac per annum

- ✓ Post Matric Scholarship for student belonging to Minority Communities

- ✓ Merit Cum Means based Scholarship for students belonging to Minority Community

- ✓ Financial Assistance to students for SC/ST categories under the budget head improvement of education

- ✓ Post Matric Scholarship to students belonging to Scheduled Caste and special grants to girls belonging to Scheduled Castes.

- **Students participating in various competitions/conferences in India and abroad**

  a) UGC sponsored career and counselling Cell, Centre for Life Long Learning, IAS coaching Centre and NET Coaching are functioning well to prepare our students for various competitive examinations.

  b) Academic guidance and financial assistance are given to students to participate in various inter-university, state level and national level competitions / conferences. Information on such events is displayed on the departmental notice boards and university web-site. The staff in-charge of associations is responsible for keeping the students informed. Training and guidance is given to the interested students. Students participate regularly in the Youth Festival conducted by the Department of Youth Welfare and win many laurels. The Staff accompany the students who participate in various inter-university, state level and national level competitions / conferences and the university bears expenses of the economically backward students.

- **Health centre, Health insurance etc.**

  University has a well-functioning health centre where free outdoor and indoor medical facilities are provided to our students. For critical cases, Doctors of health centre also refer patients to specialist doctors / hospitals. Further details are available at Annexure 'A'.

- **Skill development (spoken English, computer literacy, etc.)**

  a) Spoken English sessions are arranged on regular basis through Central Placement Cell, thereby enhancing the oral communication skills for professional and social interactions through their extensive practices and Enrichment of vocabulary level

  b) Basic Computer Knowledge sessions are arranged on regular basis through Computer Centre.

- **Performance enhancement for slow learners**

  Special classes/ tutorials are organized for slow learners.

- **Exposure of students to other institutions of higher learning/ corporates/business**

houses, etc.

a) Students are encouraged to take part in extension activities and co- curricular activities, so that they get acquainted with social, economic and corporate functioning.

b) Students are exposed to other institutions of higher learning through projects, MoUs (Refer Q3.7.3), visit to industries, instrumentation centres and research institutes, hands-on training and campus drives at other institutions and educational tours.

- **Publication of student magazines**

a) Students are encouraged to publish their creative outputs in the form of articles, poems, drawings. Some departments bring out their own magazines/placement brochure.

b) At the University level, **Campus Reporter** magazine is published in which students are encouraged to contribute their articles.

This is an in-house publication printed annually for circulation amongst the campus students and the faculty members on the Campus. It aims at providing a forum for expression to the students and is published with their active cooperation. Besides giving wide coverage to the activities of the students and the personal contributions, various competitions such as short story writing, essay writing and poetry, cartoon and painting competitions are organized for the campus reporter. The winners are awarded prizes and their entries are published. The publication has sections in English, Hindi, Punjabi, Sanskrit, Urdu, Science, Persian, Law etc.

5.1.11 Does the university provide guidance and/or conduct coaching classes for students appearing for Civil Services, Defence Services, NET/SET and any other competitive examinations? If yes, what is the outcome?

Yes, the university conducts coaching classes regularly for civil services, Judiciary and NET separately through IAS Coaching Centre. The outcome is positive as students selection rate is on rise.

The Centre runs the following programme and their fee structure is given below:

Sr.	Name of the programme	Duration	Fee
01	IAS(Preliminary)Twice a year January & August	4 Months	15000(General Candidate) 7500(SC/ST)
02	UGC(NET) Twice a year May/November	3 weeks	3000/-(General Candidate) 1500/-(SC/ST)

The Centre conducted four batches of the following Coaching programmes from July 1, 2012 to June 30, 2013.

Sr. No	Name of the Programme	Duration	No. of Candidates enrolled.
01	IAS Preliminary(CSAT) (2 Batches)	1) August- December, 2012 Batch 2) January-May, 2013 Batch	46 50

02	UGC(NET)	1) November, 2012 Batch	23
	(2 Batches)	2) May, 2013 Batch	13
		Total	**132**

5.1.12 Mention the policies of the university for enhancing student participation in sports and extracurricular activities through strategies / schemes such as

- **Additional academic support and academic flexibility in examinations**

  a) 5% of seats are reserved for sports persons in admission to a teaching department.

  b) Some relaxation in attendance are given to sports persons

  c) Special permission is given to sports persons for the internal/final exams if they are held at the time of tournaments and competitions

  d) Scholarships and fee concessions are granted.

  e) The university gives total financial assistance to the students to participate at university and national level.

- **Special dietary requirements, sports uniform and materials**

  a) Students participating in sports and cultural activities are provided free diet, uniform and guidance.

  b) For enhancement of students' participation in sports and cultural activities, free coaching camps are organized by the University.

  c) Sport uniform and sport kits to the participants are made available.

  d) All infrastructure facilities for indoor and outdoor games are provided.

  e) Diet Money to Campus Players during matches and coaching camps

     i. Refreshment @ Rs 50/- per student per match/event

     ii. Refreshment @ Rs 25/- per head per session during caching camp for Inter-College tournaments

     iii. Refreshment @ Rs 25/- per student per match/event during Inter-Hostel, Inter Department Open and friendly matches

     iv. DA @ Rs 100/- per students per day (fixed) during Inter-College tournaments outside Chandigarh

  f) Sports Kit/ Uniform & equipment

     i. Two sets of Sports Kit

     ii. One Tracksuit and One pair of shoe

     iii. Sports equipment related to the game

  g) Refreshment & TA/DA to Inter-University Players

     i. Rs 50/- per head per match/event/bout to players during Inter-University Tournaments

     ii. Local conveyance and bedding allowances as per actual expenses

     iii. DA to Players leaving Chandigarh for Tournaments

5.1.13 Does the university have an institutionalized mechanism for students' placement? What are the services provided to help students identify job opportunities, prepare themselves for interview, and develop entrepreneurship skills?

Many professional departments/institutes/schools such as UBS, DCSA, UIET, UIPS, UIHMT, UIAMS etc, have a structured placement cell, the functions of which are to contact and invite prospective recruiters to campus, for both summer internships and final centralized placement drives.

In addition, the Central Placement Cell of the university provides help and guidance to the students both for identifying jobs opportunity and later in preparing for interviews and Group Discussion.

The University is one of the first three highest impact factor Educational Institution of India, which aims at providing perfect ambience to budding professionals so as to enable them to carve a unique niche in their upcoming field. Clarity of concept, confidence, discipline, boldness, motivation and a desire to excel are inculcated in them as a part and parcel of the curriculum, besides grooming them to become learned professionals. For them striving for perfection as well as excellence has become as much a part of their personality as is gaining knowledge in their respective fields.

Our publication, patents, discoveries have been a matter of pride for us but our true strength and pride lies in our "PRODUCE" which has not only excelled in all the fields it has ventured into, but has also brought glory to the University and made the university proud. For the benefit of the students, the University has a Central Placement Cell. Institutions/Corporate Houses/Industries interested in conducting campus interviews / placement is requested to contact the Advisor, Central Placement cell.

Many of our students who participated in national and international events have brought laurels to the university.

For instance, recently Campus Placement Drive: AVSAR 2014 was organized by Central Placement Cell and Panjab University Campus Student's Council, for the placement of University students.

Most recently, Central Placement Cell in association with Industry has floated one compulsory non-credit course consisting of various sessions on personality development, business English, quantitative aptitude, logical reasoning, choosing a career, applying for a job etc. and the students will have to attend at least 75% of sessions in final year semesters. The course has to be implemented in the Time Table of each Department in a cluster of departments according to slot allocated. (http://cpc.puchd.ac.in/cpc-cluster.pdf)

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

Campus Placements for the year 2010-11: 607

Campus Placements for the year 2011-12: 908

Campus Placements for the year 2012-13: 596

Campus Placements for the year 2013-14: 489

Further details are available at Annexure 'M' which will be shown to the NAAC Team on their visit.

5.1.15 **Does the university have a registered Alumni Association? If yes, what are its activities and contributions to the development of the university?**

Yes. Since its inception in 1882 at Lahore (now in Pakistan), the University has a long tradition of pursuing excellence in teaching and research. After partition, the University continued in its present form under a fresh legislative enactment of October 1, 1947. In the finest global tradition of the reputed seats of learning, which cherish links with their former students for mutual pride and enrichment, the University Senate decided to create a **Department of Alumni Relations (DAR)** in March 1969.

The major objectives of the DAR are to:

- establish a link with the PU alumni and enroll them as members

- establish liaison between PUAA and similar other associations at the universities in the country and abroad

- raise various endowment funds and award stipends out of it to the deserving students on need-cum-merit basis

- institute and disburse scholarships, fellowships, medals, awards, etc. to the meritorious students of the university out of the corpus of the Association

- impart identity to its members by issuing them with photo-identity cards

- send birthday greeting cards to its members to impart personal touch and interaction with them

- honor distinguished alumni of PU, who have brought national/global acclaim in their respective domains

- seek donations from alumni and potential donors for promoting various righteous activities of the Association

- suggest ways and means for the participation of the Association in the working of the University

- arrange get together of the alumni and social/cultural functions of the alumni

The Senate of Panjab University approved the formation of the **Panjab University Alumni Association (PUAA)** in October 1969. However, the PUAA with the Vice-Chancellor as its President, and the Dean of the Alumni Relations as its Secretary, was formally inaugurated on 30th September 1972.

The DAR superintends the work of the PUAA and provides administrative support to it.

The proclaimed **aims and objectives of the PUAA** have been to:

- ✓ foster the spirit of brotherhood and comradeship among the alumni of the University;

- ✓ disburse scholarships to the outstanding students of various disciplines of PU;

- ✓ raise funds for various welfare and other schemes in the University as approved by the Association;

- ✓ provide a forum for the alumni for exchange of ideas on academic, cultural and social issues of the day;

- ✓ look after the general interests of the alumni of the University;

- ✓ bring out publications for the fulfillment of the objectives of the Association;

- ✓ arrange social and cultural functions;

- ✓ open branches of Association in various parts of the country and across the world; and

- ✓ Perform all other acts in furtherance of the objectives of the Association.

Executive Council

Besides the Dean of Alumni Affairs, the affairs of the Association are managed by an Executive Council of 22 members, accountable to the General Body consisting of all the members on the roster of the Association. The list of present Council is placed at Annexure 'N' which will be shown to the NAAC Committee on their visit.

Scholarships, Stipends and Awards

The DAR disburses stipends on need-cum-merit basis by inviting applications from PG students of various affiliated colleges and PU teaching departments out of the endowments created by the alumni members in memory of their near and dear ones as per the desire of the

donors. After recent rationalizations, enhancements and amalgamation to pay a tangible amount to the deserving recipients, the Association is currently awarding a total of 6 stipends to the students of various courses out of the following Endowments:

Awards and Scholarships

Sr. No.	Name of the Stipend	No. of Stipends	Eligibility
1.	Alumni Association-Lajwanti Bhanot-Shelly Sardana Memorial stipend	1	PG student of Dept. of Hindi, Sanskrit, PU
2.	Mrs. Sushila Devi Aggarwal Stipend	2 +1	Student of Biological Sciences (One is to be decided in the next meeting)
3.	Shri G.L. Kohli & Smt. Indravati Kohli Memorial stipend	4	Excellence in Sports, Boys (2), Girls (2)
4.	Deep Chand- Lal Chand Memorial stipend	1	Student of Laws, Dept. Of Laws, PU & B.Ed. course
5.	Chitranjan Mohan Sharma (Kitty) Memorial stipend	1	PG student of History, Dept. of P.U.
6.	Miglani Memorial stipend	1	B.Pharm students (UIPS, PU)
7.	Shri Prem Kumar Goyal & Sons Charitable Trust stipend	1	Student of M.Sc. in Bio-sciences
8.	Late (Mrs) Jasbir Kaur Vilkhu Stipend	2	UIET/UICET
9.	Neelam Grover Stipend	1	Student of Masters in Geography Courses in Geography Department
10.	S. Chandermohan Singh Memorial Award	1	Postgraduate student of any stream

These endowment stipends are paid on need-cum-merit basis, as per the terms and conditions of the endower(s)

The PUAA aspires to inspire excellence in academics amongst students. The Association instituted and disbursed a total of 31 Scholarships to the toppers of various courses in affiliated Colleges and teaching departments of Panjab University in 2004. The toppers from the Graduate and Post Graduate courses are paid a cash scholarship along with a Certificate of Merit and a trophy. The number of scholarships has since been increased, with a total of 62 scholarships disbursed in 2014.

Recently on May 2014, former Chief Justice of the Allahabad High Court, Justice (Retd) SS Sodhi and newly elected Chandigarh MP Mrs Kirron Kher interacted and addressed the PU toppers and other promising students at the Scholarship Award Function and Annual Meeting of Panjab University Alumni Association (PUAA), Chandigarh .

Alumni House

A major commitment of the association at the moment is to construct an Alumni House at an approximate cost of Rs.4 crore (US $1m) for which the university has allocated a 3-acre plot of land on the campus. Set in spacious lawns, the house will serve as a community

centre and meeting place for the alumni, and shall provide facilities for holding cultural and intellectual functions. The foundation stone of the house was laid by the then Prime Minister of India, Shri Inder Kumar Gujral, himself a distinguished alumnus of the university, in March 1998.

Besides the office of the association, the house shall have a couple of seminar/conference/committee rooms, and a cafeteria with dining hall and 30 well-appointed residential suites. With the contribution of alumni, four deluxe suites and a lounge have already been constructed and are operational. They are offered to the Members of the association on nominal charges. Further, six deluxe rooms and four suites have been constructed and their furnishing will also be completed shortly.

Donations are solicited from the donors for construction of more deluxe suites, office of the Association, a multi-purpose hall, and seminar/conference/ committee rooms.

Donations are tax exempt under Section 80-G of the Income Tax Act, 1961 of Government of India.

Distinguished Alumni of the University

The calibre of an institution is judged by the character of its products. The University stands tall in this regard as the list of alumni, who have served the country and society with distinction, is indeed remarkable. The prominent among them are placed at Annexure 'P' which will be shown to the NAAC Team on their visit.

The Department of Alumni Relations keeps honouring the distinguished PU alumni, from time to time, who have made tangible mark and brought acclaim in their respective domains. Scores of eminent scholars, scientists, bureaucrats, entrepreneurs, artists, journalists and intellectuals have already been honoured by PUAA.

5.1.16 **Does the university have a student grievance redressal cell? Give details of the nature of grievances reported. How were they redressed?**

Yes. The University has various Grievances Redressal Cells looking into varied students' complaints regarding Examinations, Hostels, Fees, Various other academic related issues. Most of the grievances are redressed at departmental level and a few remaining problems are redressed at university level.

As far as the Examination and Fee related grievances are concerned, the University has in place Web-based grievance-monitoring system to redress the examination-related queries in a time-bound manner. The facility would be available to all the students studying in the PU and its affiliated colleges.

The details of the nature of grievances reported are: Regarding the roll numbers, degree certificates, result-related inquiry, re-evaluation, fee-related inquiry, correction in form, wrong subject, problem in examination form and submission of documents, etc. The concerned branch would check grievances on day-to-day basis and dispose these within three to five working days, thereby speeding up the grievance-redressal process.

The controller of examination has the facility to check the status of the grievances on a daily, weekly or monthly-basis through the web-based modules.

Grievances are addresses in the following ways:

- As many as 11 PU officials have been assigned the duty to handle the students' grievances related to the examination system.

- Now the students would have to just post their grievances through an email in a prescribed format following which it would be punched in the application software and linked with the branch concerned. After that the department concerned would solve the grievance, a reply would be sent to the applicant through an email with prescribed details.

Regarding Hostel grievances, the University has empowered Dean Student Welfare (M&W) in consultation with the Dean of University Instruction and the Vice-Chancellor and the student council to resolve the issues in a harmonious way and ambience. The grievances

related to the provision of basic amenities and improvements in the facility of hostels are looked into by DSW.

The President of Panjab University Student Council attends the meeting of Senate.

5.1.17 Does the university promote a gender-sensitive environment by (i) conducting gender related programmes (ii) establishing a cell and mechanism to deal with issues related to sexual harassment? Give details.

Yes, University promotes a gender-sensitive environment by organizing seminars/ workshops/ rallies, seminar where gender discrimination issues are discussed.

Number of Departments have been organizing programme on Women's issues including seminars, workshops and training programmes for example – Centre for Human Rights and Duties, Dept. of Sociology, Dept. of Life Long Learning, Dept. of Laws etc.

Panjab University, for instance, has a well established **Department-cum-Centre for Women's Studies & Development (WSDC)** to address women's issues in higher education and to ensure a commitment to the empowerment of women. The centre regularly conducts gender related programmes. This Centre was the one of the first Centres set up by UGC in 1987 and is currently placed in Phase three (which is the highest) on the basis of its performance.

The WSDC has taken a lead in the region in introducing the formal degree programmes in Women's Studies. The programmes continuing at present are:

- M.A. in Women's Studies
- Ph.D. Programme in Women's Studies

The WSDC organized a Workshop on 'Gender Sensitization' on February 28, 2012 for sensitizing the students towards gender injustice.

'Let's be Gender Sensitive' – a panel discussion was organized by the University in light of the increasing incidence of gender violence in the country on April 22, 2013.

Apart from this, all other departments too are mainstreaming gender in their programmes. Some of these programmes are listed below.

i) Gender related programmes :-

Theme of Seminar	Dates
Women's Portrayal in Media: Issues, Concerns and Strategies	14/1/2010
Women and Denial of Human Rights: Global Agenda and Local Deterrents	21-22/1/2010
Women and Culture: Representations and Constructions	21/1/2011
Women in India: Emerging Issues of Lives, Livelihoods and Sustainable Development	1-2/11/2011
Aurat ki Duniya aur Hali ki Nazme	23-24/4/2013
Women As Messengers of Peace : Past, Present and Future on the International Women's Day	08/3/2013
Orientation Programme for functionaries of Department of Social Welfare, Chandigarh Administration	26-27/8/2013
NCW sponsored Regional Seminar on Women and Violence: Lessons Learnt and Future Strategies	22-24/1/2014

Seminar on Women and Development: Lessons from the Past and Agenda for the Future	18-19/2/2014

Theme of Workshops	Dates
Feminist Research Methodology on the International Women's Day	08/3/2011
Refresher Course on "State, Society, Technology and Gender : emerging Interface and Issues"	26/2/2011 to 18/3/2011
Capacity Building of Women Managers in Higher Education	15-19/3/2011
Gender Sensitization Workshop for Panjab University Students	28/2/2012
Special Lecture on Mapping the Journey of Women's Studies in India,	6/12/2012
Gender Sensitization Workshop for Security Personnel of Panjab University	28/1/2013
Gender Sensitization Workshop for Security Personnel of Panjab University	29/1/2013
Gender Sensitization Workshop for Security Personnel of Panjab University	30/1/2013
Gender Sensitization Workshop for Security Personnel of Panjab University	31/1/2013
Gender Sensitization Workshop for Security Personnel of Panjab University	1/2/2013
Gender Sensitization Workshop for Security Personnel of Panjab University	2/2/2013
Gender Sensitization Workshop for Security Personnel of Panjab University	4/2/2013
Gender Sensitization Workshop for Security Personnel of Panjab University	5/2/2013
Gender Sensitization Workshop for Security Personnel of Panjab University	6/2/2013
Gender Sensitization Workshop for Security Personnel of Panjab University	7/2/2013
Conference on Convergence for Empowerment of Women , Dept-cum-Centre for Women's Studies and Development, Panjab University, Chandigarh in collaboration with Dept of Social Welfare, Chandigarh Administration, UT Guest House, Chandigarh	1-2/4/2013
Refresher Course on "Human Rights and Gender Studies"	05/3/2013 to 25/3/2013
Gender Sensitisation Programme for children of Snehalaya	8-10/4/2013
Workshop on Making Chandigarh a Girls and women Friendly City in collaboration with Yuvsatta, March 6,	6/3/2014

2014.	
Organised the 4th Chandigarh Social Science Congress on the Theme: Millennium Development Goals: Retrospect and Prospects	26-27/3/2014

In 2013, the University has framed and implemented a policy namely the 'Panjab University Policy against Sexual Harassment (PUPASH)', in compliance with 'The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013'.

The Policy will provide an environment that is free of gender-based discrimination, to bring awareness about sexual harassment in its various forms and to generate public opinion against sexual harassment and all forms of gender-based violence. It would ensure the implementation of the policy in letter and in spirit though proper reporting of the complaints and their follow-up procedures. Normally, the time frame of filing a complaint has been fixed to three months from the date of incidents and in case of a series of incidents; it would be within a period of three months from the date of last incident.

The policy has made specific provisions for complaint filing process, complaint screening committees, formal enquiry process and its compositions and function, submission of enquiry report and redressive action, action to be taken by disciplinary authority, mode of appeal, penalties and provisions of protection against victimization. The policy has also made provisions for cases of false complaints and prohibited the publication of contents of complaints and enquiry proceedings. Prescribed forms for enquiry and redressal processors have also been provided in the policy.

Under the policy, a number of committees shall be constituted and their term would be for two years. All the committee have been given statutory status and be empowered to carry out the mandate of this policy including conducting an enquiry into complaints of sexual harassment. PU would allocate and appropriate amount for the committees in its annual budget while the affiliated colleges shall allocate for their college committees.

PU Committee Against Sexual harassment (PUCASH) would cover all the Departments, Centres, Institutes, Schools, Offices etc. located on the Campus. Regional Centre Committee Against Sexual Harassment (RCCASH) would be formed at each Regional Centre of the PU, College Committee Against Sexual Harassment (CCASH) would be formed in each affiliated and Constituent of the PU. PUCASH, RCCASH, CCASH shall consist of nine members of which at least half would be women.

Apex Committee Against Sexual Harassment (ACASH), at PU Campus, Chandigarh will be the apex committee, which would consider all appeal against the decisions of PUCASH, RCCASH, CCASH. It would nominate the members of PUCASH. This committee would have Vice-Chancellor, Registrar, Dean University Instructions, Deans Student Welfare (Women), and senior most women faculty members of PU, Presidents of Panjab University Teachers Association and Panjab University (Non-Teaching) Staff Association as members.

Panjab University has anti sexual harassment cell headed by a senior Professor and which looks into day-to-day complaints made by the students, which also includes gender specific complaints.

Anti-Sexual harassment Committee's Members:

1. Prof. Nishtha Jaswal,

   Chairperson, Dept. of Laws, P.U., Chandigarh.

2. Prof. Navdeep Goyal,

   Dept. of Physics, P.U., Chandigarh.

3. Dr. Yograj Angrish,

Dept. of Punjabi, P.U., Chandigarh.

4. Prof. Sangita Bhalla,
   UILS, P.U., Chandigarh.

5. Dr. Madhuri Rishi
   Warden, Girls Hostel No-03

6. Ms. Puneet Kaur Grewal,
   Research Officer, (CPEPA) P.U., Chandigarh.

7. Prof. Sudesh Kaur Khandiya,
   Indian Institute of Science Education & Research, Mohali.

8. Mrs. Amteshwar Kaur,
   Resident Gernation Saviour Association Anjios.

5.1.18 Is there an anti-ragging committee? How many instances, if any, have been reported during the last four years and what action has been taken in these cases?

Yes. In pursuance of the directions of the Hon'ble Supreme Court of India, the Vice-Chancellor has constituted the Anti Ragging Committee for the session 2014-15.

In addition, there is an anti-ragging committee to prevent ragging on the campus in all the departments and hostels. The anti-ragging committees at the departments consist of faculty members and senior research fellows. In hostels, wardens and senior residents of the hostels are entitled to keep tabs on any such odd happenings.

The university has decided to work pro-actively to curb this menace in the following ways:

- Frequent rounds of PCR vehicles (clockwise and anti-clockwise) on both the Sector 14 campus and Sector 25 campus, and outside the campus till August 31 every year starting with fresh admission in July first week.

- Security office to provide additional security personnel on the campus and in the hostels. One security guard would be there on night duty in each hostel. Chief Security Officer to ensure the functioning of CCTV cameras on the campus.

- According to UGC guidelines, an FIR to be lodged with the police by the head of the department or warden, wherever the incident takes place.

- A mandatory undertaking from all students (both old and new) as well as from their parents/guardians be obtained at the time of their admission to the hostels.

- An anti-ragging literature/material is displayed at the university.

A play against ragging by students of Indian theatre department was staged near the students' centre and hostels in the year 2013. There have been no instances of ragging reported during the last four years.

5.1.19 How does the university elicit the cooperation of all its stakeholders to ensure the overall development of its students?

The Syndicate, Senate and many other decision making bodies of the University have a democratic setup. The members are drawn from all the levels in teaching community, there is also a representation of various external members by election or nomination as well as representation from disadvantageous classes. This automatically ensures the cooperation of all the stakeholders properly in the overall development of the University. The cooperation of various sections of the society and stakeholders is also ensured by organizing Conferences, workshops, special lectures, involvement in special projects, consultancy assignments.

The views and suggestions of various stakeholders like experienced industrial executives, well placed alumni and eminent scientists that emanate during interactions are considered for the development of students. Stakeholders are also included in the Board of studies for contribution of vital inputs in designing the curriculum.

5.1.20 How does the university ensure the participation of women students in intra- and inter-institutional sports competitions and cultural activities? Provide details of sports and cultural activities where such efforts were made.

The efforts made by the University to ensure the participation of women in sports activities are given below:

- ✓ Conduct of various tournaments such as Inter-Hostel, Inter-Department, Inter-College, Inter-University, Open Championships
- ✓ Appointment of women coaches and managers
- ✓ Appointment of female members on PU Sports Committee
- ✓ Special Counseling for women players
- ✓ Special sports hostel to accommodate the girl players
- ✓ Separate women Gym and separate timings for the swimming pool

The university ensures and provides adequate funds to support the women's student activities. International Women's day is celebrated by conducting competitions and by inviting distinguished women to deliver inspiring lectures. Women are encouraged to participate in all sports and cultural activities. They are given special attention and consideration, with the motivational support of women faculty members. The women sports are organized in the university sports ground every year and women teams are encouraged to participate at inter university level and state level sports competitions. The fruitful outcomes of these efforts are evident from the following laurels achieved by the university women's team.

- Yachting - 2013 winner in the All India Inter University Championship at Pong Dam
- Yoga- 2014 Runners-up in the All India Inter University competition organized by KU from March 1-4, 2014

For more details regarding participation of women sportspersons in Tournaments and their performance, refer to Q5.3.1

5.2   Student Progression

5.2.1   What is the student strength of the university for the current academic year? Analyse the Programme-wise data and provide the trends for the last four years.

There are about 21000 students enrolled in various teaching departments of the University on its campus. In addition, there are about 16000 students enrolled through correspondence mode in the USOL.

Number of students admitted in university departments in the last four academic years:

Cat.egory	2010-11		2011-12		2012-13		2013-14	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	1638	1155	1702	1424	1852	1485	2001	1736
ST	342	244	401	247	447	322	469	323
BC	548	257	657	437	907	523	880	642
General	16016	10993	15655	11838	17736	13316	17712	13980
Others	84	39	69	38	83	75	129	95

Last four years Analysis (Programme-wise):

Student Progression	% approximately
UG to PG	20%
PG to M.Phil.	8%
PG to Ph.D.	18%
Ph.D. to Post Doctoral	2%
Entrepreneurs	2%
Employed ✓ Campus Selection ✓ Other	 14% 14%

5.2.2   What is the programme-wise completion rate during the time span stipulated by the university?

The programme-wise completion rate during the time span stipulated by the university is about 90% for various UG/PG/PhD Programmes on the campus. Approximately, the drop-out percentages is 10%, which is due to marriage of girl students, transfer of parents to some other place, poor performance of students etc.

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

The number of students who have qualified in various Exams is as given below:

Name of the Examination	Number of Qualified Students
UGC-CSIR-NET	37
UGC-NET	583
GATE	65
Central Services (IRS)	1
Defense	30
Civil Services	49
Others	16
Total	**1070**

5.2.4   Provide category-wise details regarding the number of Ph.D./ D.Litt./D.Sc. theses submitted/ accepted/ resubmitted/ rejected in the last four years.

On the average 250-300 students submit their theses every year and hardly 3-4 students are asked to re-submit their theses. No thesis has been rejected in the last four years.

Number of Ph.D. Degrees Awarded is given below:

Time Period	Number of Ph.D. Degrees Awarded
2014	283
2013	337
2011	185+217=402
2010	190

Number of D.Sc. Degrees (Honoris Causa) Awarded is given below:

Time Period	Number of D.Sc. (Honoris Causa)Degrees Awarded
2014	01
2013	02
2011	02+01=03
2010	02

Number of D.Litt. Degrees(Honoris Causa) Awarded is given below:

Time Period	Number of D.Litt. (Honoris Causa)Degrees Awarded
2014	01
2013	02
2011	01
2010	01

During the 60th Annual Convocation of Panjab University held on February 14, 2011,

- ✓ Professor Shenggen Fan, Director General, International Food Policy Research Institute, Washington, D.C. (USA) was conferred upon the Doctor of Science (D. Sc.);
- ✓ Professor C.N.R. Rao, National Research Professor and Honorary President and Linus Pauling Research Professor, Jawaharlal Nehru Centre for Advanced Scientific Research (Bangalore) was conferred upon the Doctor of Science (D.Sc.) degree.
- ✓ Eminent author and celebrated journalist, Khushwant Singh was honoured with conferment of the Doctor of Literature degree (Honoris Causa) for   his superb contribution in the field of journalism

During 61st Annual Convocation of the Panjab University held on Friday, December 16, 2011,

- ✓ Former Lok Sabha Speaker Somnath Chaterje was awarded honorary degree of Literature.

During the 62nd Annual Convocation of Panjab University held on March 10, 2013,

- ✓ Renowned Scientists- Prof. M.S. Raghunathan and Prof. Asoke Sen conferred upon the Doctor of Science (D. Sc.);

During the 63rd Annual Convocation of Panjab University held on March 09, 2014,

- ✓ Padam Bhushan awardee and world renowned Mathematician, Prof R P Bambah was conferred with the degree of Doctor of Science (honoris causa) and
- ✓ Eminent writer Prof Gurdial Singh was honoured with the Degree of D.Litt. (Honoris Causa).

5.3   Student Participation and Activities

5.3.1   List the range of sports, cultural and extracurricular activities available to students. Furnish the programme calendar and provide details of students' participation.

For sports, cultural and extracurricular activities, refer Q. No 4.1.8

List of range of sports available to students in the Directorate of Sports are as under:-

Sr	Name	Sr	Name
1	One Multipurpose Gymnasium Hall (Air Conditioned)	12	One Netball Ground
2	400 Mtr. Grassy Athletic track (8 Lanes)	13	One Korfball Ground

3	Two Basketball cemented courts of International standard (with flood lights)	14	Two synthetic Lawn Tennis courts
4	Four Volleyball Courts	15	Eight Grassy Lawn Tennis courts
5	One Hockey Ground	16	One Cinder Lawn Tennis court
6	Two Football Grounds	17	Swimming Pool- One
7	Two Handball Courts	18	10 Mt. Shooting Range (Centrally AC)
8	Two Kho-Kho Courts	19	All Weather Swimming Pool (under construction)
9	Two Kabaddi Courts	20	Hockey Astroturf (under construction)
10	Three Softball Grounds	21	Cricket Stadium (under construction)
11	Two Cricket Grounds	22	Two Sports Hostels (One for boys and One Girls)

Sports Programme Calendar for the Session 2013-14 and Details of Particiaption of students is placed at Annexure 'O' which will be shown to the NAAC Team on their visit.

Cultural Activities

About 65,000 students (boys and girls) participated in Panjab University Zonal Youth and Heritage Festivals organized by Department of Youth Welfare during the last five academic sessions in the different zones as given below:

S.No.	Zone	Session 2009-10	Session 2010-11	Session 2011-12	Session 2012-13	Session 2013-14
1.	Chandigarh-A	1025	1050	1040	1190	1250
2.	Chandigarh-B	900	1065	1025	1070	1175
3.	Ludhiana-A	1020	1058	1178	1290	1270
4.	Ludhiana- B	1025	1067	1105	1115	1175
5.	Muktsar	1200	1279	1210	1205	1220
6.	Moga Ferozepur-A	1110	1177	1208	1218	1232
7.	Moga Ferozepur-B	1126	1210	1220	1190	1160
8.	Hoshiarpur-A	1030	1205	1240	1112	1260
9.	Hoshiarpur-B	1132	1120	1305	1375	1375
10.	Educational-A	890	852	940	1040	1025

11.	Educational-B	----	884	905	1060	1030
12.	Educational-C	952	975	1050	1010	1060
	Total	**10410**	**12942**	**13426**	**13875**	**14232**

About 300 boy students participated in Youth Training Camps organized by Department of Youth Welfare during the last five academic sessions as given below:

S.No.	Camps	Session 2009-10	Session 2010-11	Session 2011-12	Session 2012-13	Session 2013-14
1.	Youth Leadership Training Camp	34	30	22	25	24
2.	Hiking Trekking Camp	28	12	18	20	9
3.	Rock Climbing Camp	18	10	13	18	9
	Total	**80**	**52**	**53**	**63**	**42**

About 400 girl students participated in Youth Training Camps organized by Department of Youth Welfare during the last five academic sessions as given below:

S.No.	Camps	Session 2009-10	Session 2010-11	Session 2011-12	Session 2012-13	Session 2013-14
1.	Youth Leadership Training Camp	41	34	23	18	26
2.	Hiking Trekking Camp	24	22	20	18	20
3.	Rock Climbing Camp	29	21	15	25	20
	Total	**94**	**77**	**58**	**61**	**66**

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

Number of students who represented Panjab University during the International & National Youth Festivals organized by Association of Indian Universities, New Delhi and State level festivals:

S.No.	Camps	Session 2009-10	Session 2010-11	Session 2011-12	Session 2012-13	Session 2013-14
1.	South Festival (Inter-National)	45	--	--	21	2
2.	Inter University	--	--	--	5	2

	National Youth Training Camp					
3.	Inter University National Youth Festival	13	**--**	**--**	11	16
4.	North Zone Inter University	35	33	37	37	37
5.	State Level Inter University	--	--	160	95	85

All India Inter University National Youth Festival

All India Inter University National Youth Festival was held at Kurukshetra University Kurukshetra from 18 to 22 Feb' 2014. More than 60 universities from all over India participated in this Festival which was organized by the Association of Indian Universities, New Delhi. Panjab University students participated in the event of One Act Play, Quiz, Debate and Elocution. It is a matter of great honour that

Panjab University won the overall Literary Trophy of the All India Inter University National Youth Festival held at Kurukshetra University Kurukshetra from 18 to 22 Feb' 2014 along with following positions:-

First Positions	
One Act Play	D.A.V. College, Sector- 10, Chandigarh
Debate	Ms. Arshdeep Kaur (Govt College for Girls Ludhiana) and Ms. Arshee Khosla (Department of Economics, P.U Campus)
Second Position	
Elocution	**Ms. Pia Bakhshi (M.C.M. D.A.V College for Women, Chandigarh)**
Fourth Position	
Quiz	**Mr. Shantnu Sharma , Mr. Rajan Kumar & Ms. Puneeta Mishra (P.U Campus)**

All India Open National Youth Festival

All India Open National Youth Festival organized by The Directorate of Youth Services, Govt. of Punjab at Punjab Agriculture University, Ludhiana from 12 to 15 January 2014. Panjab University students participated in the event of Theatre, Dances, Music and Fine Arts.

North Zone Inter University Youth Festival

29th North Zone Inter University Youth Festival was organized by Association of Indian Universities from 14.11.2013 to 18.11.2013 at Babasaheb Bhimrao Ambedkar University, Vidya Vihar, Lucknow.

In this festival approximately 1200 participants from 29 universities participated in the fields of Theatre, Dances, Music, Fine Arts, Folk Art, Heritage, Quiz, Debates, Folk Dances etc. Panjab University got 1st position in One Act Play, Quiz and second position in Debate, Elocution. These four items were recommended for All India National Youth Festival.

Panjab University Inter-Zonal and Zonal Youth and Heritage Festivals

55th Panjab University Inter-Zonal Youth & Heritage Festival was held at A. S. College, Khanna from 28 to 31 Oct. 2013. Dr. R. S. Jhanji was the convener and Prof R S Toki   was the organizing Secy of the festival. Approximately 2000 student artistes selected from various Panjab University Zonal Youth and Heritage Festivals, participated in this festival. various eminent educationists, artistes, writers, singers interacted the young students during this festival. Post Graduate Govt. College for Girls, Sector-11, Chandigarh won the Panjab University Vice Chancellor's Trophy for the session 2013-14.

The details of zonal youth and heritage festivals are as follows:-

Zone	Venue and Dates	Convener	Organizing Secretary	Winner of Zonal Trophy
Ludhiana-A	Guru Nanak National College, Doraha (25 to 28 Sept, 2013)	Dr. Narinder Singh Sidhu	Prof. Amarjeet Kaur	Guru Nanak National College, Doraha
Ludhiana-B	Khalsa College For Women, Civil Lines, Ludhiana (23 to 26 Sept, 2013)	Dr. Varinder Kaur Thind	Prof. Baljinder Kaur	Khalsa College For Women, Civil Lines, Ludhiana
Chandigarh-A	D.A.V. College, Sec-10, Chandigarh (5 to 9 Oct, 2013)	Dr. B.C. Josan	Prof.Ravinder Chaudhary	D.A.V. College, Sec-10, Chandigarh
Chandigarh-B	G.G.S. College for Women, Sec-26, Chd. (7 to 10 Oct, 2013)	Dr. Charanjeet Kaur Sohi	Prof. Anita Waraich	P.G.G. College for Girls, Sec-11, Chandigarh
Hoshiarpur-A	B.A.M. Khalsa College, Garhshankar (21 to 23 Oct, 2013)	Dr. Preet Mohinder Pal Singh	Prof.Lakhwinderjit Kaur	B.A.M.Khalsa College, Garhshankar
Hoshiarpur-B	J.C.D.A.V.College, Dasuya (8 to 11 Oct 2013)	Dr. Rajesh Kumar Mahajan	Dr. Girish Kumar	Dasmesh Girls College Chak Alla Baksh, Mukerian
Moga Ferozepur A	R.S.D.College, Ferozepur (1 to 4 Oct, 2013)	Dr.Vishwa Bandhu Sudhir	Prof. Jaspal Ghai	Guru Nanak College, Moga
Moga Ferozepur B	Khalsa College For Women, Sidhwan Khurd, Ludhiana (27 to 30 Sept, 2013)	Dr. Paramjit Kaur	Prof. Gagandeep Dharni	Swami Ganga Giri Janta Girls College Raikot
Muktsar	Maharaja Ranjit Singh College, Malout (30th Sept to 3rd Oct, 2013	Dr. Sukhdeep Kaur	Prof. Harpreet Singh	Bhag Singh Khalsa College for Women Vill:Kala Tibba Abohar
Educational Colleges-A	S.B.H.S.M College of Education, Mahilpur (14 to 17 Oct,2013)	Dr. S.S.Dhaliwal	Prof. DhirajSharma	B.C.M. College of Education, Urban Estate, Ludhiana
Educational Colleges-B	Partap College of Education, Ludhiana (4 to 7 Oct, 2013)	Dr. Balwant Singh	Prof.Rajni Bala	Partap College of Education, Ludhiana
Educational Colleges-C	G.G.S.College of Education, Gidderbaha (15 to 18 Oct, 2013)	Dr. N.R.Sharma	Prof. Sarabjit Singh	D.A.V. College of Education, Abohar

Punjab State Heritage Youth Festival (Inter University)

Panjab University won the **Overall Trophy** of the Punjab State Heritage Youth Festival- 2013 (Inter University) organized by Punjab Arts Council (Govt. of Punjab) at Lyallpur Khalsa College Jallandhar on 9-10 November, 2013. Panjab University achieved 5 first prizes, 3 second prizes and 2 third prizes out of total 10 events of this festival, as given below:

First Positions

Luddi (Boys): Guru Nanak National College, Doraha, (Ludhiana)

Luddi (Girls): M.C.M.D.A.V. College, Sector- 36, Chandigarh

Vaar-Singing: Guru Nanak College, Moga

Gidha: National College for Women, Machhiwara, Ludhiana

 Ladies Traditional Songs: S.G.G.S. College, Sector- 26, Chandigarh

Second Positions

Sammi: G.G.S. Khalsa College of Education for Women, Vill. Kamalpura, Ludhiana

Jhumar: J.C.D.A.V. College, Dasuya, Hoshiarpur

Kavishri: Guru Nanak National College, Doraha, (Ludhiana)

Youth leadership training, Hiking Trekking and Rock climbing camp

The Youth leadership training, Hiking Trekking and Rock climbing camp was organized by Youth Welfare Department of Panjab University Chandigarh at Dalhousie from June 29 to July 6' 2013. Fifty three girls and sixty eight boys from different colleges of Panjab University Chandigarh attended the camp. The camp was inaugurated by Dr. Jagjit Kaur, Director Youth Welfare Department G.N.D.U. Amritsar. A brief cultural programme was presented by the campers. Dr. Nirmal Jaura Director Youth Welfare welcomed the Chief Guest and also thanked Guru Nanak Dev University Amritsar for providing its student holiday home and guest house to the campers at Dalhousie.

The campers trekked to Kala Top, Khajjiar , Dalhousie Town and surrounding areas . During the camp, Principal Dr. Dalbir Singh, Dr. Nirmal Jaura, , Dr. Surjit Singh Sidhu, Adm. Officer and all the Deputy Adm. Officers Mr. Sanjay Gupta from Sri Aurobindo College of Commerce and Management,, Mr. Bharat Bhushan from Gobindgarh Public College, Alour, Khanna, Mr. Onkar Singh from Dashmesh Girls College of Education, Badal (Muktsar), Dr. Simerjit Kaur from Guru Nanak College, Moga,, Miss Amandeep Kaur, Miss Ankita from Gopi Chand Arya Mahila College, Abohar and Mrs. Satwinderjit Kaur from Govt College for Girls, Ludhiana , delivered inspiring lectures. All the campers also participated in different activities like Debate, Group Discussion, Poem Recitation, Painting, Story Writing, Poem Writing, Essay Writing, Singing and Dancing.

At the Valedictory Function, Principal of Dalhousie Public School Dr G S Dhillon was the Chief Guest. A Beautiful Cultural Programme with Gidha, Bhangra, Malwai Gidha, Songs, Poems, Traditional Songs, and Dance were performed by the campers. Mr. Taruntej Singh and Ms. Chhavi Jindal , both from Sri Aurobindo College of Commerce and Management Ludhiana , were adjudged as best Campers of this Camp. Prizes were also awarded to the winners of different categories.

Roll of Honors

The students, who brought laurels to the University during the various youth festivals in the field of Theatre, Dance, Music, Fine Arts, Literary and other youth activities, has been awarded University Roll of Honor and University Colors. During the current session 17 Roll of Honor and 101 University Colors presented to the students. The recipients of the Panjab University Roll of Honors 2013-14, are as follows:-

S.No.	Name	College	Proficiency
1.	**Abhishek Gautam**	D.A.V.College, Sec.10, Chandigarh	Theatre
2.	**Ajay Sharma**	D.A.V.College, Sec.10, Chandigarh	Theatre
3.	**Armandeep Singh Sandhu**	D.A.V.College, Sec.10, Chandigarh	Theatre
4.	**Arpan Vadhera**	D.A.V.College, Sec.10, Chandigarh	Theatre
5.	**Arshdeep Kaur**	Govt College for Girls, Ludhiana	Debate
6.	**Arshee Khosla**	Deptt of Economics, Panjab University, Chandigarh	Debate
7.	**Ishant Gandhi**	D.A.V.College, Sec.10, Chandigarh	Theatre
8.	**Niyati Asthana**	Sri Aurobindo College of Commerce & Management, Ludhiana	Debate
9.	**Pia Bakhshi**	M.C.M.D.A.V.College, Sec.36, Chandigarh	Elocution
10.	**Puneeta Mishra**	Deptt of Computer Science & Application, Panjab.University, Chandigarh	Quiz

11.	**Rachna Gupta**	D.A.V.College, Sec.10, Chandigarh	Theatre
12.	**Rajan Kumar**	Deptt of Geography, P.U. Chandigarh	Quiz
13.	**Sarthak Narula**	D.A.V.College, Sec.10, Chandigarh	Theatre
14.	**Shantanu Sharma**	Deptt of Psychology, P.U. Chandigarh	Quiz
15.	**Sylvester Stephen**	D.A.V.College, Sec.10, Chandigarh	Theatre
16.	**Tarun J. C. Kapil**	D.A.V.College, Sec.10, Chandigarh	Theatre
17.	**Taufeeq**	D.A.V.College, Sec.10, Chandigarh	Theatre

AIU Workshop

The Department of Youth Welfare , in collaboration with NSS has organized a two days "North Zone workshop on considering NSS as elective subject and various Youth Programmes to promote National Integration" on May 27-28, 2014, under the sponsorship of Association of Indian Universities and Ministry of Youth Affairs and Sports, Govt. of India, New Delhi. Mr. Sampson David from AIU , Dr. G.K.Tuteja NSS Advisor to Govt. of India, Dr. Naval Kishore Dean CDC, Dr. Navdeep Goyal DSW, Dr. G.S.Bhatti , Dr. Bikram Rana, Dr. Karamjit Singh, delivered the lectures focusing on the subject.

Annual Magazine "Jawan Tarang"

A Literary and cultural annual magazine "Jawan Tarang" has been launched from this session with focus on youth activities. This magazine has published to provide ample opportunity to young students to express their emotions, opinion, dreams and aspirations. It carries contributions in the form of creative writings, from the students of affiliated and constituent colleges of the Panjab University along with the record of the various youth activities of the department. Editor Dr Narinder kaur Sandhu and the all staff editors Prof S P Singh , Prof Loveleen Bains , Dr Naina Sharma worked a lot for the successful publishing of the first issue of "Jawan Tarang"

5.3.3 **Does the university conduct special drives / campaigns for students to promote heritage consciousness?**

Yes. The university conducts special campaigns for students to promote heritage consciousness through the Department of Youth Welfare, NSS units, community development Centre for Social Work and educational visits. The Centre for Social Work conducts various workshops and symposiums for students to promote heritage consciousness.

The heritage precincts of Delhi, Agra, Jaipur, Jaisalmer, Jodhpur, Ajantha&Ellora are visited by the students every year to understand the culture, lifestyle, construction techniques etc in order to comprehend the associated heritage values of the built structure.

The Department of Art History and Visual Arts in this University covers the history of art of Egypt, Middle East, Europe, America, South East Asia and Far East in addition to the history of Indian art and architecture. The Museum of Fine Arts is an integral part of the department and it has a wonderful collection of about 1200 works by contemporary Indian artists.

The Department of Youth Welfare had conducted special drives during the Youth Festivals, Heritage Festivals and Youth Training Camps to promote the heritage values and national integration among the students along with motivational programmes to aware the students about their social responsibilities.

5.3.4 **How does the university involve and encourage its students to publish materials like catalogues, wall magazines, college magazine, and other material? List the major publications/ materials brought out by the students during the last four academic sessions.**

Panjab University bring out the Annual Issue entitled '**PANJAB UNIVERSITY CAMPUS REPORTER**' having Hindi Section, English Section, Punjabi Section, Sanskrit Section, Urdu Section, Engineering Section, Science Section and Law Section. The university involves

and encourages the students of various departments to act as Sub-Editors for various sections of the Campus Reporter.

The Department of Youth Welfare encourages the young students to express their views, opinion, dreams in the form of creative writings by holding competitions at different level. The annual magazine "**Jawan Tarang**" has been launched to provide ample opportunities to the students to express their imaginations and expressions.

Every year, in each department, a large number of literary contests/workshops/conferences/placement events are held where students get an opportunity to participate publish materials like **Placement Brochure, Conference Brochure** and other materials to showcase students' literary activities.

5.3.5 Does the university have a Student Council or any other similar body? Give details on its constitution, activities and funding.

Yes, the University has a Student Council name "Panjab University Campus Students' Council" (PUCSC).

Duly elected PUCSC is constituted every year for having liaison with the students of the Campus. This Council organizes various cultural functions and also helps to promote sports and extra-curricular activities on the Campus.

Constitution of PUCSC

The Council shall consist of four office Bearers (President, Vice-President, Secretary, Joint-Secretary) elected directly by the students of the campus and elected or deemed to be elected representatives of the various departments. The term of the Students' Council is from the date of election to the 31st of May. Students of the Department of Evening Studies have their own local Council.

The Executive Committee of the Students' Council shall consist of:

1. One President
2. One Vice-President
3. One Secretary
4. One Joint Secretary
5. Five other members elected by the Departmental Representatives from amongst themselves

Activities:

The Activities of PUCSC are:

1. to promote healthy corporate life on the Campus
2. to ensure maintenance of proper academic atmosphere and orderliness on the Campus
3. to help in allocation of Amalgamated Fund for different authorized purposes and activities connected with students welfare
4. to assist in organizing various cultural and sports functions

The PUCSC and Departmental societies organize various kinds of Academic, Cultural, Social and Extra-curricular activities to promote students' involvement and participation in these events and to enrich the Campus atmosphere in general. Blood Donation Camps and sanitation campaigns are also organized.

Funding:

Funding to the Students' Council is provided by the University for various Students' Welfare Activities. (Approximately 5.00 lacs per year).

5.3.6 Give details of various academic and administrative bodies that have student representatives on them. Also provide details of their activities.

President, Panjab University Campus Students' Council can sit in the meetings of Senate. The following committees have Student/Council representation:

a) Traffic Management Committee : Regulate Traffic and Parking problems

b) Anti-ragging Committee: Preventing ragging on the campus in all the departments and hostels. Anti Ragging Committee that have student representative for the session 2014-15 is given in 5.1.18.

c) Fee Hike Committee: Looking into fee hike for tuition, exam and hostel fees.

d) Rate Revision Committee for various shops at Student Centre and various messes in Hostels

e) Committees for various functions/activities such as Agaaz, Jhankar, Vimarsh, Tours etc.

f) Scholarships Committees

g) Committee to maintain law and order on the campus

h) Hostel Committees: Involvement of residents through Student Secretaries like Mess, Canteen, Sports, Cultural, Discipline, Maintenance, Academic etc.

i) Committees at the Departmental level

The Panjab University Campus Students' Council (PUCSC) and Departmental societies organize various kinds of Sports, Academic, Cultural, Social and Extra-curricular activities to promote students' involvement and participation in these events and to enrich the Campus atmosphere in general.

Any other information regarding Student Support and Progression which the university would like to include.

The university initiatives for student support and progression are reflected in the following:

- Orientation programme for fresher's to introduce them to new environment.

- CIIIP – Centre for Industry Institute partnership Programme to facilitate students employability

- CPC – Centre Placement Cell for Soft Skill Development and Campus Placements

- Scope for grievance redressal

- Scope for sports and cultural activities

- Alumni are invited for lectures and for interaction with the students.

- Counseling on Career Planning, Development and Training.

- Ensuring good students support – academic, infrastructure, finance and co-curricular activities.

- Good results and significant progression to higher education.

CRITERION VI: GOVERNANCE, LEADERSHIP AND MANAGEMENT

6.1 Institutional Vision and Leadership

6.1.1 State the vision and the mission of the university.

Objective as per University Calender

Panjab University, Chandigarh defines the mandate of the University to be:

"The University has been incorporated for the purpose, among others, of making provision for imparting education in Arts, Letters, Science and the learned professions and of furthering advancement of learning, the prosecution of original research, with power to appoint University Professors, Readers and Lecturers, to hold and manage educational endowments, to erect, equip and maintain University colleges, libraries, laboratories and museums, to making regulations relating to the residence and conduct of students and to do all such acts as tend to promote study and research".

Vision

Following the broad mandate of the University of Furthering Advancement of learning and the prosecution of original research, the University's vision has been:

- ✓ To emerge as a premier educational institution engaged in quality teaching, research, consultancy and developing intellectual capital for societal needs and nation building.
- ✓ To create sustainable and effective linkages between access to and success in higher education, to make PU as a world class institution.

However, as per Vision-2020 document of the University, the Vision and Mission are:

Vision of the University

- ➢ To attain and retain coveted position as a premier educational institution engaged in creation and dissemination of knowledge, new ideas, perceptions and methodologies;
- ➢ To arrange for quality teaching, research, outreach activities and
- ➢ For developing intellectual capital to meet societal needs and global challenges

Mission of the University

- ➢ Promote learning keeping in view the concern for Access, Equity, Quality, Relevance and Value Based Education.
- ➢ Attract brilliant students and to train them to compete in facing global challenges
- ➢ Search for highly talented and innovative teachers and staff and provide them with congenial work environment to retain them.
- ➢ Undertake and promote basic and applied research
- ➢ Promote a dynamic, decentralized and transparent Governance System.

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

Yes, the University's mission statement defines the institution's distinctive characteristics in terms of addressing the needs of the society, the students it seeks to serve, the institution's tradition and value orientations, its vision for the future, etc.

Duties of the University

To conduct academic programmes for the preparation of under-graduate and post-graduate examinations in various faculties available in the University, and to undertake activities that are contributory to this object.

Main activities/functions of the University

1. To establish specific Centers/Chairs for specialized studies in any branch of learning.

2. To encourage excellence in teaching and research with the help of UGC and DST, Government of India by covering a large number of departments under various programmes such as SAIF/DRS/COSIST/CAS and FIST respectively.

3. To arrange academic interaction, special lectures, symposia, workshops, seminars and conferences through different departments at local, regional, national and international levels.

4. To sign the memorandum of understanding with a number of reputed universities, national and international, for providing latest education to the students.

Services being provided by the University

The University does not provide services as interpreted for the purposes of Service Tax and the Consumer Protection Act. However, it facilitates the following:

1. The University offers facilities for pursuing undergraduate courses in arts, science, commerce, engineering, medical, law, education, fine arts, dental sciences through its affiliated and university maintained departments/ colleges/institutes.

2. The University offers facilities for pursuing post-graduate courses and research in arts, science, commerce, engineering, medical, law, education and fine arts through its departments, schools, centres and institutes.

3. The University undertakes various research/special studies/projects especially finances for this purpose by external agencies/bodies other than the Panjab University.

4. The University offers postgraduate research programmes leading to different degrees. The University has special Chairs in different areas exclusively for research. The research findings are disseminated through books, research papers and journals. In addition to the journals of some individual departments, the University publishes research bulletins for Science, Social Sciences and Arts. These interdisciplinary research journals are refereed and internationally circulated. The University has introduced a test for enrolment for Ph.D. and has also provided some research fellowships.

The University's mission statement also includes a comprehensive idea of higher education where undergraduate, postgraduate and research programmes are seen as one continuum, and there is no hierarchy among the three in its imagination and practice.

The University has put in place structures and policies for creating a healthy and inclusive learning environment for its students. There are a large number of scholarships and fee waivers available for meritorious and needy students. The University has also set-up a students' elected Panjab University Campus Students Council (PUCSC) run solely by students for nurturing and hand-holding students in their academic life. To enhance the language skills of students, specially designed English Proficiency Courses are being offered in undergraduate and postgraduate study programmes. ICT is creatively implemented in the University to support use of Computers, LCDs, broad band internet etc.

The University offers its academic programmes through Sector-14 and Sector-25 Campuses and envisages the possibility of expanding our academic programmes by exploring on-line mode in a big way, to achieve an inclusive expansion of our academic programmes.

Various stake holders are involved in the curriculum framing. The University has clearly-defined model for curriculum re-design by promoting use of technology through ICT.

Some distinctive characteristics that are in-built in PU's institutional philosophy are:

- A commitment to follow a path of offering ethically oriented, socially relevant education so as to play a pivotal role in creating and disseminating knowledge, educating highly skilled workforce for technological and intellectual leadership, thereby enhancing India's competitiveness in the emerging knowledge economy.

- A commitment to follow the decentralized planning, empowerment and autonomous governance structures aimed at attracting talent, consolidation and revitalization so as

to build an ecosystem of enquiry and critical appraisal.

- A commitment to strengthen institutional mechanisms for mentoring and nurturing students, study skills and their ability to communicate effectively, in order to assure success and excellence for all students.

- A commitment to enforce and intensify efforts of becoming a world-class institution through transformational restructuring into an interdisciplinary teaching & research superstructure thereby responding effectively to the emerging skill sets.

6.1.3 How is the leadership involved

- In ensuring the organization's management system development, implementation and continuous improvement?

- In interacting with its stakeholders?

- In reinforcing a culture of excellence?

- In identifying organizational needs and striving to fulfil them?

Mechanism available for monitoring the services delivery and public grievances resolution

Subject to the provisions of the Panjab University Act, the higher authority of the University is vested in the Senate which consists of –

(a) Chancellor, (b) Vice-Chancellor, (c) Ex-Officio Fellows and (d) Ordinary Fellows.

The Vice-Chancellor is the principal executive and academic officer of the University and exercises general control over its affairs in accordance with the statutes, rules and regulations.

Norms and standards for various activities of the University are set by the competent authority such as Senate, Syndicate etc. The Syndicate is the executive authority of the University and monitors the progress and achievements of the performance. The Syndicate, subject to the control of the Senate has the power of management of the revenue, property and all administrative affairs of the University.

The Academic Council is the highest academic body of the University. It is responsible for maintenance of standards of instruction, education and examination of the University and other academic matters. The detailed functions of the Academic Council are given under Regulation 8 at pages 44-45, Panjab University Calendar, Volume 1, 2005.

(http://www.puchd.ac.in/important-documents.php).

The Senate is the supreme authority of the University, has the power to review the recommendations of the Syndicate and the Academic Council. The annual report of the University, Budget etc. are presented to the Senate at its annual meetings.

Various statutory bodies of the University, namely the Senate, Syndicate and Academic Council comprising eminent people from society and representatives of public who directly participate in the affairs of the University.

Powers and duties of the officers and employees

The Vice-Chancellor provides academic leadership and evolves strategies for academic growth of the University in association with the Senate, Syndicate, DUI, Registrar, COE, FDO, Dean of Faculties, Chairpersons of Departments, Directors of Centers, faculty members and other statutory bodies.

The Registrar is a whole-time paid officer of the University appointed by the Senate. He is the in-charge of the administration of the University acting under the immediate control of the Vice-Chancellor and represents the University in all legal proceedings except where the Senate otherwise resolves to the contrary.

The powers of the other authorities like Senate, Syndicate, Academic Council, the Board of Finance, the Faculties and the Board of Studies etc. are given in Chapter 2 (A) from pages 28-

59 of Panjab University Calendar, Volume I, 2005. The Administrative Officers of the University work as per directions issued by the Administrative bodies/the Vice-Chancellor/the Registrar of the University. The Panjab University Act and regulations framed there under is available on the University website (http://www.puchd.ac.in/important-documents.php).

The Vice-Chancellor ensures that all provisions of UGC Act, the Statutes and the Regulations are observed and also the guidelines from the regulatory authorities like AICTE/NCTE/DCI. He is Ex-Officio Chairman of the Academic Council (AC), the Senate, the Syndicate and the Board of Finance and convenes meetings of the Academic Council, the Senate, the Syndicate and the Board of Finance and performs all such acts as may be necessary to carry out and give effect to the decisions of the said authorities.

The Vice-Chancellor exercises such other powers as may be prescribed by the Statute, Ordinances, and Regulations.

The leadership organizes reflective sessions with the students, faculty and the staff (at least once every two months) to nurture the early ideas, vision and mission, and to further develop nuanced practices to implement them.

The Vice-Chancellor sets goals, makes commitments, and formulates strategies in order to maintain and enhance excellence in all endeavors. The university meets its commitments and realizes its goals by stressing on excellence in instruction, research and service, by recognizing the importance of diversity and innovation and by building a shared community. The University also accomplishes these goals of excellence by supporting diversity and community in its students, faculty and staff, open exchange of ideas in intellectual inquiry and accepting civic responsibility within the university and outside it.

A culture of excellence is reinforced in a variety of ways:

- The statutory bodies of the University – Academic & Administrative Committee, BoS – meet regularly to deliberate upon matters related to teaching and research.

- The University also provides dedicated funding for seminars, workshops and conferences by individual faculty or Departments/Institutes/Schools.

- The University has instituted the practice of regularly inviting eminent academics and practitioners as guest, visiting and adjunct faculty for lectures and workshops.

- The University has a scheme to extend seed money to faculty for carrying out research. Individual proposals are scrutinized by a group of eminent academics before making a grant.

The University keeps a constant watch on the organizational needs through regular consultative meetings, thereby monitoring the functions of various divisions / constituents of the University more efficiently. For instance, these meetings have resulted in effective student mentoring, setting up of the Student Grievances Cell, setting up of the Anti-Sexual Harassment Committee, Anti-Ragging Committee, a more humane system of fee waiver disbursement, smoothening assessment processes, effective implementation of attendance requirements, etc.

New initiatives/best practices by the Leadership

✓ Organization of Monthly Panjab University Colloquium Series

The Colloquium series brings to campus national icons/distinguished speakers/eminent personalities to share their scholarship. These colloquia talks have been well appreciated by University community and the public at large.

For instance, The Colloquium lecture on August 16, 2013 was delivered by Mr. Ashok Thakur, a distinguished alumnus of P.U. and presently the Secretary, Higher Education in MHRD at New Delhi.

Since September 2012, more than 20 colloquia talks have been arranged

✓ Creation of Research Promotion Cell (RPC)

A five member cell has been put in place for the entire University to coordinate, facilitate and collate the research work of all the departments. RPC is expected to timely respond and anticipate the requirements of research scholars, post doctoral fellows and the INSPIRE faculty who choose to join P.U.

✓ Setting up of Research Centres in affiliated colleges

Research centres have been set up to enhance and facilitate disciplinary and interdisciplinary research collaboration, knowledge transfer and training.

✓ Creation of Chandigarh Region Innovation and Knowledge Cluster (CRIKC)

CRIKC brings together on a common platform 15 institutions in and around tricity Chandigarh. CRIKC endeavors to foster and sustain close academic alliances between institutions of higher education and research in the Chandigarh region, to facilitate innovation and knowledge creation and for achieving excellence in all academic spheres without compromising in any manner the autonomy of the participating institutions. This cluster has received financial support from former Chandigarh M.P. and a very senior member of our Senate, Shri Pawan Kumar Bansal.

✓ Organization of Annual PU Foundation Day Lecture Series by an iconic PU Alumnus

First and second PU Foundation Day Lectures were delivered by Professor Romila Thapar and and Professor Gurdial Singh, respectively.

6.1.4 Were any of the top leadership positions of the university vacant for more than a year? If so, state the reasons.

No. However, the post of Controller of Examinations was filled in the year 2013 and had been lying vacant since 2008. In spite of sincere efforts of the authorities, the post remained vacant for more than four years.

6.1.5 Does the university ensure that all positions in its various statutory bodies are filled and meetings conducted regularly?

Yes, all positions in statutory bodies are filled and meetings of the Board of Studies, Academic Council, Syndicate, Senate and Board of Finance are conducted regularly.

Board Of Finance: Deliberate on financial matters

Academic Council: Makes all decisions in academic matters

Senate & Syndicate:

✓ The Senate has the entire management of, and superintendence over the affairs, concerns and property of the University and provides for that management, and exercise that superintendence in accordance 'with the statutes, rules and regulations for the time being in force.

✓ Makes decisions concerning the high level appointments, conferring of degrees and diplomas, affiliation and disaffiliation of colleges, regulation of finances, appointment of other committees and especially the Syndicate- the most powerful single committee of the university.

The number of meetings year-wise is presented in the following table:

Year	# of Meetings of Statutory Bodies			
	Senate	Syndicate	BOF	AC
2014	1	6	2	1
2013	4	9	3	4
2012	2	9	3	4

| 2011 | 3 | 14 | 3 | 4 |
| 2010 | 3 | 11 | 3 | 4 |

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

Yes, the university believes in promoting participative approach of management at all levels.

Board of Studies (BoS) of each Department, with membership also from external experts in the respective areas of knowledge, meets at least 2-3 times every semester to design and manage academic matters, including issues related to assessment, evaluation and results.

The University's structure has also promoted the involvement of the academic staff in different committees tasked to set-up and frame rules and norms on a variety of academic matters.

The Syndicate is the apex executive and governing body, the Senate is the supreme decision making body, and the Academic Council is the authority to decide on courses and curriculum and other academic matters of the University.

The composition of syndicate and senate is given in Figure 6.1 & 6.2.

The three bodies have adequate representation from the divergent set of stakeholders namely University faculty, affiliated college principals and faculty, academic administration as well as eminent personalities of society. This diversity in the higher bodies enables the leadership to interact with the stakeholders and in identifying the organizational needs. It also promotes a culture of participative management.

Figure 6.1: Composition of Syndicate
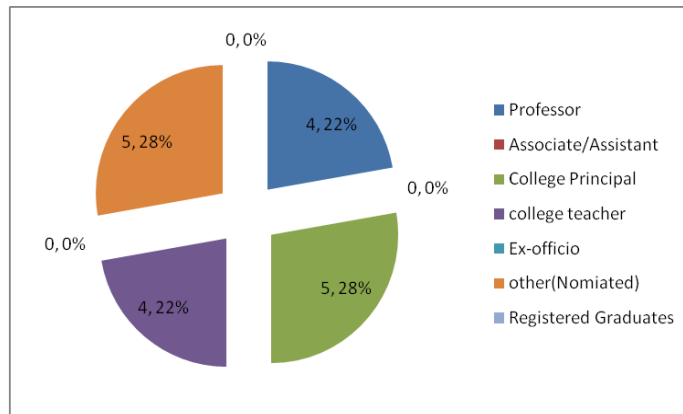
Figure 6.2 Composition of Senate
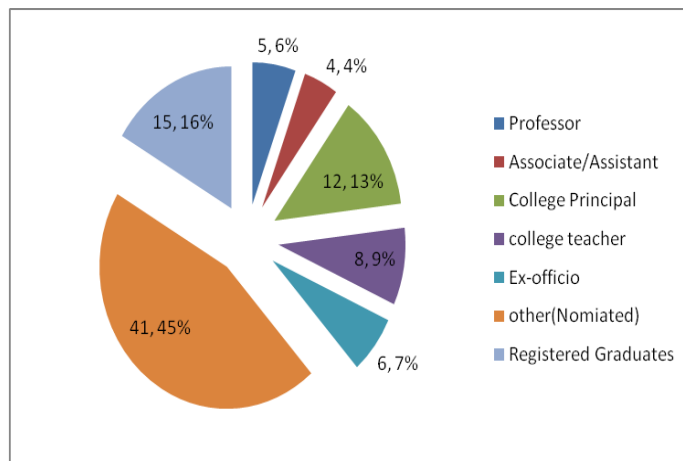
Composition of the Panjab University Senate: Representation from the public

The Senate consists of 85 ordinary fellows out of which 46 are elected from different constituencies and 39 nominated by the Chancellor, Panjab University (Vice-President of India) as under:

Registered Graduates Constituency	15
Professors on the staff of Teaching Departments	02
Readers and Lecturers on the staff of Teaching Departments	02
Principals of Technical & Professional Colleges	03
Heads of affiliated Arts Colleges	08
Professors, Senior Lecturers and Lecturers of affiliated Colleges	08
Various faculties	06
Punjab Legislative Assembly	02
Nominated by the Chancellor	39

Composition of the Panjab University Syndicate

Vice-Chancellor - the Chairman	01
Ex-Officio members • Director, Public Instruction (Colleges), Punjab • Director, Public Instruction (Colleges), Chandigarh, U.T.	02
Ex-Officio or ordinary fellows elected by the fellows assigned to the following faculty in proportion indicated against each: • Faculty of Languages: 2 • Faculty of Arts: 3 • Faculty of Science: 3 • Faculty of Law: 2 • Faculty of Medical Sciences: 2 • Faculties of Dairying, Animal Husbandry & Agriculture, Education, Business Management and Commerce, Engineering & Technology, Design & Fine Arts and Pharmaceutical Sciences: 3	15
The Registrar – The Secretary	01

Composition of the Panjab University Academic Council

1. The Vice-Chancellor, as Chairman
2. The Dean of University Instruction
3. Chairperson of University Department of Evening Studies
4. Two Principals of affiliated Colleges of Education having M.Ed. classes, by rotation
5. The Deans of the Faculty of Arts, Languages, Science, Business Management and

Commerce, Education and Design & Fine Arts – Ex-Officio

6. Dean, College Development Council – Ex-Officio

7. The University Professors (including the Director-Professor, V.V.B.I.S. & I.S., Hoshiarpur, and those designated by the Syndicate as Professors in the subjects which are taught in the University teaching departments in the Faculties of Arts, Science, Business Management and Commerce, Languages, Education and Design & Fine Arts

8. The Principals/Directors of such Arts and Science Colleges/University Postgraduate Regional Centres as undertake teaching up to Master's degree in two or more subjects

9. Fifteen teachers (as defined in Regulations 2.1, 2.2 and 2.3) in the affiliated colleges, elected from amongst themselves

10. Fifteen Principals of affiliated colleges (as undertake classes defined in Regulation 2.1) elected from amongst themselves

11. Two University Lecturers (one from the Science Faculty and one from other Faculties) to be nominated by the Syndicate, by rotation

12. Five fellows of the University elected by the Senate

13. Not more than two University Readers, nominated by the Syndicate

14. Three nominees of the Vice-Chancellor

15. The Syndicate appoints the Registrar or the Deputy Registrar as Secretary of the Academic Council

6.1.7 Give details of the academic and administrative leadership provided by the university to its affiliated colleges and the support and encouragement given to them to become autonomous.

The College Development Council (CDC) acts as an intermediary between the university and its Affiliated Colleges and has a mandate to ensure democratic decision making within the affiliated colleges. It plans for the integrated development of the Affiliated Colleges and provides them with the required necessary help and guidance. The CDC comprises of about 40 members and they meet at least once in a year. A standing committee is also constituted which meets at least three times in a year. Besides, the Principal's conference (Chaired by the Vice Chancellor) is organized at least twice a year to discuss various academic and administrative issues relating to the affiliated colleges.

The office of the Dean CDC deals with the matters related to Affiliations and Approvals of the opening of new colleges or new courses. Fresh appointments of the faculty in the Affiliated Colleges are also made through this office. The applications of those students who seek late admission in the affiliated colleges are forwarded to the Vice Chancellor's office for approval through this office. The procedure and proformas regarding Affiliations, Approvals, Appointments and Late Admissions have been put on this web-site so that the Affiliated Colleges may download these whenever there is a requirement of these.

The office of the Dean CDC provides some scholarships to the deserving students every year. The office also provides financial support to the colleges to organize seminars / conferences / workshops / symposiums etc. The teachers of the affiliated colleges who wish to participate in a seminars / conferences / workshops / symposiums etc. in India or in abroad get travel grant from this office.

The university involves the representatives of affiliated colleges in the academic and administrative leadership by involving them in various authorities like BoF, Senate, Syndicate, Academic Council, BoS, etc.

The recommendation of all these committees is considered to approve many ordinances regulations and guidelines for improvement and smooth functioning of university. Beside this there is feedback mechanism from stakeholders which helps the university in taking decision. The process of giving autonomous status to its affiliated college is under consideration.

6.1.8 Have any provisions been incorporated / introduced in the University Act and Statutes to provide for conferment of degrees by autonomous colleges?

No.

6.1.9 How does the university groom leadership at various levels? Give details.

For the last many years, it has been a constant endeavor of the University to encourage the participation of all stakeholders in setting up the norms and rules of the University, and encourage them to create innovative courses, and involve them in the administration of various programmes by creating an intellectual ambience that is essentially democratic. All academic decisions are taken after deliberation at the department, faculty, and university levels providing the opportunity for younger members to articulate their viewpoint. This bottom-up approach grooms both students and staff members to take up leadership roles.

At students level

Every batch of students has a student representative. Student Secretaries are nominated as office bearers of department associations. In addition, students function as Under-officers for NCC and team leaders for various NSS units.

At faculty level

The faculty members are deputed to attend training programmes for developing leadership qualities. At the department level, staff members are entrusted with the responsibility of an office such as In-charge mid-term Examinations, Stores, Library, or Convener of departmental societies thereby honing their leadership potential. The constitution of committees in the university has resulted in grooming faculty for leadership role besides achieving the goal of shared responsibility. Many staff members organize national and international conferences and workshops. Faculty members are entrusted with different leadership positions like Warden, Deputy Warden, NSS/NCC Officers, Placement cell officers, members of student grievances cell, and office bearers of Research society, etc. to groom leadership at various levels.

6.1.10 Has the university evolved a knowledge management strategy? If yes, give details.

Knowledge management efforts at the University typically focus on continuous improvement in teaching and learning and efficient administration with increased use of computers, knowledge repositories, intranets, and computer-supported cooperative work.

The University has developed a Computer based MIS system (http://campus.pu.ac.in) to manage all important academic and administrative information. While it will be some time before the MIS is fully operational, some important beginnings have already been made, for instance, for the entire life cycle of each student maintenance of assessment records, staff and faculty profile, staff and faculty recruitment, accounts, etc.

All faculty, staff and students have also been provided official email IDs on which important notices are sent, and communications exchanged. They have also been provided network IDs through which they can access the MIS / Intranet where all notifications are put up. Hard copies of important notices and information are sent to relevant individuals. SLIM 21 software and electronic resources in the main Library can be accessed from remote locations.

The University has set up committees with diverse composition on important issues. The idea is not only to deliberate and decide issues, but also to use the meetings of such committees to disseminate important information to other stakeholders.

Research Promotion Cell (RPC), Joint Research Board (JRB), Research Degree Committee (RDC) in each faculty and Research Monitoring Committee (RMC) in each department take care of research activities at various levels, inculcate research culture and promote research at the institutional level.

6.1.11 How are the following values reflected in the functioning of the university?

- **Contributing to National development**

    Generating much needed human resources

    ✓ The trained manpower from the University serves various Govt./Non-Govt. departments and organizations after the completion of their study.

    ✓ The impeding factors in the growth of our country viz., illiteracy and unemployment, are being addressed.

    ✓ Research work carried out in the University through certain frontier project funding agencies like UGC/AICTE/, DBT, CSIR contributes to the national development.

    Public Awareness Lecture Series:

    For the last many years, the University has been organizing public awareness lectures,   which are open to students, faculty members and citizens of Chandigarh city. Eminent   experts in the area of social issues, environmental and sustainability issues address the gathering.

    In addition, lectures of eminent scholars and speakers on human values, sensitive issues like female feticide, community and social harmony, values of secularism, Gandhian philosophy etc. are also arranged periodically.

    Blood Donation Camps:

    Blood donation drives/camps are a way of facilitating blood collection from society. Donors voluntarily come to donate in camps. The staff and students of the University aim to meet the requirement of precious blood by organizing voluntary blood donation camps.

    Blood Donation Camps are being organized regularly in the University to create awareness among students & staff and to promote voluntary blood donation on special occasions like World Blood Donor Day, Red Cross Day and Independence Day.

    People are so aware that they have even started to celebrate their birthdays, anniversaries etc. by organizing blood donation camps on these days.

    Entrepreneur Development Programme:

    The Centre for Industry Institute Partnership Programme (CIIPP), Panjab University, Chandigarh was set up in 1996 as a separate entity as a self sustaining centre on Strategic Buisness Unit and Entrepreneur Development concept. It aims to bring the industry closer to the academia and vice-versa, and enriches the university by providing monetary support in the form of university share received through various consultancy projects.

- **Fostering global competencies among students**

    The University fosters global competencies among its students from the day they get admission at the University. The University curriculum helps its students to develop a conceptual framework of how to look at the world and students can use this framework to appreciate various aspects of economic, historical, financial and technological differences.

    The University has a Memorandum of Understanding (MoU) with a premier National as well as International Institutes thereby creating avenues for faculty exchange and student exchange programmes.

Recently, a nine member delegation from the University has visited universities in the UK to discuss and develop international academic and research collaborations. The UK universities are the University of Birmingham, University of Nottingham, Cambridge University and Imperial College London. The delegation from Panjab University consisted of representatives from PEC University of Technology, Center of Innovative and Applied Bioprocessing Mohali, Dr. S.S. Bhatnagar University Institute of Chemical Engineering & Technology, and Post Graduate Institute of Medical Education and Research.

This study tour was organized under the Knowledge Economy Partnership (KEP) programme. The KEP programme supports collaboration between Indian and UK academic institutions with the primary purpose of building capacity and strengthening policy and practice. It provides a platform and framework for the creation of sustainable, multilateral partnerships that link the higher education sector, government and business communities to drive forward regional, national and global knowledge economies.

Aims and objectives of this collaboration are:

o   Identify institutional partnerships and potential areas for collaboration.

o   Explore research collaborations in specific areas of science and technology.

o   Understand the role of research training centers and explore possibilities for offering graduate courses.

o   Explore partnerships for Centre for Policy Research in Industry-Academia collaboration.

o   Explore partnerships for Chandigarh Region Innovation and Knowledge Cluster institutions with a view to form a professional network of Indian and UK experts

The very fact that majority of our students get placements in Multi-National Companies every year, is a testimony of the Global Competencies they acquire through the exposure and learning processes adopted at the University.

- **Inculcating a sound value system among students**

  The University takes lot of initiatives to inculcate a strong value system, which supports the students in their formative years and stays ingrained for their corporate and personal lives. The curriculum introduces subjects such as Corporate Social Responsibility, Business Values & Ethics and Soft skills. There are various additional inputs and guest lectures, which emphasize the need of inculcating values in the process of learning to become successful professionals. Experiences and case-studies help the students appreciate values and are a springboard for application in their daily lives.

- **Promoting use of technology**

  Managing technology to provide the greatest value to any organization is a challenge. The University has introduced technological innovations in its academic and administrative activities. The University provides opportunities for all to network, learn, share, and collaborate on technology innovations and best practices, which benefit all members. In-house/ out-sourced software helps the smooth functioning of the Computer Center, Examination and the Administrative departments. The hi-tech infrastructure helps students with their skill-level training, the computer and language laboratories aid this process. The curriculum incorporates two aspects, one the conduct of syllabi with the technological aids and second the latest technology subjects are included to keep the students updated. The Main Library of the Institute has e-Journals and databases, the usage of which has been well incorporated into the teaching-learning process.

- **Quest for excellence**

  In the quest for excellence the University stresses on emphasizes enquiry, creativity and innovation in teaching and learning processes, use of high technology, creating and nurturing entrepreneurial and moral leadership. The University attempts to transform the imparting of education from uncreative and mechanical to a dynamic genuine process supporting the following dimensions:

  - Good Infrastructure
  - Subscription to e-journals and e-databases
  - Updated and Hi-tech Computer Centre (CC)
  - Updated Curriculum
  - Competent & Proactive Faculty
  - Responsiveness to issues promptly by the Administration
  - Smooth processes in Examinations with Accuracy and transparency
  - Extensive Research & Consultancy
  - Transforming with Out-bound activities
  - Reaching with Social sensitivity

6.2 Strategy Development and Deployment

6.2.1 Does the university have a perspective plan for development? If yes, what aspects are considered in the development of policies and strategies?

Yes, the University has a perspective plan for development.

- **Vision and mission**

  The plan of the University is to develop integrative multidisciplinary teaching-learning systems and processes for the holistic development of students with global perspective and to enhance Gross Enrolment Ratio (GER), offering equity in access for education while ensuring quality of education.

- **Teaching and learning**

  As outlined by the UGC, the perspective plan of the university is designed to have periodical reforms in teaching and learning aspects. This include increased students' choices of courses, improved technology-assisted participatory teaching-learning processes and provision of relevant education which emphasis on feed-back-based holistic evaluation system. Further it is planned to strengthen the teaching and learning process in a way to attract and retain the students from socially deprived backgrounds particularly in rural areas.

  The University envisages the possibility of expanding our academic programmes by exploring on-line mode in a big way, to achieve an inclusive expansion of our academic programmes.

  Towards the vision of development, the University plans to introduce various new academic programmes from the session 2014-15 as given in the table below:

Sr#	Name of the Department	Course	Duration
1.	UIET	M.E. Mechanical Engineering	2 years
2.	UIET	M.E. Electrical Engineering (Power System)	2 years

3.	UIET	M. Tech Material sciences and Technology	2 years
4.	UICET	M.E. Chemical with specialization in Environmental Engineering	2 years
5.	UICET	M.E. Food Technology	2 years
6.	CEDS	M. Ed Special Education (Learning Disability)	1 year

- **Research and development**

    The plan of the University is to develop promotion of research activities in the identified areas. The university is planning to create facilities for research with modern cutting-edge technology so as to provide international quality infrastructure and resource support to researchers in all the disciplines.

    The research priorities that are identified based on the university's strength include:

    - ✓ Materials Engineering
    - ✓ Innovations in entrepreneurship for rural livelihood uplift aiming at desirable changes in society and culture.
    - ✓ Nano Science & Nano Technology

    Cluster Innovation Centre (CIC)

    In the year 2014, Panjab University has been selected (one of the three Higher Education Institutes in India) to establish Cluster Innovation Centre with the support of Biotechnology Industry Research Assistance Council (BIRAC, a Govt. of India Enterprise) and National Innovation Council (NInC).

    The mandate of CIC is to promote the spirit of innovation in the young minds and to nurture a culture of applied research and need - oriented (societal or industry) innovation among researchers.

- **Community engagement**

    The University has planned various activities to be carried out for community development. Thus, it is planned to organize programs such as Colloquium Speaker Series, Chandigarh Region Innovation and Knowledge Cluster (CRIKC) to foster and sustain close academic alliances between institutions of higher education and research in the Chandigarh region, Public Awareness Lectures, Blood Donation Camps and Women Entrepreneur Development Program (WEDP).

- **Human resource planning and development**

    The University has a well defined Human Resource Planning and Development policy. The policy lays down guidelines for recruitment, remuneration, performance appraisal, career advancement, training and development, superannuation, health & insurance benefits, research grants and leave entitlement.

    The prospective plan of the university in human resource development includes capacity building and capability enhancement with modern-day requirement of the faculty resources through training in current developments and technologies.

- **Industry interaction**

    The Centre for Industry Institute Partnership Programme (CIIPP), Panjab University, Chandigarh was set up in 1996 as a separate entity as a self sustaining centre on Strategic Business Unit concept. It aims to bring the industry closer to the academia

and vice-versa, and enriches the university by providing monetary support in the form of university share received through various consultancy projects.

It is planned to strengthen interactions with industry by way of industry visit, guest lectures by eminent industry personnel, and projects for students with the help of industry by nominating industry experts on various academic bodies.

Policy Research Centre (PRC)

In the year 2013, Panjab University has been selected (one of the four Institutes in India) to establish Policy Research Centre (PRC) with the support of Department of Science and Technology (DST), Govt. of India.

The mandate of DST sponsored Policy Research Centre at PU is for the promotion of Industry Academia Interactions. The data collected from the Academia and the Private Sector including Industry will lay the foundations for drafting the National Science Policy.

▪ **Internationalisation**

For improving the quality of teaching and research it is planned to have more collaborations with reputed international organizations.

To make the programmes taught and graduates brought out internationally accepted, curriculum is to be periodically revamped in a way to fit to the situations, opportunities and requirements of subjects concerned at global level. Trainings are provided to the students with hands–on training so as to widen their practical knowledge and competence in various facets. Computer related courses are also included in the curriculum.

The **Knowledge Economy Partnership** (KEP) programme of the University supports collaboration between Indian and UK academic institutions with the primary purpose of building capacity and strengthening policy and practice. It provides a platform and framework for the creation of sustainable, multilateral partnerships that link the higher education sector, government and business communities to drive forward regional, national and global knowledge economies.

6.2.2   Describe the university's internal organizational structure and decision making processes and their effectiveness.

The Organizational structure of the University encompasses:

> ➢ The Senate
> ➢ The Syndicate
> ➢ The Academic Council
> ➢ The Faculties
> ➢ The Board Of Finance
> ➢ The Boards of Studies

The Syndicate is the apex executive and governing body, the Senate is the supreme decision making body, and the Academic Council is the authority to decide on courses and curriculum and other academic matters of the University.

The three bodies have adequate representation from the divergent set of stakeholders namely University faculty, affiliated college principals and faculty, academic administration as well as eminent personalities of society. This diversity in the higher bodies enables the leadership to interact with the stakeholders and in identifying the organizational needs. It also promotes a culture of participative management.

Board of Finance (BoF) in the University deliberate on financial matters

Board of Studies (BoS) of each Department, with membership also from external experts in

the respective areas of knowledge, meets at least 4-5 times every semester to design and manage academic matters, including issues related to assessment, evaluation and results.

At the department level, all the decisions are taken by following the democratic process as per the Rules and Regulations of the University. As per Panjab University Calendar Vol. III, there are three statutory committees, i.e., Academic Committee, Administrative Committee and Technical Committee and their respective functions are prescribed at page 386 of P.U. Cal. Vol. III. All the matters regarding admissions and migration are placed before the Board of Control, which is constituted by the university every year. All the decisions are taken by the appropriate committees/bodies of the department.

The University's structure has also promoted the involvement of the academic staff in different committees tasked to set-up and frame rules and norms on a variety of academic matters.

The University's internal organizational structure is depicted below:
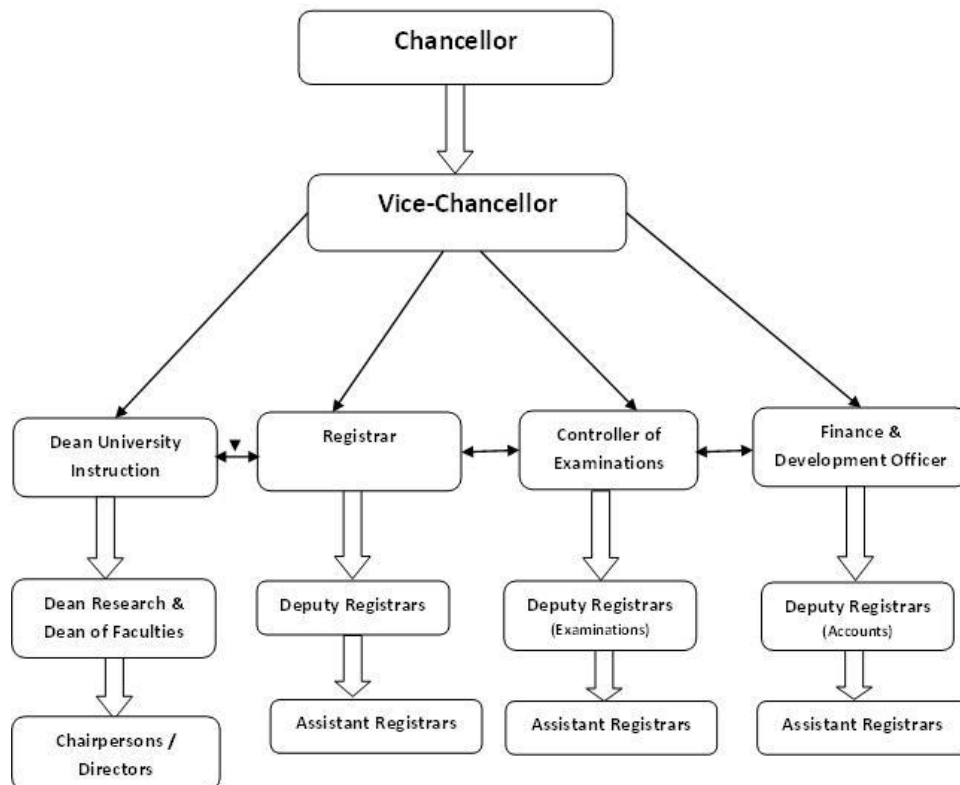
Honorable Vice-President of India is the Chancellor of the University. The Vice-Chancellor who is appointed for a term of three years is the Head of the Institution. The Dean University Instruction provides academic leadership and evolves strategies for academic growth of the University. The Registrar of the University, who is the Secretary of the Syndicate, is the custodian of all the records and Chief Administrator of the university. Yet another function, the examinations of the University, is managed by Office of the Controller of Examinations.

6.2.3   Does the university have a formal policy to ensure quality? How is it designed, driven, deployed and reviewed?

Yes. The University has a constant endeavor to ensuring quality at various levels in the University and has been clearly stated in the vision-2020 document of the University.

The various wings of the University are empowered to formulate and implement the policies as per the rules of the University to maintain the quality. While following the bottom-up approach, the Boards of Studies of respective departments, Research Promotion Cell (RPC), Departmental Research Monitoring Committees (RMCs), Departmental Committees and other stakeholders define and deploy the quality benchmarks. The IQAC and College

Development Council (CDC) on the University campus ensure successful implementation of these policies.

Departmental Committees

The Departmental Committees are bestowed with the powers to take decisions on academic and administrative matters concerning the department and implement them with the approval of the University.

Research Promotion Cell (RPC)

A five member cell has been put in place for the entire University to coordinate, facilitate and collate the research work of all the departments. RPC is expected to timely respond and anticipate the requirements of research scholars, post doctoral fellows and the INSPIRE faculty who choose to join P.U.

Departmental Research Monitoring Committee (RMC)

The Departmental RMC constituted under the Chairmanship of the respective Heads of the Departments, shall monitor all research activities in the departments and address the quality sustenance and maintenance matters in the research activity of the departments.

Internal Quality Assurance Cell (IQAC)

IQAC, constituted in the University under the Chairmanship of the Vice Chancellor,

- ✓ Functions as a nodal agency of the University for quality-related Issues.
- ✓ Initiates measures leading to quality sustenance and quality enhancement.
- ✓ Promotes quality consciousness among all the stake holders and constituents of the University through seminars, workshops and meetings.
- ✓ Evolves mechanisms to record and monitor the healthy practices adopted by the various wings of the University.
- ✓ Analyzes and discusses the NACC Peer Committee Reports. The Cell also deliberates on various aspects of quality sustenance, quality enhancement and the action to be initiated on the recommendations and observations of the Peer Team.

Mini-Internal Quality Assurance Cell (Mini-IQAC)

A Mini-IQAC, established in all the departments having one Coordinator and two members, monitors the quality aspects in the department and coordinates with IQAC from time to time at the university level. It provides the required information to IQAC and facilitates in the preparation of annual reports and other information required for submitting reports to NAAC.

The quality indicators at the University are:

- The lifelong learning through curriculum restructuring and continuous professional development
- Comprehensive assessment and evaluation system
- The interdisciplinary approaches to education with innovative ideas.
- Attract faculty who bring distinction and stature to the university.
- Use of e-learning pedagogy and technology.

6.2.4   Does the university encourage its academic departments to function independently and autonomously and how does it ensure accountability?

Yes. All the departments are autonomous and function independently except in case of certain policy matters like Annual Academic Calendar, Course Structures, Course Fees, Recruitments, Financial Matters etc. The University directs all the departments to submit Annual Reports, Annual Confidential Performance Reports and AQAR which are reviewed to ensure accountability.

6.2.5 **During the last four years, have there been any instances of court cases filed by and against the institute? What were the critical issues and verdicts of the courts on these issues?**

During the period under review, there are no remarkable decisions/ judgments delivered by various courts in academic and administrative matters of the University.

On July 17, 2013, Supreme Court dismissed the petition of Panjab University faculty for extending retirement age to 65. Court says that PU is a state university and Punjab government is liable to take all decisions.

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

Each Department has an Administrative Committee headed by Chairperson of the department and consisting of a senior faculty member, a lady teacher, a research scholar. The committee meets periodically and redresses the complaints/grievances if any and recommend to the University for Action. A centralized grievance committee, Anti-Ragging Committee, Anti Sexual Harassment Committee etc exist at university level for solving problems which are beyond the purview of Department.

6.2.7 **Does the university have a mechanism for analyzing student feedback on institutional performance? If yes, what was the institutional response?**

Yes. The University collects feedback information students on institutional performance at the end of each semester. The information obtained is analysed and the steps to be taken for necessary improvements are passed on to the concerned departments.

6.2.8 **Does the university conduct performance audit of the various departments?**

The University collects the information pertaining to teaching, research and outreach activities regularly such as Annual Report, Placement Records, Papers Published, Research Projects going on, Awards to faculty etc. which are looked into to understand the performance of the departments.

6.2.9 **What mechanisms have been evolved by the university to identify the developmental needs of its affiliated institutions?**

The University monitors and directly helps the affiliated colleges to meet their academic needs. As far as the infrastructure developmental needs are concerned, the Dean, CDC guides and facilitates flow of grants from UGC to affiliated colleges recognized under 2(f) and 12(b).

6.2.10 **Does the university have a vibrant College Development Council (CDC) / Board of College and University Development (BCUD)? If yes, detail its structure, functions and achievements.**

Yes. The University has a vibrant College Development Council (CDC) and the information is provided to the colleges through its web-site: http://dcdc.puchd.ac.in . The details for its structure, functions and achievements are given as under:

Structure of CDC

The College Development Council consists of the following:

- Vice-Chancellor, Panjab University, Chandigarh   **(Chairman)**
- Dean, College Development Council, Panjab University, Chandigarh
- Registrar, Panjab University, Chandigarh
- Controller of Exams, Panjab University, Chandigarh
- Finance & Development Officer, Panjab University, Chandigarh
- Director of Public Instructions (Colleges), Punjab, Chandigarh

- Director of Public Instructions (Colleges), U.T. Administration, Sector-9, Chandigarh
- Deputy Registrar (Colleges), Panjab University, Chandigarh
- A few senior teachers of the University Teaching Departments
- Some Principals/Teachers of the affiliated colleges

Functions of CDC

The duties and functions of the College Development Council as well as the Dean of the Council are as under:

a) Function as a policy making body in regard to proper planning and integrated development of colleges;

b) Conduct surveys of all the affiliated colleges district-wise with a view to preparing and maintaining an up to date profile on each college under the university, revising the existing facilities and identifying the needs and gaps that need to be filled for the development of colleges and make such information available to the UGC and other concerned bodies;

c) Advise the University on all matters relating to development of affiliated colleges, such as provision of adequate facilities – academic and physical – for raising thereof learning, teaching and research and its periodic evaluation of enabling the University to maintain reasonable continuity of policy in regard to development colleges;

d) Prepare a perspective plan for the development and opening of new colleges, to enable the university and state education authorities to take long term decisions on the planning and development of colleges and may advise the university on matters relating to different disciplines taught in colleges at different levels of university education;

e) Advise the university in regard to rationalization and implementation of University's policy on affiliation of colleges.

f) Keep close contact with the colleges with a view to helping them in their proper development, selection of teachers, student amenities, and proper utilization of grants and efficient implementation of UGC approved projects and reforms, viz., examination.

g) Review the facilities for post-graduate departments of colleges in terms of the norms prescribed by the UGC and assist those having the potential of coming up to the norms within a few days;

h) Help in the selective development of some colleges to remove regional imbalances and also assist the colleges to realise their potential and in identification of colleges for autonomous status;

i) Evaluate and assess the impact of UGC grants utilized by the colleges for the implementation of various development projects;

j) Ensure close and continued contact and interaction between the academic faculties at the university teaching departments and at the colleges, monitor the development programmes and maintain regular statistics on the development of college;

k) Review the inspection reports of the colleges and suggest remedies for the defects and irregularities reported.

Achievements of CDC

a) Setting up of Research Centres in affiliated colleges

✓ to enhance and facilitate disciplinary and interdisciplinary research collaboration, knowledge transfer and training

✓ to transfer and mobilize knowledge gained through research for the benefit of society, via a variety of mechanisms as appropriate

b) Facilitated the introduction of pre-PhD course work followed by examination in those colleges that have been identified as research centres by Panjab University

c) Facilitated the setting up of 'Community Colleges' in the UT and Punjab State to impart skill-oriented education of Diploma level with multiple futuristic opportunities for preserving and upgrading traditional skills.

d) Facilitated the introduction of new academic programme of studies in affiliated colleges

6.3 Faculty Empowerment Strategies

6.3.1 What efforts have been made to enhance the professional development of teaching and non-teaching staff?

Several initiatives have been taken and provisions made for the professional development of the teaching staff. The University promotes faculty participation in research by providing the following facilities:

Internet and Wi-Fi facility

Various academic areas are provided with wireless access points for the staff and students to make use of internet and intranet.

To stay advanced and provide staff with the best of the latest services, the University campus has gone Wi-Fi, enabling staff to access the internet through the wireless router, anytime and anywhere in the campus. The campus is wireless-fidelity enabled, with an internet speed of 1 Gbps. Staff in the campus can now access internet from anywhere using their wireless devices.

Subscription to e-journals and e-databases like INFLIBNET, DELNET

Subscription to research journals and periodicals besides procurement of books on various research areas

Study Leave

All faculty members are eligible to avail study leave for higher studies.

Leave for orientation and refresher course:

All faculty members are granted leave for the period when they want to attend orientation and refresher courses in any Academic Staff College. They are also granted leave and allowed to attend any other short-term training programmes.

Seed money for research:

A separate budgetary head has been created and a dedicated fund has been created to provide seed money to faculty members to start a research project. Details of the 'seed money' allocated and actual quantum utilized is provided in Criterion- VI.

Partial travel grants:

Partial travel grants for attending conference / seminars are provided to faculty members to attend / participate in national and international conferences / seminars / workshops.

Improvement of Education Grants:

Nominating and financially supporting faculty members to participate in workshops/training programmes/ other national and international forums in areas which are important to the University's mission of the University.

Similarly, the non-teaching staff have also benefitted from the University's policy of encouraging and helping its staff's professional development.

- The staff of the University is provided training in basic and advanced computing skills. This includes training in use of software (MIS and MS-Office).
- Nominating and financially supporting the staff to workshops / training programmes in relevant matters (for instance, RTI)

6.3.2   What is the outcome of the review of various appraisal methods used by the university? List the important decisions.

The University has been able to achieve efficiency, through performance appraisals. The faculty members give self-appraisal consisting of information related to their academic development in respect of teaching-learning process, research, consultancy etc., at the time of Career Advancement and Publication of Annual Report. The non-teaching employee's annual confidential report is submitted by their departmental head. These are the annual exercises in the University.

Some of the major decisions taken are:

- To sanction special incentives/rewards to staff with exemplary performance.
- To nominate faculty to training on specialized topics wherever some gap in performance is noticed.
- To assign senior faculty to mentor the junior faculty and guide them in both academic and administrative functions.
- To enthuse members of the staff to rise to the expectations of the students and stakeholders.
- To encourage the staff to familiarize with modern technical support systems.

6.3.3   What are the welfare schemes available for teaching and non- teaching staff? What percentage of staff have benefited from these schemes in the last four years? Give details.

The University provides welfare facilities to their employees to keep their motivation levels high. The welfare schemes available for teaching and non- teaching staff in the University are as follows:

- Free of cost health checkups and medication in health center
- Provision of financial assistance for health related emergencies
- Facility of day-care center/ crèche within the campus for working women, to take care of their children
- Provision of 3-months maternity leave to female employees with full salary and 15 days' paternity leave to male employees.
- Availability of working women hostel
- Waiver of 25% of the tuition fees to the wards of employees pursuing self-financing courses
- Provision of wheat/grain advance, festival advance, car/scooter advance, house building advance and other such schemes
- Provision of advance out of provident fund (PF) of employees for meeting expenses towards education, marriage etc. of their wards.
- Prompt payment of pension benefits including gratuity to Superannuated employees appointed prior to 2004 (there are standing instructions to this effect in the University)
- Provision of Ex-gratia grant and other facilities to the family of a University employee who dies while in service
- Benefit of Provident Fund and Group Insurance Scheme for all employees
- Provision of Professional training sponsorships
- Financial assistance to the Teachers of the University for attending the National/International Conferences/Seminars

- Subsidized transportation/ free transportation to off-campus employees
- Subsidized canteen/cafeteria facility
- Uniforms to class-IV non -teaching staff
- Excellent Internet/Wi-Fi facility to all the Staff
- Other facilities such as University Residences, Timely promotions, Salary through Bank, Indoor/Outdoor Sports Facility, Mobile Allowance etc.

A large percentage of employees have been benefitted from welfare measures initiated by the University.

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

To attract and retain eminent faculty members, the University takes the following measures:

- Implemented various welfare schemes such as Superannuation Fund, PF/EPF, group insurance etc.
- Faculty members are given opportunities to earn extra income through participation in Consultancy Assignments through CIIPP.
- Vacancies are publicized in leading national and regional newspapers and selection is always made on the basis of merit.
- The University offers and provides attractive salary package as per 6th Pay commission.
- Granting necessary financial assistance to attend seminars/conferences at national level.
- Infrastructural support for fitness & health care facility & recreation facility like badminton, table tennis, basketball, etc.
- Good work ambience, and respectable climate.

As a result, the University has been able to retain faculty members without any attrition during the last five years.

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

The university is mainstreaming gender in all its progammes and policies.

The University has conducted a gender audit for SC, ST, BC, General and other category students admitted in various academic programmes on the campus in the last four years and is given below:

Category	2010-11		2011-12		2012-13		2013-14	
	Male	Female	Male	Female	Male	Female	Male	Female
SC	1638	1155	1702	1424	1852	1485	2001	1736
ST	342	244	401	247	447	322	469	323
BC	548	257	657	437	907	523	880	642
General	16016	10993	15655	11838	17736	13316	17712	13980
Others	84	39	69	38	83	75	129	95

The University has conducted a gender audit for the faculty having highest qualification as Ph.D., M.Phil. or PG and is given below:

Highest Qualification	Professors		Associate Professors		Assistant Professors		
	Male	Female	Male	Female	Male	Female	Total
Permanent teachers							
Ph.D.	103	94	45	37	101	120	500
M.Phil.&PG	03	01	06	11	84	78	183
Temporary teachers							
Ph.D.	00	01	00	00	16	14	31
M.Phil.&PG	00	00	04	01	57	66	128
Part-time teachers							
Ph.D.	00	00	00	00	01	00	01
M.Phil.&PG	00	00	00	00	08	15	23

6.3.6   Does the university conduct any gender sensitization programmes for its faculty?

Yes.

'Let's be Gender Sensitive' – a panel discussion at PU was organized on April 22, 2013 in the light of the increasing incidence of gender violence in the country, brought to the fore disturbing statistics on crimes against women, particularly in the educated higher socio-economic section of the population.

The panelists - Prof. Reicha Tanwar (Member, National Consultative Committee of UGC on Women Managers in Higher Education and Director, Women Studies Research Centre, Kurukshetra University); Ms. Gurpreet Deo (IG Police, Jalandhar Range, Punjab); Mr. Naunihal Singh (S.S.P., U.T., Chandigarh) – stressed the necessity of changing mindsets, of spurning outdated notions of patriarchy, of refusing to accept traditions that nullify one's very humanity.

Another Workshop on 'Gender Sensitization' was organized by the Department-cum-Centre for Women's Studies & Development on February 28, 2012 for sensitizing the students and faculty towards gender injustice.

For Gender sensitization programmes please refer to Q5.1.17:

6.3.7   What is the impact of the University's Academic Staff College Programmes in enhancing the competencies of the university faculty?

The UGC-Academic Staff College, Panjab University, Chandigarh was established in the year, 1987 and in the last 27 years it has trained about 12,000 teachers. Most of these teachers are faculty of affiliated colleges of the University or the various departments of the University.

The University faculty needs to pass through the portal of the Academic Staff College for the mandatory requirements of attending Orientation and Refresher Courses. The competencies that are focused on, in the training programmes of the UGC-Academic Staff College, are classroom teaching, pedagogical skills, research skills and understanding of the inter-linkages

between society, community and academic faculty for junior teachers. Senior teachers are trained into subject updating, novel methods of training, development of interdisciplinary perspective and, finer and more advanced research techniques. Refresher Courses are subject- specific, hence the specific competency in teaching of corresponding discipline is targeted at. For mid career faculty members administrative skills are honed which include financial understanding, conflict management, human resource management etc. Meets for heads of the departments are held to develop leadership skills and a wider vision of Higher Education. From the feedback received from the participants it can be deduced that about 87% of the participants feel that the Academic Staff College training programmes have sharpened their competencies.

The Programmes of Academic Staff College have been successful in enhancing the competencies of faculty and have enabled the teachers to:

(a) Understand the signification of education in general and higher education in particular, in the global and Indian contexts;

(b) Understand the linkages between education and economic and socio- economic and cultural development, with particular reference to Indian Polity where democracy, secularism and social equity are the basic tenets of society;

(c) Acquire and improve the basic skills of teaching at the University level to achieve goals of the higher education;

(d) Keep abreast of the latest development in the specific subjects;

(e) Understand the organization and management of a College / University and to perceive the roll of the teachers in the total systems;

(f) Utilize opportunities for development of personality, initiative and creativity;

(g) Promote computer literacy as well as use of ICT in teaching and learning process.

6.4 Financial Management and Resource Mobilization

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

The University has well structured institutional mechanism to monitor the effective and efficient use of financial resources. In terms of section 31 (2) (r) of Panjab University Act, 1947, the University has constituted a Board of Finance comprises of following members:

1. Vice-Chancellor, P.U., Chandigarh. (Chairman)

2. Principal Secretary to Government of Punjab,

3. Department of Finance, Chandigarh (Ex-officio).

4. Joint Secretary, Deptt. of Higher Education, Ministry of Human Resource Development, New Delhi (Ex-officio)

5. Principal Secretary, Deptt. of Higher Education, Govt. of Punjab (Ex-officio).

6. Finance Secretary, Chandigarh Administration, Chandigarh (Ex-officio).

7. Dean University Instruction, P.U., Chandigarh.

8. Two Members from Syndicate

9. Two members from Senate

10. Registrar, P.U., Chandigarh (Secretary)

The Board of Finance periodically reviews the financial requirement of the University and suggests ways and means of its improvement and also make recommendations to Syndicate relating to University finances.

The following are the specific measures being followed by University for effective and efficient use of financial resources.

1. All the financial activities are planned by translating these requirements in annual budget incorporating therein recurring and Non-recurring expenditure and the income expected to be generated from internal resources. The Board of Finance considers these budgetary requirements and after careful examinations makes recommendations for its approval by the Governing Bodies of the University i.e. Syndicate and Senate.

2. For day to day financial transactions, the University has prepared its Accounts Manual which provides the rules for making various expenditures following the principle of transparency, efficiency and fair procedures.

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

The University has a strong mechanism of independent audit both at pre-audit and post-audit stage. Each bill before it is paid is pre-audited by independent Government Auditor i.e. Resident Audit Officer deputed by the Finance Department, U.T. Administration Chandigarh.

Besides above, the accounts of the University are being audited on annual basis by the office of C.A.G.

6.4.3 Are the institution's accounts audited regularly? Have there been any major audit objections, if so, how were they addressed?

The University has a system of concurrent pre-audit by the office of Resident Audit Officer deputed by the Chandigarh Administration as well as post audit by the office of CAG. The accounts of University are being regularly audited on annual basis and there are no major audit objections. However, all the audit observations are put up before the Board of Finance on annual basis.

6.4.4 Provide the audited income and expenditure statement of academic and administrative activities of the last four years.

The audited statement of income and expenditure of the University for the last four years are enclosed herewith (Annexure V-A).

6.4.5 Narrate the efforts taken by the University for Resource Mobilization.

The University has taken various measures for internal resource mobilization as below:

- The University has set up a Centre for Industry Institute Partnership Cell (CIIP) which gives a platform to the University faculty members not only to interact with the industry by providing various kinds of consultancy services but also helps to supplement the resource generation of the University.

- The University has been conducting the examination for various government institutions including recruitment tests which helps the University to mobilize extra resources.

- The University through its strong alumni base has been able to receive donations and contribution for creation of endowments and specific projects.

6.4.6 Is there any provision for the university to create a corpus fund? If yes, give details

The University has created following corpus fund out of the internal resources generated by the University:

S.#	Name of Corpus	Amount	Purpose
1.	Foundation for Higher Education & Research Fund	Rs.25.00 crores	The interest of the corpus is being utilized for the development of infrastructure
2.	Endowment Fund	Rs.5.34 crores	Interest is utilized to pay scholarships, prizes etc.

6.5   Internal Quality Assurance System

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

The University prepares annual report by taking inputs from various departments regarding their progress in terms of Academics.

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

Based on inputs received from the Annual Report of each department, IQAC interacts with the Chairpersons to improve teaching learning and evaluation.

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

Yes. Academic Council and its composition is given at Q:6.1.6 of Criterion VI.

6.5.4   How has IQAC contributed to institutionalizing quality assurance strategies and processes? Yes. IQAC has initiated the monthly meetings with heads of the departments to enhance quality. Moreover, Mini-IQAC have been setup in each department.

6.5.5   **How many decisions of the IQAC have been placed before the statutory authorities of the university for implementation?** All.

6.5.6   Does the IQAC have external members on its committees? If so, mention any significant contribution made by such members.

Yes. IQAC have three external members on its committee. The members suggested using ICT fully for maintaining the institutional database. The MIS/IQAC Cell was strengthened and the data organization and management has been streamlined.

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

Comparative study is placed at Q: 6.3.5 of Criterion VI.

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

Syndicate/Senate, Board of Studies, Academic Council, Research Degree Committee, etc have well defined roles for periodic review to implement the rules and regulations of the university.

	ANNEXURE – V-A									
Heads of Income			Estimates for 2009-2010		**Actuals for**	**Heads of Expenditure**		Estimates for 2009-2010		**Actuals for**
			Original	*Revised*	*2009-2010*			Original	Revised	*2009-2010*
I.	NON-PLAN		(Rupees	in	Lacs)	I	NON-PLAN	(Rupees	in	Lacs)
(A)	**REVENUE RECEIPTS :**					**Expenditure charged to Revenue Receipts:**				
I	Fees of Examinations	..	3608.55	3892.25	4302.67	i.	General Administration	..	5307.37	4979.19	5316.14
II	Registration/Certificate fee etc.	..	466.10	433.70	482.34	ii.	Conducting Examination	..	1019.47	1030.70	987.50
III	University Tuition Fee	..	868.59	791.74	863.12	iii.	University Teaching Deptts.		8484.41	7460.86	7040.33
IV	University Institute of Engg. & Tech.	..	1528.22	1472.43	1458.18	iv.	University Institute of Engineering & Technology	..	1321.68	917.68	765.28
V	University Institute of Legal Studies	..	347.50	340.80	342.91	v.	Dr.H.S.Judge Inst. of Dental Sciences & Hospital	..	818.18	559.36	521.57
VI	Dr. H.S. J. I. of Dental Sci. & Hospital	..	500.85	410.23	439.35	vi.	Regional Centre Muktsar,INVS,Kauni & B.Ed Kauni	..	287.59	162.04	142.97
VIII	University School of Open Learning	..	644.43	802.08	941.67	vii.	Regional Centre Ludhiana	..	135.28	114.68	97.58
IX	Regional Centre, Muktsar	..	67.05	16.10	18.21	viii.	S.S.G.P.U. R.C. Hoshiarpur	..	477.80	329.02	279.18
X	Regional Centre Ludhiana	..	266.65	175.84	216.14	ix.	V.V.B.I.S. & I.S. Hoshiarpur	..	215.06	180.39	174.66
XI	S.S.G.P.U.R.C., Hoshiarpur		657.00	551.01	615.54	x.	A.C. Joshi Library Chd.	..	319.82	450.69	465.00
XII	V.V.B.I.S. & I.S., Hoshiarpur	..	1.24	0.89	0.68	xi.	Ext. Library Ludhiana		110.86	89.08	85.95
XIII	(a) A.C. Joshi Library, Chandigarh		1.67	1.20	1.39	xii.	Improvement of Education	..	152.37	163.33	128.47
XIV	(b) Extension Library, Ludhiana	..	2.45	2.60	3.00	xiii.	Publication Bureau & P.U.News	..	66.57	45.06	42.58
XV	Publication Bureau (Sale of Books)	..	18.00	15.40	15.97	xiv.	Press Department	..	246.86	189.05	177.82
XVIII	University Hostels	..	19.50	20.00	16.78	xv.	Bhai Ghanayia Ji Health Centre	..	131.08	147.89	144.76
XIX	Research Journals	..	0.41	0.35	0.33	xvi.	Research Journals	..	18.83	17.00	16.13

XX	Centre for Emerging Areas	..	280.33	220.57	146.39	xvii.	University Hostels	..	287.96	255.78	231.66
XXI	U.I.A.M.S.	..	1003.28	750.42	829.60	xviii.	Works Department	..	2608.66	1406.11	1406.40
XXII	Miscellaneous Receipts (i.e. Rent of Staff Qtrs., Dilap. Fee., Sale of Result Gazette & other priced forms, Refund of Adv., etc.)	..	805.96	607.75	678.23	xix.	Provision for D.A. instalments	..	825.35	..	..
	TOTAL (REVENUE RECEIPTS):	..	**11087.78**	**10505.36**	**11372.50**						
	Less 50% of NRI Tuition Fee transferred to Fund 'Foundation for Higher Education & Research'	..	452.00		..						
	Total:	**..**	**10635.78**	**10505.36**	**11372.50**		**Total (Non-Plan Expenditure)**	**..**	**22835.20**	**18497.91**	**18023.98**
	Total (Income for calculating the deficit)	**..**	**10635.78**	**10505.36**	**11372.50**		**Deficit Non-Plan (Excess of Expenditure over Income)**	**..**	**12199.42**	**7992.55**	**6651.48**

Heads of Income		Estimates for 2010-2011		Actuals for 2010-2011	Heads of Expenditure		Estimates for 2010-2011		Actuals for 2010-2011
		Original	*Revised*	*2010-2011*			Original	Revised	*2010-2011*
I. NON-PLAN		(Rupees	in	Lacs)	I NON-PLAN		(Rupees	in	Lacs)
(A) REVENUE RECEIPTS :					**Expenditure charged to Revenue Receipts:**				
1	Fees of Examinations	..	3893.25	4579.15	5453.13	1	a) General Administration & Deans	..	7029.77	7098.94	6666.59
2	Registration/Certificate fee etc.	..	452.50	490.46	581.31		b) Arrears of revised Pay-scales	..	14700.00	10500.00	9055.93
		..				2	Conducting Examinations		1066.20	1190.21	1150.95
3	University Teaching Departments, (Tuition Fee)	..	1526.38	1586.91	1871.12	3	University Teaching Departments, Chandigarh	..	11805.91	10308.17	8734.16
4	(a) A.C. Joshi Library, Chandigarh	..	1.40	1.45	2.33	4	(a) A.C. Joshi Library, Chandigarh	..	582.83	547.59	437.32
	(b) Extension Library, Ludhiana	..	2.65	3.15	3.38		(b) Extension Library, Ludhiana	..	146.20	131.79	108.47
5	Improvement of Education	..	..	..	..	5	Improvement of Education	..	238.28	135.67	86.71
6	Publication Bureau & P.U. News	..	16.00	22.00	22.04	6	Publication Bureau & P.U. News	..	73.77	57.51	54.29
7	Research Journals	..	0.41	0.35	0.24	7	Press Department	..	306.69	234.99	213.43
8	University Hostels		21.00	22.00	17.96	8	Bhai Ghanayia Ji Institute of Health Sciences	..	160.81	168.37	165.03
9	Partially Self-Financed Departments	..	4388.65	4469.26	4685.27	9	Research Journals		18.78	18.98	17.94
10	Miscellaneous Receipts (i.e. Rent of Staff Qtrs., Dilap. Fee., Sale of Result Gazette & other priced forms, Refund of Adv., etc.)	..	615.80	715.25	722.80	10	University Hostels	..	420.12	375.88	296.35
			..	..	..	11	(a) Works Department	..	3272.75	3924.56	2102.54
			..	..	..		(b) Expenditure on Projects transferred from fund 'Foundation for Hr. Education & Research A/c	..	..	4112.86	4105.57
			..	..	..	12	Partially Self-Financed Departments	..	5036.13	2580.05	2961.60

Total Revenue	..	**10918.04**	**11889.98**	**13359.58**						
Amount transferred to Non-Plan from fund 'Foundation for Higher Education & Research Account'	..	..	4112.86	4112.86						
TOTAL (REVENUE RECEIPTS):	..	**10918.04**	**16002.84**	**17472.44**		**Total (Non-Plan Expenditure)**	**..**	**44858.24**	**41385.57**	**36156.88**
Total (Income for calculating the deficit)	..	**10918.04**	**16002.84**	**17472.44**		**Deficit Non-Plan (Excess of Expenditure over Income)**	**..**	**33940.20**	**25382.73**	**18684.44**

	Heads of Income		Estimates for 2011-2012		Actuals for		Heads of Expenditure		Estimates for 2011-2012		
			Original	*Revised*	*2011-2012*				Original	Revised	Actuals for 2011-2012
I.	NON-PLAN		(Rupees	in	Lacs)	I	NON-PLAN		(Rupees	in	Lacs)
	(A) REVENUE RECEIPTS :						**Expenditure charged to Revenue Receipts:**				
1	Fees of Examinations	..	4704.15	5353.70	5956.17	1	a) General Administration & Deans	..	9942.00	7778.20	8035.14
2	Registration/Certificate fee etc.	..	505.45	545.93	530.44		b) Arrears of revised Pay-scales	..	2000.00	1300.00	1211.49
		..				2	Conducting Examinations		1136.80	1283.44	1241.45
3	University Teaching Departments, (Tuition Fee)	..	1743.47	1801.45	1929.83	3	University Teaching Departments, Chandigarh	..	14290.78	10355.24	9356.53
4	(a) A.C. Joshi Library, Chandigarh	..	1.50	2.30	2.35	4	(a) A.C. Joshi Library, Chandigarh	..	589.35	584.41	517.34
	(b) Extension Library, Ludhiana	..	3.25	3.05	3.10		(b) Extension Library, Ludhiana	..	166.14	134.54	112.71
5	Improvement of Education	..	..	..	..	5	Improvement of Education	..	274.46	182.89	115.20
6	Publication Bureau & P.U. News	..	22.00	16.00	17.41	6	Publication Bureau & P.U. News	..	79.28	61.45	51.38
7	Research Journals	..	0.41	0.25	0.38	7	Press Department	..	345.09	260.23	232.81
8	University Hostels		22.00	25.00	22.06	8	Bhai Ghanayia Ji Institute of Health Sciences	..	190.26	200.15	181.81
9	Partially Self-Financed Departments	..	4778.56	4663.93	4395.39	9	Research Journals		21.04	24.20	19.40
10	Miscellaneous Receipts (i.e. Rent of Staff Qtrs., Dilap. Fee., Sale of Result Gazette & other priced forms, Refund of Adv., etc.)		728.25	736.00	798.77	10	University Hostels	..	427.26	407.18	346.16
11						11	Works Department	..	3269.08	1758.26	1604.95
		..				12	Partially Self-Financed Departments	..	6234.61	4505.49	3642.52
	TOTAL (REVENUE RECEIPTS):	..	**12509.04**	**13147.61**	**13655.91**		**Total (Non-Plan Expenditure)**	..	**38966.15**	**28835.68**	**26668.89**
	Total (Income for calculating the deficit)	..	**12509.04**	**13147.61**	**13655.91**		**Deficit Non-Plan (Excess of Expenditure over Income)**	..	**26457.11**	**15688.07**	**13012.98**

Heads of Income		Estimates for 2012-2013		Actuals for	Heads of Expenditure			Estimates for 2012-2013		Actuals for
		Original	*Revised*	*2012-2013*				Original	Revised	*2012-2013*
I. NON-PLAN		(Rupees	in	Lacs)	I NON-PLAN			(Rupees	in	Lacs)
(A) REVENUE RECEIPTS :					**Expenditure charged to Revenue Receipts:**					
1	Fees of Examinations	..	5452.70	6132.65	6657.40	1	a) General Administration & Deans	..	11330.13	10718.40	10394.52
2	Registration/Certificate fee etc.	..	579.45	575.45	591.46		b) Arrears of revised Pay-scales	..	1000.00	350.00	383.50
3	University Teaching Departments, (Tuition Fee)	..	1806.76	1924.23	2093.94	2	Conducting Examinations		1344.97	1985.94	1816.90
4	(a) A.C. Joshi Library, Chandigarh	..	2.35	2.45	2.42	3	University Teaching Departments, Chandigarh	..	17025.41	10776.33	10202.39
	(b) Extension Library, Ludhiana	..	3.20	3.15	1.96	4	(a) A.C. Joshi Library, Chandigarh	..	650.52	626.10	599.07
5	Publication Bureau & P.U. News	..	18.00	22.00	22.67		(b) Extension Library, Ludhiana	..	186.20	117.62	101.83
6	Research Journals	..	0.31	0.37	0.26	5	Improvement of Education	..	300.31	187.47	135.23
7	University Hostels	..	25.00	23.00	19.44	6	Publication Bureau & P.U. News	..	96.43	59.83	48.18
8	Partially Self-Financed Departments	..	4731.93	4456.50	4684.83	7	Press Department	..	415.14	250.78	232.53
9	Miscellaneous Receipts (i.e. Rent of Staff Qtrs., Dilap. Fee., Sale of Result Gazette & other priced forms, Refund of Adv., etc.)	..	749.00	743.00	849.90	8	Bhai Ghanayia Ji Institute of Health Sciences	..	233.21	200.99	187.25
						9	Research Journals		27.73	24.56	21.55
						10	University Hostels	..	510.33	367.35	319.44
						11	Works Department	..	2112.84	1987.40	1740.52
		..				12	Partially Self-Financed Departments	..	7701.65	4354.54	4100.75
	TOTAL (REVENUE RECEIPTS):	..	**13368.70**	**13882.80**	**14924.28**		**Total (Non-Plan Expenditure)**	**..**	**42934.87**	**32007.31**	**30283.6**

									6
Total (Income for calculating the deficit)	..	13368.70	13882.80	14924.28			**Deficit Non-Plan (Excess of Expenditure over Income)**	..	29566.17	18124.51	15359.38

CRITERION VII: INNOVATIONS AND BEST PRACTICES

7.1   Environment Consciousness

7.1.1   Does the university conduct a Green Audit of its campus?

There is no formal conduct of green audit in the University Campus but the University Campus is eco- friendly. Lot of expenditure is incurred to make the campus eco-friendly.

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

- **Energy Conservation:-**
  a) The Panjab University buildings are planned/ designed in order to achieve best ventilation, glare free light and well lighted interiors by choosing proper Orientation.
  b) The materials used for the construction, especially for the External Wall i.e. cladding with red sand stone, automatically provides sound and thermal insulation to specific areas.
  c) New buildings like All Weather Swimming Pool planned with water heating system through solar panels as backup.
  d) Use of Shading devices in a Judicious manner like Chajjas, Sunshades, Louvers, Overhangs further help in energy conservation of the buildings.
  e) Plantation of large number of trees along Pedestrian walk ways and other green areas help in reducing the temperature inside the Campus.
  f) Use of LEDs instead of traditional lights for street lighting and interiors of the buildings has been made popular to take care of energy conservation further.

- **Use Of Renewable Energy**

  Taking a step towards becoming environment-friendly, Bhai Ghanaiya Ji Institute of Health, Panjab University plans to install systems of harnessing solar energy for the various facilities it offers. The Institute is planning to use solar power mainly for the emergency room, the patient OPD and the dressing room. It will be helpful for accomplishing tasks which require minimum energy like the lighting system and supplying lukewarm water to patients for washing hands.

  There is also a plan that all hostels on the University campus will have to generate their own energy through biogas plants. Biogas would be produced from the waste of kitchens of these hostels to meet the requirements. It would not only help reduce consumption of LPG, but would also manage waste.

- **Water Harvesting**

  The Construction office of Panjab University, under the guidance of department of Geology & in collaboration with Central Ground Water Board, Chandigarh region has worked out & implemented the scheme with respect to Rainwater Harvesting, funded by Govt. of India, for the main campus of Panjab University.

- **Check Dam Construction**

  Well designed Storm Water System and Water Harvesting System take care of any flooding in Campus.

- **Efforts For Carbon Neutrality**

  Plantation of new trees has helped in reducing carbon contents. The dead leaves and the waste papers are not allowed to be put on fire. The leaves are buried in the soil itself and the papers are disposed off.

- **Plantation**

Panjab University has been organizing Tree Plantation drive for the last many years. 20,000 to 30,000 saplings have been planned during the past 5 to 6 years and there is planning to Plant 10,000 to 20,000 more trees in the future.

Every year, Panjab University's Ecological Club celebrates the Environment Day by creating awareness among students and teachers on the campus through a tree plantation drive.

The National Service Scheme (NSS) volunteers of Panjab University planted trees at the boys' hostels on January 03, 2014.

Tree Plantation Drive was held on 21st August, 2010 at University Institute of Dental Sciences, Panjab University, Chandigarh under Youth United Mass Education and Awareness Mission (YUMEAM)- Environment in collaboration with Nehru Yuva Kendra Sangathan (NYKS) and 100 different trees of various varieties were planted.

- **e-Waste Management**

As of today, e-waste generated in the University finds its way to the informal sector where it is not handled with due process and is disposed of without any attention to safety measures.

However, the University is in touch with some approved companies registered with Ministry of Environment & Forests/ **Central Pollution Control Board** (MOEF/CPCB) as e-waste Recyclers/Re-processors having environmentally sound management facilities, where the entire pool of e-waste that is collected from the University will be sent for safe disposal.

Name and address of E-waste Re-Processor is given below:

> **M/s Earth Sense Recycle Pvt. Ltd.**
>
> **Plot No.225, Sector-VI**
>
> **IMT Manesar, Gurgaon**
>
> **Haryana – 122 051**

- **Hazardous Waste management facility**

    a) The Job of Waste Management is undertaken by Panjab University itself.

    b) Garbage containers of 4.5 Cubic Meter capacities are placed near the Departments & Residential Areas.

    c) This Garbage is segregated & disposed off at Dadumajra, (Plant of J.P. Industries) place identified by the Municipal Corporation.

7.2   Innovation

7.2.1   Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the university.

Some of the recent initiatives/innovations introduced during the last four years which have created a positive impact on the functioning of the university are given below:

1. **Community Empowerment**

    a. Conducting a monthly colloquium speaker series where luminaries from various fields are invited to deliberate on the issues related to the academic interest as well as common interest.

    b. Organizing Induction Training Programme for newly recruited ministerial and secretarial (non-teaching) staff to make them aware about the functions of the University and use of campus portal (http://campus.pu.ac.in) for efficient operations.

    c. The community radio station (Jyotirgamaya: 91.2 MHz- **http://radiostation.puchd.ac.in**) located on the Panjab University campus, housed in the university's three-storey School of Communication Studies, plays music by local bands,

broadcasts stories by local writers and interviews with experts and offers a platform to little-known talent.

Books, which are not available in Braille, are read out and recorded for the benefit of visually-impaired students pursuing higher education, and this expanding audio library is made available to them free of cost.

d. Embracing Social Media to stay in touch with the students, staff and alumni

http://www.facebook.com/official.pu.india (verified page) is a great tool to quickly and easily get your message out to world. In less than one year of its launch, it has got more than 52000 LIKES.

e. Provision of Wi-Fi connectivity and access to the Internet in all academic areas and hostels

2. Academic and Administrative (A&A) Reforms

a. Setting up of Research Promotion Cell (RPC) to coordinate and facilitate Research

In an endeavour to promote research work in the streams of sciences and social sciences, Panjab University (PU) has created a Research Promotion Cell (RPC).

The cell has been formed with an aim to ease out the entire research process starting from making funds available for the research to making the research projects available to the academia.

The cell is supposed to have a detailed record of all the research projects that are going on in the varsity, the updated list of all funding agencies and a mechanism to help the researchers to come out of problems they encountered during study.

b. Setting up of Research Centres in affiliated colleges of the University

The purpose of a Research centre in an affiliated college is to promote and facilitate collaborative and/or interdisciplinary research and enhancement of research networking capacity and infrastructure.

c. Setting up of Policy Research Centre (PRC) to work on various aspects of 'industry-academia interaction' leading to better employability

d. Establishing Cluster Innovation Centre in Biotechnology (CIC-B) under the University Innovation Cluster (UIC) programme to nurture bright new ideas of young scientists

e. Signing Memorandum of Understanding (MoU) for academic activities

The varsity had already signed various memorandums of understandings (MoUs) with the Post Graduate Institute of Medical Education and Research, Central Scientific Instruments Organization (CSIO), IMTECH, University of Western Australia, University of Salzburg, Austria, Oxford Brookes University, and ONGC.

University of Western Sydney (UWS), Australia, and Panjab University (PU), Chandigarh, signed a memorandum of understanding (MoU) for joint research; organization of joint academic and scientific activities, like courses, conferences, seminars, symposia or lectures; exchange of academic staff for teaching and research activities; exchange of students for study or participation in research programmes and exchange of publications and other information of common interest.

British city Nottingham and Chandigarh have decided to explore academic collaboration opportunities between the University of Nottingham (UoN), UK and Panjab University (PU) Chandigarh. PU and UoN have decided that student exchange, joint research and industry-academia will help the two institutions. Both the varsities will identify the areas of mutual interest and might collaborate in the areas like public health, engineering, geography, food security, pharmacy, bio-science and management.

f. <u>Promoting interdisciplinary teaching and learning through series of workshops/seminars/conferences/debates/panel discussions</u>

Setting up of Chandigarh Region Innovation and Knowledge Cluster (CRIKC) is the major initiative taken in the year 2013 in which fourteen leading institutions in and around tri-city Chandigarh have been brought on a common platform.

For the last four years, Chandigarh Science Congress (CHASCON) as well as Chandigarh Social Science Congress (CHASSCON) has been held every year to develop interaction between the scientific communities in the tricity.

The University organized a seminar (Oct 24–26, 2013) on the issue of "The Making of Modern Punjab from 1850 to Contemporary Times, in the background of 150 years of Higher Education in Punjab" as part of the celebration of the **foundation day of the university** and the commemoration of the 150th birth anniversary of eminent scholar Professor Ruchi Ram Sahni.

These series of academic events have established the reputation of this university as a place of quality education and research.

g. <u>Introducing Choice-Based Credit System as a flexible and student-friendly learning system on a pilot basis</u>

In an attempt to provide students the freedom to choose what they want to study according to their interests and abilities, Panjab University is moving forward to introduce choice-based credit system (CBCS) in all its programmes of the study.

The system has been introduced in School of Communication Studies on a pilot basis from the academic session 2014-15 and is running successfully. Education imparted under the system will be more student-centric and will provide enhanced learning opportunities to match the students' scholastic needs and also their aspirations.

h. <u>Introducing the semester system to engage the faculty and the students in academic activity throughout the year</u>

Unlike in the annual system where a student, after entering the department/ college of his/her choice, tends to study only during the exam time, the semester system involves the student throughout the year and reduces the examination burden.

i. <u>Introducing Cumulative Grade Point Average (CGPA) that can be used by potential employers /educational institutions to assess and compare applicants</u>

Bringing the evaluation system at par with the global best practices, the University Institute of Engineering and Technology (UIET) in Panjab University has made a shift from marks and division system to the grading system that is based on a nine-point scale and cumulative grade point score.

j. <u>Revising Curricula and streamlining the examination process</u>

The University ensures that the curricula development exercise leading to a major revision in course contents and curricular is taken up every three years and the results are declared in a time-bound manner by adopting a uniform academic calendar and by streamlining the examination process. Computerized results, uploading of results on university website, and timely examination have also improved our reputation and commitments.

k. <u>Introducing specialized Courses at the University from the session 2014-15</u>

Six new courses – M.Ed Special Education (Learning Disability) at the department of Education and M.E. (Food Technology), M.E. (Chemical with specialization in Environment Engineering), M E (Electrical Engineering) and M E (Material Science and Engineering) at University Institute of Engineering and Technology (UIET) are being introduced in the new curriculum of PU.

l. Introducing Feedback mechanism

    Students give the feedback about the teachers at the end of each session/semester to improve the teaching-learning process.

m. Introducing Library Automation

    A.C. Joshi Library is fully automated and uses SLIM21 software as the Integrated Library Management Sofware, connected to the Campus Wide Network providing Internet and e-mail facility to the University community.

    E-Resources, Web Based On-line Public Access Catalogue facility (WEB OPAC), INFLIBNET, RFID technology to track books and 24x7x365 reading room provide right ambience for more footfalls.

n. Adopt-a-Village initiative

    In a first of its kind initiative, students of the department of Community Education and Development, Women's Studies and Development, Centre for Emerging Areas in Social Sciences and Population Research Centre at the Panjab University, will be catalysts of actual social development of village population. With an aim to provide first hand practical experience to students and also uplift the people residing in the rural areas, the Panjab University will adopt six villages surrounding the city. The villages already identified include Nayagaon, Sarangpur, Dhanas, Kaimbwala, Palsora and Halo Majra.

o. Providing a Dynamic, Decentralized and Transparent Governance System

    One of the salient features of the University management is that, there is a practice of constituting several sub-committees and other non-statutory bodies to discuss the issues and their complexities in depth and recommend decisions to the relevant authorities. This enables a de facto decentralization, involving wider participation of the faculty and others in decision making. Thus, the University has the practice of delegation of powers from authorities to their sub-committees and from higher officers to next level officers. Right from the inception, this healthy practice is in vogue and the delegation of powers is well defined. Such delegation of powers leads to not only a sense of involvement but also a speedy and efficient administration.

    The University greatly relies on ICT, to automate and simplify its daily activities thereby establishing an automated and transparent Governance System.

p. Recognition of University employees through awards/prizes/commendation certificates to promote more efficient and quality services.

3. Student Focused Initiatives

a. Establishment of SC/ST Cell for welfare of students

    The University has established a SC/ST cell at its administrative block which caters to the needs and requirements of the students belonging to minority classes. This cell provides coaching to the minority students for various competitive exams. This cell also provides scholarships to the students belonging to the SC/ST/BC students to facilitate higher education among them.

b. Anti Ragging Committee

    The University has established an Anti Ragging Committee to restrict ragging related activities in all its affiliated colleges and University Campus. This committee takes immediate action within no time limit as soon as there is any case reported for ragging.

c. Anti Ragging Squad

    The University has created an Anti Ragging Squad which performs periodic visits in the University Departments and all hostels of the campus.

d. Women Anti-Sexual Harassment Cell

The university has constituted Women Anti-Sexual Harassment Cell. The cell is responsible for maintaining equal opportunity to female students, employees and teachers. Any female candidate can approach to the cell if she feels any sort of discrimination. The women can also approach to the cell if she is harassed socially, emotionally and physically. Thus cell ensures the fare, protective and gender sensitive environment to female students, employees.

e. Central Placement Cell

The University has established a central placement cell at the campus. This cater to the training and development needs of the students in the context of their placement through campus drives at various national, international corporate, companies, public sector undertakings etc. This cell also emphasizes on skilled development, personality development, technically enriched knowledge among the students. Central Placement Cell is dedicated to strengthen the interaction between PU and the corporate sector. The Cell is headed by a Director and supported by other faculty. The Cell receives input from Industry regarding employment opportunities and trends and disseminates the information by organizing expert lectures from corporate world, short term training program for students as well as faculty. The placement cell also organizes Industrial Training for students.

f. Providing Excellent Sports Facilities

The University has playgrounds for all major sports, a gymnasium hall and a swimming pool of high standard for its sports activities. The gymnasium hall houses in-door games with international standard facilities and equipment for Badminton, Table-Tennis, Kabaddi (NS), Weight Lifting, Judo and Wrestling. A separate fitness centre for men and women and a well-equipped physiotherapy laboratory has also been established in the gymnasium hall.

Series of sports and cultural events have created positive impact on our stakeholders.

g. Providing Shuttle Bus Service

The University has started free-of-cost shuttle bus service for the convenience of students so as to control the traffic on the campus and to discourage students from making use of their private vehicles. The University has planned that students and staff should have access to shuttle service after every 10-15 minutes.

The University is also planning to connect all the institutions in Chandigarh and Mohali through a shuttle bus service for use by students and staff of all the CRIKC institutions.

h. Making available Group Insurance Scheme to its students

The University makes a provision of Group Insurance Scheme every year for its about 16000 Campus Students including Research Scholars enrolled/registered on annual basis and under this scheme benefits are given to the students in case of death/partial disability in the accident by the Group Insurance Company.

4. **Campus Development**

a. Eradication of plastic in the campus is insisted among students. The entire campus has been made tobacco free and polythene/plastic free zone through initiatives of both the teaching and non-teaching staff and this has definitely created a positive impact in the University.

b. Ecological Club of Panjab University instills awareness on eco-friendly environment and conservation of nature. Environmental Education is given on various environmental issues to keep the environment clean and green. The Students and Staff are motivated towards tree plantation to keep the environment green and eco-friendly.

c. Setting up of a Herbal Garden, Rose Garden and Recreation park

For the last many years, the Horticulture Division of Panjab University Construction Office, has been organizing the '**Chrysanthemum Exhibition'** as a matter of tradition, to re-experience and to relive the heralding of the coming of the spring season, a season of hope, activity and a life full with the spirit of zeal.

The 6th Chrysanthemum Exhibition was organized in Prof. R.C. Paul Rose Garden, PU, Chandigarh on December 12, 2013.

7.3 Best Practices

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

Best Practice-I

1. **Title of the Practice**

Chandigarh Region Innovation & Knowledge Cluster (CRIKC) - A Cluster of Chandigarh Region Institutions to Promote and Sustain Excellence in Research

http://crikc.puchd.ac.in

2. **Objectives of the Practice**

CRIKC endeavours to foster and sustain close academic alliances between institutions of higher education and research in the Chandigarh region, to facilitate innovation and knowledge creation and for achieving excellence in all academic spheres without compromising in any manner the autonomy of the participating institutions.

CRIKC aims:

1. To identify and carry out joint and collaborative research projects.
2. To initiate joint teaching/training programs including pre-PhD courses.
3. To encourage the pooling of research facilities of the participating institutions.
4. To nurture scientific culture from school level onwards.
5. To promote the spirit and philosophy of 'Meta-University' concept
6. To promote and sustain excellence in research in select areas such as Biomedical Sciences, Applications of Nano-Science and Nano-Technology and Theoretical Studies.
7. Policy planning for better comprehension of GOI programs and societal needs.

3. **The Context**

The contextual features/challenging issues that were needed to be addressed in designing and implementing this practice is mentioned below:

• Building a commitment to collaborate by leveraging value systems and external pressure

Value systems provided a basis for putting collaboration in a larger context such as an institutional desire to be innovative. At this stage, academic heads of participating institutions built a case in support of collaboration by utilizing supportive external entities and the campus network.

- Building from commitment to action

  After building support for collaboration, the second stage in the process entailed building from commitment to action. Critical in this step was the role of senior academic and administrative leadership to demonstrate that collaboration was a priority both symbolically and substantively.

- Sustaining collaborative activity

  The third stage focussed on sustaining collaborative activity primarily through changes in larger organizational structures, processes, and design. Each of these was leveraged to support, solidify, and institutionalize the commitment for collaboration.

The governance of CRIKC is vested with an Advisory Committee consisting of the heads of the participating institutions and chaired by the Vice-Chancellor, Panjab University. The core office of CRIKC is located in Panjab University campus.

Three Committees, Finance committee, Academic committee and Administrative committee are there for operational functioning of CRIKC.

4. **The Practice**

The idea of having a knowledge cluster/hub has its genesis in the '**Narayan Murthy report** 'April 2012, commissioned by Planning Commission on corporate participation in 'higher education'. This also finds echoed in the '**Knowledge Commission Report'** of GOI. Further, the idea of having alliances between institutions of higher education and research in and around a given city also finds reference in the **12th Plan Document of GOI.** The idea of having knowledge cluster/hub is also inclusive of the '**Meta-University'** concept, being advocated by MHRD, GOI. Furthermore, **"Science, Technology and Innovative (STI) 2013 policy of GOI"** also refers to clusters/hubs as tools for innovations. Globally, it is well known that innovation and knowledge clusters lead to accelerated creation of wealth (i.e. 2/3 of world GDP originates from 40 odd clusters).

Keeping these broad ideas in mind, several rounds of meetings involving heads and/or representatives of institutions of higher education and research in and around Chandigarh have been held from July 2012 onwards under the Chairmanship of Vice-Chancellor of Panjab University. In one of the meetings held on 24th November, 2012 at Panjab University, it was agreed to name the knowledge cluster/hub as "**Chandigarh Region Innovation and Knowledge Cluster (CRIKC)".** On 11th May, the Technology Day, 15 Heads of Institutions approved a document enunciating academic co-operation amongst participating institutions.

As per the vision 2020 document of the University, the focus of the University is on interdisciplinary courses and accordingly in the year 2013, the University started the Chandigarh Region Innovation and Knowledge Cluster (CRIKC) comprising 14 different medical and research institutes in the Chandigarh region, to promote and sustain Excellence in Research. The CRIKC involves all the premier institutions of higher learning and research located in and around Chandigarh such as:

BPU, Mohali	CSIO, Chandigarh	GMCH, Chandigarh	IISER, Mohali
IIT, Ropar	IMTECH, Chandigarh	INST, Mohali	NABI, Mohali
NIPER, Mohali	NITTR, Chandigarh	Panjab University	PEC, Chandigarh
PGIMER, Chandigarh	TBRL, Chandigarh		

1. Bio Processing Unit (BPU)
2. Central Scientific Instrumentation Organization
3. Government Medical College & Hospital
4. Indian Institute of Science Education & Research
5. Indian Institute of Technology
6. Institute of Microbial Technology
7. Institute of Nano Science & Nano Technology
8. National Agri Food Biotechnology Institute
9. National Institute of Pharmaceutical Education & Research
10. National Institute of Technical Teachers' Training and Research
11. Panjab University
12. Punjab Engineering College of Engineering and Technology
13. Post Graduate Institute of Medical Education & Research
14. Terminal Ballistic Research Laboratory (TBRL)

Evidence of Success

CRIKC has already received a support of Rs One crore from the former local MP, Shri Pawan Kumar Bansal, out of MPLAD scheme for purchasing two AC buses (Rs 50.00 lacs) and other Rs 50.00 lacs for developing infrastructure (Books for Library, Server / Computers and computer peripherals, video conferencing paraphernalia etc.) to realize few steps towards CRIKC's creation.

A presentation about CRIKC was made by Professor Arun Kumar Grover, Vice Chancellor, Panjab University, at MHRD, New Delhi on 18 July 2013. The entire idea received good deal of support from the Secretary, MHRD and his colleagues.

The following brainstorming sessions under CRIKC indicate evidence of success of the practice:

1. Lecture by **Sam Pitroda** entitled, 'Importance of Information Technology Infrastructure in Growth and Development of the Nation' 23rd January, 2013.

2. Lecture by **Shri Pawan Agarwal**, Advisor Higher Education Planning Commission' entitled, Higher Education in the 12th Plan and Beyond: Strategy and Approach'

3. **Prof. Yehiam Prior**, a Distinguished Professor in Chemical Physics at **Weizmann Institute of Science Israel** visited P.U. Campus, PGIMER and IISER, Mohali and gave two lectures at P.U. and IISER.

4. **Professor Richard Jones**, a Distinguished Professor at **Oxford University, U.K.** and President Physiological Society, U.K., was hosted by CRIKC at PGIMER as a one stop interaction point for all the institutions in the region. He deliver a lecture entitled: **Spatial Ca^{2+}/H^+ ion coupling in the heart: a key substrate for arrhythmia**?

5. National Technology Day lecture on May 11, 2013 at P.U., Chandigarh by **Dr Girish Sahni**, Director CSIR Institute of Microbial Technology, 'Challenges and Opportunity for Translation of Science for Public Good'

6. Visit by **Japanese delegation from AIST** at P.U., Campus to explore collaboration in Biological Sciences.

7. Director British Council in India, **Mr. Rob Lynes**, has already visited PU to explore CRIKC as a facilitator to promote interaction between British Universities and Chandigarh region institutions.

8. This was followed by another visit of **Mr. Rob** on 24th July to Chandigarh.

9. Panjab University along with CRIKC hosted **79th annual meeting of Indian Academy of Sciences** from November 8thh to 10th at PU Chandigarh with the activities on 9th and 10th held in other institutions associated with CRIKC, viz., CSIR-IMTECH and IISER Mohali.

10. CRIKC participation in workshop held at IIT Ropar on 2nd July, 2013. The theme of the workshop "**Eradicating the problem of open field burning in India: turning agricultural waste into energy**", emerging out of in IIT Ropar - Aston University U.K. initiative.

11. Several proposal amongst the CRIKC's institution in the offing are as:

    (i) Bio-Agro proposal submitted by NABI and DBT.

    (ii) Centre for excellence in detonic (CED) by TBRL, Mohali.

    (iii) Creation of cold room facility by Snow and Avalanche Study Establishment, (SASE - DRDO).

5. **Problems Encountered and Resources Required**

Resources Required

For immediate commencement of CRIKC activities, funding required is as follows:

Sr.	Human Resource Requirements	Amount (Per annum)
01	Project Officer/Senior Scientific Officer	6.0 Lakhs (50,000 p.m.)
02	Project Assistant/Scientific Assistant	3.6 Lakhs (30,000 p.m.)
03	Junior Assistant/Data Entry Operator	2.4 Lakhs (20,000 p.m.)
04	3 Bus Drivers	9.0 Lakhs (25,000 p.m. each)
	Total	**21.0 Lakhs**
	Recurring Expenses	**Amount (Per annum)**
01	Diesel & Maintenance of Buses	30.0 Lakhs
02	Funds for Hosting Visiting Scientists	15.0 Lakhs
03	Travel Funds	12.0 Lakhs
04	Seminars/Conferences/Training Programmes	12.0 Lakhs
05	AMC & Maintenance	5.0 Lakhs
06	Contingency Fund (Office infrastructure, Consumables, Stationary, Postage, Electricity charges, Water charges, Miscellaneous etc.)	5.0 Lakhs
	Total	**79.0 Lakhs**
	Grand Total for First Year	**1 Crore**
	For Three Years	**3 Crores**

Year Wise Plan of CRIKC

Phase I of CRIKC (1st year) plans to provide the following facilities:

- CRIKC website with a directory of active Scientists in the Chandigarh region
- Sharing of library resources
- Common identity cards
- Lecture notification amongst different institutions
- Free shuttle service to cover institutions under CRIKC
- Seamless access to the laboratory facilities of participating institutions
- Holding joint seminar/conferences
- Joint Ph.D. programs including common courses
- Recognition of supervisors on mutual basis
- Setting up of Centre for Theoretical Studies and Policy Planning

- Creation of Research Based Sub-Clusters (Medical, Industrial, Nano-technology, Physical Sciences, Chemical Sciences, etc.)

Phase II of CRIKC (2nd year) plans to provide the following facilities:

- A few joint programs in Bio-sciences and Nano-science
- Common physical facilities to be created
- Joint pre-PhD courses
- Facility of spending a few months in the participating institutions on mutual basis
- Incentive scheme enabling Ph.D. holder college teacher to take sabbatical leave to work with faculties/scientists in CRIKC institutions.
- Create/provide facilities to attract faculty members from abroad to spend sabbatical leave period in CRIKC institutions: Possible partners in this initiative, TCS and Tata Trusts (Discussion with Mr. F.C. Kohli, Emeritus Chairman TCS).
- Initiation of Industry-Academia interaction
- Joint admission of PhD students in bio-stream
- Refresher courses / summer school / college teachers

Phase III of CRIKC (3rd year) plans to provide the following facilities:

- Integration of Industry sponsored programs.
- Setting mission oriented goals.
- High level of visibility in research.
- New and innovative schemes to attract talent, in particular, Inspire Post Doctoral Fellows to choose CRIKC institutions as hosts to initiate new programmes.
- Creating examples where we achieve 'concept to commercialization'

Challenging issues that are needed to be addressed in successfully implementing this practice are given below:

1. Seeking greater involvement of industries and corporate in both research activities and financially supporting the CRIKC initiative
2. Realising the idea of a meta university and getting funding from UGC in accordance with the guidelines on setting up meta universities
3. Seeking to attract quality international students and faculty in order for the participating institutions to measure up to international standards.
4. Implementing the concept of community college for imparting skills and vocational education through the participating institutions in Chandigarh region coming together.

Best Practice-II

1. **Title of the Best Practice**

   Honours School System of Under Graduate and Post Graduate Studies in Science Education

2. **Objectives of the Practice**

   The main objectives of this education system are:

- ✓ To teach and study fundamental scientific/academic theories and their various applications as applicable to the progress of the society.

- ✓ To develop self-reliant, thinking and committed individuals capable of contributing towards India's continued growth and prosperity.

- ✓ To focus on the development of human resources to meet India's need for an educated and skilled workforce in Science Education.

- ✓ To enthuse students about the science discipline and its applications, and to develop their confidence in their work using the discipline.

- ✓ To provide access to science at the frontiers, capitalizing on the strengths of the research undertaken in the science departments.

- ✓ To provide opportunities and support for all students to reach their full potential during their studies.

3. **The Context**

The University had commenced Honours School System (HSS) in Sciences and Humanities in 1920s to enroll students for seamlessly connected Bachelors and Masters degree phases culminating in exposure to meaningful research before eventual graduation. After learning the basics, Honours School students explored and contributed to the newer developments in a given field in partnership with a chosen teacher. The senior students of Honours School also performed supervisory duties in laboratories and conducted tutorial sessions. The efficacy of such an approach can be gauged from the fact that ten of the sixty five founding Fellows of Indian Academy of Sciences (IASc), Bangalore in 1934 were faculty and alumni of the University of Punjab at Lahore. By 1940, eight more academics of the University had become Fellows of I.A.Sc., Bangalore. In 1939, the founder Director of the University Chemical Laboratories and Chemistry Honours School at Punjab University Lahore, Dr S.S. Bhatnagar, had been requested to conceive the plan for industrial research and exploration of mineral resources of India as Director of Scientific and Industrial Research by the then Government of India.

After Indian independence, when PU reassembled at its present campus at Chandigarh in early 1960s, the Honours School programme recommended only in Science streams and Economics. The five year Masters programme at IITs and newly established IISERs and the integrated Masters and PhD programmes at the premier research institutions of India, like Indian Institute of Sciences, Bangalore, Tata Institute of Fundamental Research, Mumbai etc. are today offering a challenge and inspiration to remodel and expand the Honours School System of Panjab University on the lines of "Graduate Schools" in Western universities.

The challenging issues that were needed to be addressed in designing and implementing this practice are:

- ✓ To determine characteristics of courses that set high expectations

- ✓ To establish a clear rationale for writing common course syllabi, including how the syllabi will promote horizontal and vertical articulation and guide the use of common planning time

- ✓ To incorporate literacy goals into course expectations

- ✓ To examine components of effective course syllabi: a course description, course standards, an instructional philosophy, major projects and assignments, and a course assessment plan and grading policy

4. **The Practice**

Every student in this system undergoes three years of education at UG level and two years of education at PG level.

In this Honors School Semester System, the University administers separate Common Entrance Tests (CET) for UG and PG studies on a national scale for admission to the following courses:

Sr. No.	Courses	Institution(s)/Department(s) offering the Course
1.	B. Pharmacy (Credit based Semester System)	University Institute of Pharmaceutical Sciences,
2.	B.Sc. & M.Sc. (Honors School Semester System) in the subjects of: 1. Anthropology 7. Geology 2. Bio-Chemistry 8. Microbiology 3. Bio-Physics 9. Mathematics 4. Biotechnology 10. Zoology 5. Botany 11. Physics 6. Chemistry 12. Physics & Electronics Mathematics & Computing (UG only) Computer Science (PG only)	Respective Science Departments of the University

The eligibility criterion (subject-wise) for admission to B.Sc. (Honors School) is as:

	Should have passed 10+2 examination with at least 50% marks (45% marks in case of SC/ST/BC) with:
Botany, Zoology	Physics, Chemistry, Biology and English
Anthropology, Chemistry, Geology, Physics, Physics & Electronics	Physics, Chemistry, Mathematics/Biology and English
Biochemistry, Microbiology	Physics, Chemistry, Mathematics/Biology/ Biotechnology and English
Biotechnology, Biophysics	Physics, Chemistry, Mathematics/Biology/ Biotechnology/Computer Science and English
Mathematics, Mathematics & Computing	Mathematics as one of the subjects
B. Pharmacy (Credit based Semester System)	Physics, Chemistry, Mathematics/Biology/ Biotechnology and English

a. Senior Professors teach and ignite young minds for future leadership roles and encourage them to think critically.

b. Research Students of Senior Professors take Laboratory sessions, thereby giving students a better appreciation of what "real world" research is all about.

c. Semester system is followed in this system in order to enlarge curricular space and encourage

more learning opportunities. Moreover, the latter enhances the ability to accommodate diverse choices that dynamic and motivated students may like to have. The decisions regarding faculty-to-students contact hours during a semester in different programmes; the decision regarding the credit system determining the quantum of class room learning hours; elements of participatory teaching-learning process; field-work; lab-work; and, other curricular work are taken by various academic bodies of the university.

d. Computer-based programmes are introduced in honors school to ensure that pupils are ready to meet the challenges of the 21st century. Information Technology is used widely as teaching and learning resources to develop skills in communication and independent learning.

e. All pupils in the first year of UG studies follow a curriculum having 60% minor subjects and 40% major subjects. All pupils in the second year follow a curriculum having 40% minor subjects and 100% major subjects. All pupils in the third follow a curriculum having 100% major subjects. M.Sc.(Honors School) level programmes naturally impart a high dose of discipline based knowledge.

f. Honors School system enjoys autonomy in question paper setting, its evaluation and final result preparation.

'Continuous Internal Evaluation' is the central feature of the evaluation in this system. A teacher who offers the course is the best person to assess performance of the students. However, there is the end-semester evaluation. And, to ensure transparency, fairness, and accountability appropriate mechanisms such showing evaluated answer sheet to students for verification have been devised.

g. Feedback is also taken from students to help develop a better class atmosphere and assist an instructor in improving instruction.

h. Discussion and debate of all academic issues raised by students is also encouraged in the system.

5. **Evidence of Success**

   a. The Honors School courses are very popular among 10 + 2 students who are interested in building their career in Sciences.

   b. Alumni hold enviable and key positions in different fields of sciences not only in India but also abroad. Refer Criterion-V for detailed list of distinguished alumni.

   c. Seven science departments accorded the status of Centre of Advanced Studies (CAS) besides FIST grants from DST and Special Assistance Programme (SAP).

   d. PURSE (Promotion of University Research and Scientific Excellence) award of Rs 30 crores given by the Department of Science and Technology, G.O.I., New Delhi.

   e. Recognition accorded by the UGC as the "University with Potential for Excellence in Bio-Medical Sciences" with facilities for 'Stem Cell Research and Drug Development' as well as "Centre of Excellence" in 'Application of Nano Material, Nano Particles and Nano Composites'

6. **Problems Encountered and Resources Required**

   The University is providing all types of support to run the Honors School System in Science education successfully.

   All appropriate steps are taken by the University to create and maintain infrastructure required for quality teaching and research.