A

REPORT

ON

POST ACCREDITATION INITIATIVES
(During the period 2009-2014)

For the purpose of 3rd Cycle of
Re-accreditation by NAAC

Presented by

Panjab University, Chandigarh

Submitted to

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL
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Report on Post Accreditation Initiatives during the period 2009-2014 for Panjab University, Chandigarh.

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".

Post Accreditation Initiatives

The NAAC peer team visited the University on 22-25 of October, 2008 and examined the infrastructural facility available in the University and other relevant records to make their assessment, recommendations as well as suggestions for further enhancement of quality in curricular and co-curricular programmes including various aspects of the functioning of the University.

Based on the recommendations of the NAAC peer team for the second cycle of Accreditation process in 2008-2009, the University has taken the following initiatives for quality sustenance and quality enhancement in the last 5 years (Post NAAC accreditation period 2009-2014) which are highlighted through action taken by the University on specific recommendation by the NAAC peer team as well as through the seven criteria of NAAC:

- **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.

  - ❖ **Post Accreditation Initiatives 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, internalization 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.

- ❖ <u>**Post Accreditation Initiatives on Recommendation #2:**</u>

    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 UIET and '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 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.

- ❖ **Post Accreditation Initiatives 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.

- ❖ **Post Accreditation Initiatives 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.

- ❖ **Post Accreditation Initiatives 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.

- ❖ **Post Accreditation Initiatives 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 mechanism 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.

- ❖ **Post Accreditation Initiatives 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.

- ❖ **Post Accreditation Initiatives 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.

❖ **Post Accreditation Initiatives 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.

❖ **Post Accreditation Initiatives 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.

Summary of Seven Criteria of NAAC

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.