Panjab University
Chandigarh

Criterion II:
Teaching-Learning
and Evaluation

CRITERION II: TEACHING-LEARNING AND EVALUATION

2.1   Student Enrolment and Profile

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

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,	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)

	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	
2.	B. Pharmacy and B.Sc. (Honors School) in Anthropology, Biochemistry, Biophysics, Biotechnology, Botany, Chemistry, Geology, Mathematics, Physics Mathematics & Computing, Zoology, Microbiology, Physics & Electronics,	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 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	Common Admission Test

	Business), M.B.A. (Human Resources), M.Com. (Hons.)	(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: $10^{th}+12^{th}$+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	116490	1:1
➢ 2011-12	123023	1:1
➢ 2012-13	141431	1:1
➢ 2013-14	156708	1:1
PG		
➢ 2010-11	14391	1:1
➢ 2011-12	16756	1:1
➢ 2012-13	19178	1:1
➢ 2013-14	22329	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	8847	940	9.41:1
➢ 2012-13	12315	943	13.06:1
➢ 2013-14	15013	1095	13.71:1
➢ 2014-15	19119	1095	17.46:1
PG			
➢ 2011-12	16147	2379	6.79:1
➢ 2012-13	17761	2325	7.64:1
➢ 2013-14	19185	3380	5.68:1
➢ 2014-15	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:
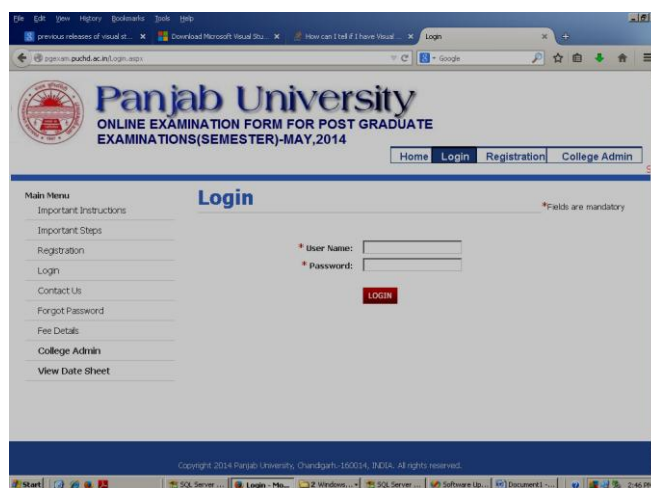
(c) Introduction of innovative evaluation system based on continuous assessment of the students, rather than the single examination system

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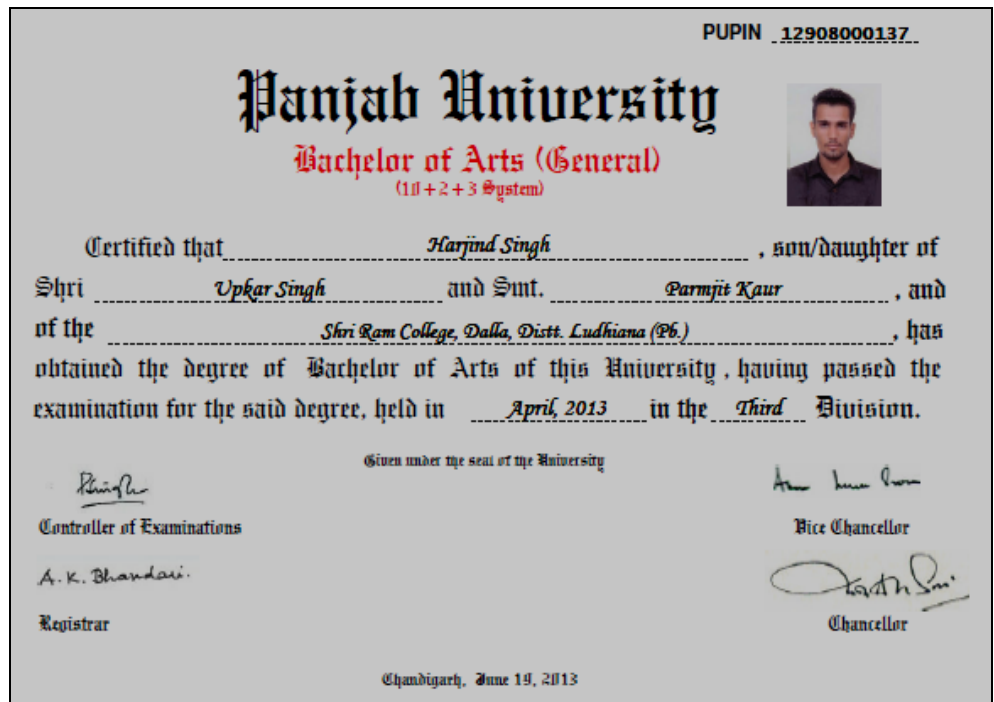
Computerized Maintenance of the data of the entire paper setters is done so that seniority wise list of paper setter is generated every year.

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:

PUPIN 12908000137

Panjab University

Bachelor of Arts (General)
(10 + 2 + 3 System)

Certified that _____ Harjind Singh _____ , son/daughter of

Shri _____ Upkar Singh _____ and Smt. _____ Parmjit Kaur _____ , and

of the _____ Shri Ram College, Dalla, Distt. Ludhiana (Pb.) _____ , has

obtained the degree of Bachelor of Arts of this University, having passed the

examination for the said degree, held in _____ April, 2013 _____ in the _____ Third _____ Division.

Given under the seal of the University

Controller of Examinations

A. K. Bhandari.

Registrar

Vice Chancellor

Chancellor

Chandigarh, June 19, 2013

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