Panjab University
Chandigarh

Criterion I:
Curricular Aspects

CRITERION I: CURRICULAR ASPECTS

1.1 Curriculum Design and Development

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

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

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

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

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

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

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

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

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

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

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

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

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

c) Once a suitable need assessment is carried out, the programme committee takes it for approval to the academic bodies constituted at the University level. The University follows a four-tier structure for the development of any academic programme – programme teams, Board of Studies (at the Department-level), Various Faculties (Arts/ Science/ Languages/ Education/ Law/ Business Management & Commerce etc), and the Academic Council, a highest academic body of University chaired by the Vice-Chancellor, which is the final approving body.

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

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

- **Employability**

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

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

  ➢ The curriculum design through an equitable proportion of hands-on practical training for skill acquisition and sound theoretical knowledge serves to equip the students to face real-time situations and societal needs. The curriculum attempts to address the needs of various

stakeholders such as Industries, Government agencies, Banking sector, Corporate, IT industry, Insurance sector, etc.

- **Innovation**

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

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

  The list of Innovative Interdisciplinary Courses is:
  - Emerging Areas in Science & Technology
    - M.Sc. Nuclear Medicine
    - M.Sc. Nuclear Physics
    - M.Sc. System biology & Bioinformatics
    - M.Sc. Microbial Biotechnology
    - M.Tech. Nano Science and Nano Technology
    - M.Sc. Masters in Public Health
    - M.Sc. Stem Cell & Tissue Engineering

  - Emerging Areas in Social Sciences
    - M.A. Police Administration
    - M.A. Social Works
    - M.A. Human rights & Duties

  - Other Emerging Areas
    - B.Com. LL.B.
    - B.A. LL.B.
    - 1-Year Law

- **Research**   (For details, refer to Criterion-III)

  - In many of the PG programmes offered by all the faculties, subjects on 'Research Methodology' and 'Statistics' are included as mandatory courses in the curriculum.

  - Many of our PG programmes also have a mandatory component of research projects / dissertations.

  - PG students in professional programmes are oriented to research through participation in minor and major projects.

➢ PG students are encouraged to enhance their research knowledge through mechanisms which encourage working on empirical data, writing term-papers, field-based research, working on live projects, etc.

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

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

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

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

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

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

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

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

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

the following well-established centres on the campus:

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

In the year 2013, an important initiative has been taken by Panjab University to foster and sustain close academic alliances between institutions of higher education and research in the Chandigarh region to facilitate innovation and knowledge creation and for achieving excellence in all academic spheres. This initiative resulted in the formation of "**Chandigarh Region Innovation and Knowledge Cluster (CRIKC)**".

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

Several proposals amongst the CRIKC's institution are in the offing as given below:
- Bio-Agro proposal submitted by NABI and DBT.
- Centre for excellence in detonic (CED) by TBRL, Mohali.
- Creation of cold room facility by Snow and Avalanche Study Establishment, (SASE - DRDO).

Some of the recent CRIKC activities are mentioned below:

1. Lecture by Sam Pitroda entitled, 'Importance of Information Technology Infrastructure in Growth and Development of the Nation' 23rd January, 2013.
2. Lecture by Shri Pawan Agarwal, Advisor Higher Education Planning Commission' entitled, Higher Education in the 12th Plan and Beyond: Strategy and Approach'
3. Prof. Yehiam Prior, a Distinguished Professor in Chemical Physics at Weizmann Institute of Science Israel visited P.U. Campus, PGIMER and IISER, Mohali and gave two lectures at P.U. and IISER.
4. Professor Richard Jones, a Distinguished Professor at Oxford University, U.K. and President Physiological Society, U.K., was hosted by CRIKC at PGIMER as a one stop interaction point for all the institutions in the region. He delivered a lecture entitled: Spatial Ca^{2+}/H^+ ion coupling in the heart: a key substrate for arrhythmia?
5. National Technology Day lecture on May 11, 2013 at P.U., Chandigarh by Dr Girish Sahni, Director CSIR Institute of Microbial Technology, 'Challenges and Opportunity for Translation of Science for Public Good'
6. Visit by Japanese delegation from AIST at P.U., Campus to explore collaboration in Biological Sciences.

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

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

The interaction with various stakeholders leads to the following inputs:

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

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

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

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

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

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

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

➢ The University has facilitated the development of its affiliated colleges as research centres with the respective PU department serving as their nodal agencies so that there is a 'capacity building' through which a larger research community gets distributed to these research centres

and will eventually go on to contribute at universities and colleges. These colleges will be able to conduct MPhil and PhD courses at these centres.

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

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

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

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

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

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

The following colleges of Panjab University are running Research Centres:

✓ D.A.V. College,Sector-10, Chandigarh
✓ G.G.D.S.D. College, Sector-32, Chandigarh
✓ Post-Graduate Govt. College for Girls, Sector-42, Chandigarh

- ✓ Chandigarh College of Engineering & Technology, Sector-26, Chandigarh
- ✓ Post Graduate Govt. College, Sector-11, Chandigarh

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

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

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

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

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

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

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

Faculty of Design and Fine Arts: Fine Arts

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

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

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

Faculty of Science: Animation And Graphics, Apparel Manufacturing

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

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

1.2   Academic Flexibility

1.2.1   Furnish the inventory for the following:

- **Programmes taught on campus**

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

Details of courses being offered on the University Campus

1. **Ph.D. Courses**

    i.   **Faculty of Arts**

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

    ii.   **Faculty of Science**

    Anthropology, Botany, Biochemistry, Biophysics, Chemistry, Computer Science, Environment Studies, Geology, Human Genome Studies & Research, Microbiology, Microbial Biotechnology, Nanoscience & Nanotechnology, Nuclear

Medicine, Physics, Statistics, Stem Cell and Tissue Engineering, System Biology and Bioinformatics, Zoology

iii. **Faculty of Law**
Laws

iv. **Faculty of Languages**

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

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

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

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

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

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

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

| 1 | M. Phil. | Ancient Indian History, Culture & Archaeology (AIHCA), Botany, Defense & National Security Studies, Economics, English, Gandhian and Peace Studies, History, Music, Philosophy, Physical Education, Police Administration (Centre for Emerging Areas in Social Sciences), Political Science, Public Administration, Punjabi, Sanskrit, Statistics, Sociology and Zoology. Pol. Sci and Pbi (PURC, Muktsar), Sanskrit at VVBIS (Hoshiarpur) |
| 2 | M.Sc. (Two Years Course) | Human Genomics, Environment Science, Statistics, System Biology & Bioinformatics, |

		Medical Physics, Nuclear Medicine, Public Health, Stem-Cell & Tissue Engineering and Microbial Biotechnology.
3	M.A.	Ancient Indian History, Culture & Archaeology, Defense and National Security Studies, Economics, Education, French, Geography, Hindi, History, Panjabi, Philosophy, Political Science, Psychology, Public Administration, Sociology, Urdu, English & Cultural Studies, Gandhian and Peace Studies, History of Art, Indian Theatre, Music (Instrumental and Vocal), Sanskrit, Journalism and Mass Communication, Police Administration, Social Work, Human Rights & Duties, Remote Sensing & GIS, Disaster Management.
4	M.Ed.	M.Ed. (General), M.Ed. (Guidance and Counseling) and M.Ed. (Educational Technology).
5	M.Com.	M.Com. (Hons.)
6	M.Tech/ME:	Instrumentation, Microelectronics, Nanoscience & Nanotechnology, Polymer, Chemical Engg., Electronic and Communication Engg., Information Technology, and Computer Science Engg.
7	M.Sc.(Hons. School)	Anthropology, Biochemistry, Biophysics, Biotechnology, Botany, Chemistry, Computer Science and Applications, Geology, Mathematics, Mathematics and Computing, Microbiology, Physics, Physics & Electronics, Zoology, and 5 yr Integrated Course in Fashion & Life Style.
8	B.Sc. (Hons. School)	Anthropology, Biochemistry, Biophysics, Biotechnology, Botany, Chemistry, Geology, Mathematics, Mathematics and Computing, Microbiology, Physics, Physics & Electronics,

		Zoology, and 5 yr Integrated Course in Fashion & Life Style.
9	(B.E.)	Chemical Engineering, Food Technology, Biotechnology, Electronics & Communication Engg., Information Technology, Computer Science & Engg., Mechanical Engg., Electrical & Electronics Engg.,
10	Five Years Integrated BE with MBA	Chemical Engineering, Biotechnology, Electronics & Communication Engg., Information Technology, Computer Science & Engg., Mechanical Engg., Electrical & Electronics Engg
11	Other Professional undergraduate and postgraduate courses	BDS, LL.B., LL.M., B.Ed (4 yr. Integrated), B.Pharma, M.Pharma, M.Lib. & Information Science, M.A. Physical Education, M.B.A. (Executive), M.B.A. (Bio-technology), M.B.A. (Retail Management), M.B.A. (Telecommunication and IT), M.B.A. (Infrastructural Management), M.B.A.(Pharm. Mgt.), M.B.A. (Hospital Administration), B.E. (Chemical) with MBA -5 yr Integrated Course, M.Pharma. in Drug Discovery & Drug Development, M.Pharma. in Pharmaceutical Analysis & Quality Assurance.
12	Postgraduate Diploma Courses	Remote Sensing and Geographic Information Systems. Disaster Management & Security, Hindi Journalism, Punjabi Journalism, Advertising & Public Relations, Executive Course in Disaster Management & Security
13	Advanced Diploma Courses	Chinese, French, German, Proficiency in Interpretership for Tibetan, Persian, Russian and Urdu.
14	Diploma Courses	Chinese, French, Forensic Science and Criminology, German, Panjabi Language and

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

3. **UNIVERSITY SCHOOL OF OPEN LEARNING:**

The present study programmes consist of the following courses:

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

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

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

4. One year Diploma/Certificate Courses:

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

    ii. Advanced Diploma in Naturopathy and Yoga

    iii. Diploma in Creative Photography

    iv. Certificate Courses in Vivekananda Studies, Women Studies

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

6. MBA (Off Campus) (Four Semester Course).

To maintain its cutting-edge status, the University launched in 2008, off-campus Management Programmes.

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

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

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

1. B.A./B.Sc. (Agriculture/Bio-Informatics/ Fashion Design / Bio.Tech./ Home Science) ./ B.Com/BCA/BBA Course
2. B.Ed., D.P.Ed., B.P.Ed., M.P.Ed., M.Sc. (I.T), PGDCA
3. M.A./M.Sc. in Hindi, Punjabi, English, Mathematics, Physics, Chemistry, Zoology, Economics, Public Administration, History, Political Science, Geography

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

➢ Core / Elective options

The academic programmes are well structured in terms number of credits required. A programme consists of two types of courses – core and electives and a student has to earn a minimum number of credits. The core courses emphasize on fundamental aspects together with design methodologies and throw open avenues for applications.

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

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

➢ Enrichment courses

The Advanced Diploma, Diploma and Certificate programmes are offered as add-on programmes for enriching the students further with relevant specializations and learn additional foreign languages. Under this system the University provides an opportunity to get one UG/PG degree and Advanced

Diplomas / Certificates within a period of two/ three years of stay at the University.

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

➤ **Courses offered in modular form**

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

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

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

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

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

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

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

A significant number of students enroll in a variety of programmes to pursue their career prospects. The curriculum does meet the requirements of such student in terms of employability and suitability to work in their own countries on their return.
The Foreign Students admitted during the last 5 years are given below:

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

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

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

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

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

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

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

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

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

		Bio-Informatics)
		d) M.Sc. (Nuclear Medicine) e) M.Sc. (Medical Physics) f) M.Tech. (Nano Science & Nano Technology) g) M.Sc. (Stem Cell & Tissue Engineering)
5.	Computer Science & Applications	3-Year MCA (Evening)
6.	Dr S S Bhatnagar Institute of Chemical Engineering & Technology	5-Year integrated B.E. (Chemical) + MBA
7.	Physics	a) B.Sc. (Honors School) in Physics and Electronics b) M.Sc. (Honors School) in Physics and Electronics
8.	Arts History & Visual Arts, A.I.H.C. & A.	Certificate in Arts Appreciation Diploma in Heritage Tourism
9.	English	Proficiency in English (IELTS) & Spoken English
10.	Community Education & Disability Studies	a) M.A. in Community Education b) B.Ed. Special Education in Learning Disability
11.	Centre for Defense & National Securities	a) Year PG Diploma in Disaster Management & Security b) Month Executive Certificate Course in Disaster Management & Security c) 1-Year PG Diploma in Home Land Security
12.	Institute of Forensic Science & Criminology	M.Sc.(Forensic Science & Criminology)
13.	School of Communication Studies	a) PG Diploma in Advertising & Public Relations b) PG Diploma in Hindi Journalism c) PG Diploma in Punjabi Journalism
14.	University Institute of Applied Management Sciences	M.B.A. in Retail Management, Banking & Insurance, Telecommunication & IT, Infrastructural Management, Pharmaceutical Management, and Hospital Management
15.	University Institute of Pharmaceutical Sciences	a) M.Pharmacy (Drug Discovery & Drug Development)

		b) M.Pharmacy (Pharmaceutical Analysis)
		c) Ph.D. in Pharmaceutical Sciences
16.	University Institute of Hotel Management & Tourism	a) B.Sc. in Hospitality & Hotel Administration
		b) B.Sc. in Tourism Management
17.	University Institute of Fashion Technology & Vocational Development	a) B.Sc. in Fashion & Life Style Technology
		b) M.Sc. in Fashion & Life Style Technology
18.	Institute of Educational Technology & Vocational Education	4-Year Integrated B.A. (Hons) (Education) B.Ed.
19.	University Centre of Instrumentation & Microelectronics	M.Tech. in Instrumentation
20.	Geography	a) Masters in Remote Sensing & GIS
		b) Masters in Disaster Management
21.	Psychology	a) 1-Year Post M.A. Diploma in Professional Counseling and Psychotherapy
		b) 1-Year Post M.A. Diploma in Psychological Testing
22.	University Institute of Emerging Areas in Social science	M.A. in Social Work
		M.A. in Police Administration
		M.A. in Human Rights & Duties

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

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

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

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

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

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

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

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

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

1.2.9   What percentage of programmes offered by the university follow:
  ➤ **Annual system in University**
    UG Programmes in University: 0%
    (BDS Course offered by Dr. H.S. Judge Institute of Dental Sciences and Hospital follows annual system)

    PG Programmes in University: 0%

  ➤ **Semester system in University**
    UG Programmes in University: 100%
    PG Programmes in University: 100%

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

  ➤ **Annual system in Colleges**
    UG Programmes in Colleges: 100%
    PG Programmes in Colleges: 0%

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

> ➢ **Semester system in Colleges**
> UG Programmes in Colleges: 0%
> PG Programmes in Colleges: 100%
>
> ➢ **Trimester system**   **Nil**

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

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

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

1.3 Curriculum Enrichment

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

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

The meeting of the Board of Studies is held periodically to keep track of the changes and identifies the necessary changes to make the curriculum socially relevant and job oriented. The curriculum is revised in order to remove obsolescence and introduce a new direction to the courses such that it retains its knowledge intensive trait and addresses the emerging needs. In every

faculty, the courses are tailored with the objective of providing development and trained manpower to the needs of industries. The modifications in the existing courses is done keeping in view the guidelines of regulatory bodies and taking into account the recommendations of the members of the Board of Studies who are experts in the courses concerned.

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

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

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

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

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

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

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

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

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

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

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

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

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

Yes. The University has already introduced higher order skill development programmes in consonance with the National Requirements as required by National Skill Development Corporation., like, B.Sc. in Hotel Management and Catering, B.Sc. in Tourism Management, B.Sc. in Fashion Technology and Design, B.Sc. (Hons. School) in Mathematics and Computing and Master of Mass Communication, etc. We are also in the process of developing many courses which are relevant to the present need of the nation, like, Certificate Course of Vivekananda Studies, Certificate Course in Yoga and Medication, Postgraduate Diploma in Statistics, etc.

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

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

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

1.4 Feedback System

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

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

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

STUDENT FEEDBACK FORM

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

Class/Semester…………………………………………………………

Subject/Paper…………………………………………………………..

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

……………………………………………………………………………………………………

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

……………………………………………………………………………………………………

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

……………………………………………………………………………………………………

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

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

……………………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………
……………………………………………………………………………………………………

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.

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

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

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

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

1.4.4 **What is the quality sustenance and quality enhancement measure undertaken by the university in ensuring the effective development of the curricula?**
The University allows major changes in the curriculum every three years and minor changes annually. This system facilitate quality sustenance & quality enhancement at different intervals. However, in addition, efforts are also being made to seek input from the stakeholders such as alumni, industry, employer, etc.

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

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

1. Planning well in advance about the course content and organization
2. Undertaking a comprehensive review inclusive of student feedback towards the end of the semester and bringing it up for discussions in the Board of Studies.