The Annual Quality Assurance Report (AQAR) of the IQAC

Part – A

1. Details of the Institution

- 1.1 Name of the Institution: Guru Nanak Dev University
- 1.2 Address Line 1: G. T. Road
 City/Town: Amritsar
 State: Punjab
 Pin Code: 143005
 Institution e-mail address: vcgndu@gmail.com
 Contact Nos.: 0183 2258811
 Name of the Head of the Institution: Prof. Jaspal Singh Sandhu
 Tel. No. with STD code: 0183 2258811
 Mobile: 9958840701
 Name of the IQAC Co-ordinator: Prof. Renu Bhardwaj
 Mobile: 9876214176
 IQAC e-mail address: iqacgndu@gmail.com
- 1.3 NAAC Track ID: PBUNGN10009
- 1.4 NAAC Executive Committee No. & Date: EC(SC)/04/RAR/87 dated 10-12-2014
- 1.5 Website address: <u>http://online.gndu.ac.in/pdf/iqac_report.pdf</u>
- **1.6 Accreditation Details**

S. No.	Cycle	Grade	CGPA	Year of Accreditation	Validity Period
1	1 st Cycle	Five Star	N.A	2000	2005
2	2 nd Cycle	А	3.50	2007	2012
3	3 rd Cycle	А	3.51	2014	2021

1.7 Date of Establishment of IQAC: 25/11/2002

1.8 AQAR for the year: 2016-17

1.9 Details of the previous year's AQAR submitted to NAAC after the latest Assessment and Accreditation by NAAC

This AQAR (2016-17) is the third report after the Assessment and Accreditation by NAAC Peer Team in November, 2014. AQAR (2015-2016) was submitted on 17th March, 2017.

1.10 Institutional Status

University	State
Affiliated College	No
Constituent College	No
Autonomous college of UGC	No
Regulatory Agency approved Institution	Yes
Type of Institution	Co- education & Urban
Financial Status	Grant-in-aid, UGC 2(f) & UGC 12B

1.11 Type of Faculty/Programme

Agriculture & Forestry	Yes
Arts & Social Sciences	Yes
Economics & Business	Yes
Education	Yes
Engineering & Technology	Yes
Humanities & Religious Studies	Yes
Languages	Yes
Laws	Yes
Life Sciences	Yes
Physical Education	Yes
Physical Planning & Architecture	Yes
Sciences	Yes
Sports Medicine & Physiotherapy	Yes
Visual Arts & Performing Arts	Yes

1.12 Name of the Affiliating University (for colleges): N.A.

Autonomy by State/Central Govt./University	Yes
University with Potential for Excellence	Yes
DST Star Scheme	No
UGC-Special Assistance Programme	Yes
UGC-Innovative PG programmes	No
UGC-COP Programmes	No
UGC-CPE	No
UGC-CE	No
DST-FIST	Yes
Any other (Specify)	CPEPA- Life Sciences

1.13 Special status conferred by Central/State Government

2. IQAC Composition and Activities

2.1 No. of Teachers: 08

- 1. Prof. Subodh Kumar, Department of Chemistry
- 2. Prof. Avinash Kaur, Department of Botanical & Environmental Sciences
- 3. Prof. Suninder Tung, Department of Psychology
- 4. Prof. Gurpreet Bal, Department of Sociology
- 5. Prof. Subheet Kumar Jain, Department of Pharmaceutical Sciences
- 6. Prof. Raminder Kaur, Department of School of Punjabi Studies
- 7. Prof. Amarjit Singh Sidhu, Department of University Business School
- 8. Prof. Palwinder Singh, Department of Chemistry

2.2 No. of Administrative/Technical Staff: 05

- 1. Dr.(Prof.) Renu Bhardwaj, Director
- 2. Dr. Swati Mehta, Assistant Director
- 3. Dr. Gagandeep Gahlay, Assistant Director
- 4. Mr. Bhupinder Singh Thakur, Assistant System Analyst
- 5. Mr. Harpreet Singh, Assistant System Analyst

2.3 No. of students: 02

- 1. Mr. Hilal Ahmed Dar, Ph.D Research Scholar, Department of Sociology
- 2. Ms. Amandeep Kaur, Ph.D Research Scholar, Department of Chemistry

2.4 No. of Management representatives: 03

- 1. Vice Chancellor
- 2. Dean, Academic Affairs
- 3. Registrar

2.5 No. of Alumni: Nil

2.6 No. of any other stakeholder and community representatives: 2

- 1. Sh. Rajinder Mohan Singh Chinna, Hon. Secretary, Khalsa College Governing Council, Amritsar.
- 2. Prof. Inderjit Kaur, Chairman, All India Pingalwara Society, Amritsar.

2.7 No. of Employers/Industrialists: Nil

2.8 No. of other External Experts: 1

1. Prof. M. Rajivlochan, Department of History, Panjab University, Chandigarh.

2.9 Total No. of members: 21

2.10 No. of IQAC meetings held: 2

2.11 No. of meetings with stakeholders: Nil

2.12 Has IQAC received any funding from UGC during the year? No

2.13 Seminars and Conferences (only quality related):

UGC – Human Resource Development Centre of the Guru Nanak Dev University, Amritsar organised following courses:

Interaction Programme –cum-Workshop on Research Methodology for Ph.D scholars	14.9.2016 to 20.9.2016
Short Term Course on Research Methodology	27.5.2016 to 2.6.2017
Workshop for Academic Administrators	6.3.2017 to 7.3.2017

2.14 Significant activities and contributions made by IQAC:

- Nodal Agency, for participating in Surveys for University ranking in the country through different survey agencies.
- Compilation of 47th Annual Report-2016 of the University.
- Actively associated with Gender Champions programme at the University level.
- Encouraged the use of interactive audio-visual systems in class rooms for improving teaching-learning methods.
- Held Class Committee meetings at Departmental levels.
- Held "Orientation Day" by respective Head of the Departments within a week of start of new academic session with special emphasis on educating the newly admitted students about CBCEG System.
- Institutionalized the "Mentoring System" in University Campus by allotting faculty members as Mentors to new students for guiding them in matters regarding their day to day activities in the University.
- Held "Helpdesk" for hostellers through NCC office and Dean Students' Welfare at the counselling venue during admission process.

2.15 Plan of action by IQAC/Outcome:

Plan of Action	Achievements
 Documentation of various activities in the University. To participate in Survey for University Ranking at the National level. Preparation of self-reviewed AQAR:2017- 2018. Monitoring of Teaching & Learning Processes. To work on the recommendations of NAAC Peer Team. 	 Compiled 47th Annual Report -2016 of the University. Acted as a Nodal Agency for participating in various surveys like National Institutional Ranking Framework (NIRF), The Week , ACU Measures–The Association of Commonwealth Universities . Compiled AQAR 2016-2017 of the University. Continued the practice of taking Faculty Evaluation Feedback from the students. Effective implementation of the NAAC Committee recommendations is under process.

Some of the important plans of action and their achievements by IQAC are as follows:

Academic Calendar of the year is attached as Annexure II.

2.16 Whether the AQAR was placed in statutory body:

The report will be placed in the Advisory Committee of IQAC and in University Senate Meeting.

Criterion – I

1. Curricular Aspects

1.1 Details about Academic Programmes

Level of the Programme	Number of existing Programmes	Number of programmes added during the year	Number of self-financing programmes	Number of value added / Career Oriented programmes
PhD	37	-	-	-
PG	59	-	-	-
UG	21	-	-	-
PG Diploma	03	-	-	-
Advanced Diploma	05	-	-	-
Diploma	09	-	-	-
Certificate	08	-	-	-
Others	16	-	-	-
Total	158	-	-	-

Interdisciplinary	46
Innovative	-

1.2 (i) Flexibility of the Curriculum:

Flexibility of the Curriculum	Yes
Choice Based Credit System	Yes
Core	Yes
Elective Option	Yes
Open Options	Yes

The University has adopted a Credit-Based Continuous Evaluation Grading System (CBCEGS), under which programme of studies have three types of courses i.e. Core course, Elective/Optional courses and Interdisciplinary (ID)/ Outside Department courses. There is a provision for students to opt for courses over and above the prescribed credits to allow for enrichment.

(ii) Pattern of programmes:

Pattern	Number of programmes	
Semester	160	
Trimester	-	
Annual	02	

1.3 Feedback from stakeholders (on all aspects):

Alumni	Yes
Parents	Yes
Employers	Yes
Students	Yes

Mode of feedback:

Online	Yes
Manual	Yes
Co-operating schools (for PEI)	N.A.

1.4 Whether there is any revision/update of regulation or syllabi, if yes, mention their salient aspects:

Yes, major revisions are made annually in the syllabi of every department.

Salient aspects:

All syllabi have been revised, reviewed and updated keeping in view the following :

- UGC guidelines and University norms.
- Syllabi of National level competitive examinations.
- Current and prospective needs of industry and society.

1.5 Any new Department/Centre introduced during the year. If yes, give details: No

Criterion – II

2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty:

Total	Assistant Professors	Associate Professors	Professors	Others
299	168	42	89	-

2.2 No. of permanent faculty with Ph.D: 222

2.3 No. of Faculty Positions Recruited (R) and Vacant (V) during the year:

	stant essors		ociate fessors	Prof	fessors	Oth	ners	To	tal
R	V	R	V	R	V	R	V	R	V
		(filled)		(filled)				(filled)	
-	205	-	122	-	73	-	-	-	400

2.4 No. of Guest and Visiting faculty and Temporary faculty:

Guest and Visiting faculty	Nil
Temporary faculty	367 (approx)

2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended Seminars/ Workshops	96	220	18
Presented papers	106	262	07
Resource Persons	25	121	28

2.6 Innovative processes adopted by the institution in Teaching and Learning:

The University has adopted various innovative processes to enhance the learning capacity of the students. To meet the challenges of the world, the curriculum is regularly updated while making the students important contributors. ICT has become an integral part of the University system for online depositing of fees, declaration of results to the conducting of day to day classes. The University has also initiated the processes to develop "Smart Classes" on the campus. The regular curriculum design and its development by involving various stakeholders including students, industrialists etc has become a regular part of the University system. Practical training across disciplines are emphasised in the University and its constituent colleges.

2.7 Total No. of actual teaching days during this academic year: 186

2.8 Examination/ Evaluation Reforms initiated by the Institution:

Photo copy of marked Answer book is provided to concerned student on demand to bring more transparency into the evaluation system under RTS Act.

- Setting up of Video Conferencing facility in all Evaluations Centres for monitoring and surveillance in addition to following:
 - Timely opening and closing of Evaluation Centres established in various cities.
 - Distribution of answer sheets of various subjects to different places.
 - SMS facility launched to facilitate college teachers to get information regarding duty assigned and location of evaluation centres on their mobile.
 - Problem solving process has been improved. Guidelines are issued regularly by Controller Office and routine meetings are held through video conferencing between Professor In charge (Examinations) and principals, co-coordinators of centres and superintendents of various evaluation centres to bring more efficiency, discipline and timely evaluations of answer books.
 - Various subjects are re-allocated during evaluation at various evaluation centres depending upon the availability of examiners to speed up the evaluation work.
- Fast processing and timely declaration of results have been achieved and number of withheld results has been minimized.
- Under RTS, fortnight RTS report of Issued Migrations Certificates, Number of Dispatch of D.M.C. & Degrees is sent to DC office.
- Examinations related queries received from Student Grievance Redressal Cell were solved.
- Follow up of examinations related queries asked in Sangat Darshan routinely held by Chief Minister, Punjab was undertaken and appropriate steps taken were made aware to concerned office.
- Automatic Assignment of registration number, roll numbers and automation of different pre-examination processes.
- Online Application for Award Absentee has been launched by the University to bring in more transparency and to speed up the result declaration process. This has helped in reducing absentee related data problems.
- Online Application for Practical Award Entry has been launched by the University to bring in more transparency and to speed up the result declaration process.
- Keeping in view the various problems being faced by the teachers and subordinate staff, the Manual award feeding is replaced by the online award system. Awards feeding will be done online on the same day along with uploading of printed scanned awards on the portal.
- Online Application for Re-evaluation has been launched by the University to speed up the re-evaluation result declaration process. Students will access the application through University roll number and after selecting the subjects for re-evaluation, shall proceed to print the challan or required fee can be submitted through different payments mode available. Physical visits to university have been minimized.
- Dedicated evaluation centre has been established to speed up the re-evaluation process.
 - Physical visits to University or banks have been minimized.
 - Applications get validated in the system as per rules and regulations.
 - Dedicated helpline and complaint system to facilitate students and to address their enquiries in short span of time.

- College teachers have been instructed to evaluate minimum 250 Answer books.
- As per Syndicate decision, in the process of re-evaluation if there is variation above 30% of Original marks and re-evaluation marks then concerned evaluator or shall be debarred from University examination work or his/her approval shall be taken back.

2.9 No. of faculty members involved in curriculum restructuring/revision/syllabus development as member of Board of Study/Faculty/Curriculum Development workshop:

Members of	Board of Studies	Board of	Common Board	Board of Control
All Faculties	(UG)	Studies (PG)	(UG & PG)	
194	143	116	33	172

All the faculty members of the University are involved in the above exercise either directly or indirectly in a very systematic and institutionalised process. The basic purpose of this exercise is to make the students competitive and to increase their employability. The effort is also oriented towards the development of knowledge, skill and aptitude among the students. For this process, the Meeting Branch of the University formally requests all the HODs to initiate the process. The HODs fix meetings and start the process among the members of the faculty well in advance so that adequate preparations are made. Prior to the meeting of the Board of Control (BOC) / Board of Studies (BOS), the HOD's of each department initiate the process by meeting with the faculty and getting their inputs for curriculum restructuring /revision/syllabus development. These inputs are considered in the meetings of the BOS (UG boards are constituted of up to 70% of college teachers and 30-50% for PG boards).

2.10 Average percentage of attendance of students: 75%

2.11 Course/Programme wise distribution of pass percentage:

The requisite information is provided in the Annexure III.

2.12 How does IQAC Contribute/Monitor/Evaluate the Teaching & Learning processes:

Planning and implementation of various policies is an integral part of the University system for the development of students. The academic calendar is well planned and organised keeping in view the interest of the different stakeholders and in this process IQAC plays a suggestive role. The University is under CBCS system that helps in meeting the global challenges in term of curriculum and teaching-learning process. IQAC plays an important role in the whole process of continuous teaching evaluation process. The online feedback system, as developed by IQAC has built a strong linkage between teachers and students.

2.13 Initiatives undertaken towards faculty development:

Faculty / Staff Development Programmes	Number of faculty benefitted
Refresher courses	258
UGC – Faculty Improvement Programme	Nil
HRD programmes	Nil
Orientation programmes	135
Faculty exchange programme	Nil
Staff training conducted by the university	Nil
Staff training conducted by other institutions	Nil
Summer / Winter schools, Workshops, etc.	50
Others	165

2.14 Details of Administrative and Technical staff

Category	Number of permanent employees	Number of vacant positions	Number of permanent positions filled during the year	Number of positions filled temporarily
'A' Class Non-teaching Administrative Staff	84	95	09	10 (Contract Basis)
B- Class-Clerical Cadre	413	154	17	-
'C' Class Non-teaching Administrative Staff	323	307	01	74 (Contract Basis)
Technical staff	321	430	39	2 (Contract Basis)

Criterion –**III**

3. Research, Consultancy and Extension

3.1 Initiatives of the IQAC in Sensitizing/Promoting Research Climate in the institution:

The office of IQAC makes continues efforts in promoting the Research Climate in the institution. The faculty as well as students of the university are encouraged to apply for various funding schemes for research and for organizing/ attending national and international conferences. Lectures by prominent scientists and academicians are also held in the university from time to time. Various workshops and training programme are also regularly held in the university for the benefit of research scholars & students especially from outside the university.

3.2 Details regarding major projects:

Major Projects (UGC)

	Completed	Ongoing	Sanctioned	Submitted
Number	5	17	0	4
Outlay in Rs. Lakhs	48.07	119.85	0	5.09

Major Projects (DST)

	Completed	Ongoing	Sanctioned	Submitted
Number	12	11	10	8
Outlay in Rs. Lakhs	370	283.47	399.4	1.01

Major Projects (DBT)

	Completed	Ongoing	Sanctioned	Submitted
Number	5	5	3	2
Outlay in Rs. Lakhs	117.00	80.00	54.542	21.7864

Major Projects (CSIR & State Government)

	Completed	Ongoing	Sanctioned	Submitted
Number	2	15	4	5
Outlay in Rs. Lakhs	39.41	413.02	38.125	49.14

3.3 Details regarding minor projects: Nil

3.4 **Details on research publications:**

	International	National	Others
Peer Review Journals	927	149	05
Non-Peer Review Journals	04	18	02
e-Journals	61	01	00
Conference proceedings	86	32	32

Details of Impact Factor of publications: 3.5

Range	0.05-13.324
Average*	2.32
h-index**	15
Nos. in Scopus***	1021

*Average of articles published in impacted journals. **h-index of papers published in 2015 as on 3rd December, 2016.

***Nos. in Scopus

3.6 Research funds sanctioned and received from various funding agencies, industry and other organisations:

Nature of the Project	Duration Year	Name of the funding Agency	Total grant Sanctioned (Rs.)	Received (Rs.)
Major projects	2016-17 2016-17 2016-17 2016-17	UGC DST DBT CSIR	2294646 41710292 7244629 6528079	2294646 21231574 7244629 6528079
Minor Projects		·	-	
Interdisciplinary Projects			-	
Industry sponsored			-	
Projects sponsored by the University / College			-	
Students research projects (other than compulsory by the University)			-	
Any other (Specify)			-	
Total	-	-	57777646	37298928

3.7 No. of books published:

With ISBN No.	24
Without ISBN No.	01
Chapters in Edited Books	89

3.8 No. of University Departments receiving funds from:

UGC-SAP	13
CAS	1
DST-FIST	2
UPE	-
DBT Scheme/funds	01

3.9 For colleges: N.A.

3.10 Revenue generated through consultancy : Rs. 3,04,69,975/-

3.11 No. of conferences organized by the Institution:

Level	International	National	State	University
Number	02	32	03	09

3.12 No. of faculty served as experts, chairpersons or resource person's: 243

3.13 No. of collaborations:

Level	International	National
-	-	04

3.14 No. of linkages created during this year: 04 (Industry Linkage)

3.15 Total budget for research for current year in lakhs:

From Funding agency	-
From Management of University/College	338.50 (F.Y 2016-17)
Total	-

3.16 No. of patents received this year:

Type of Patent		Number
National	Applied	2
Induotial	Granted	-
International	Applied	-
International	Granted	-
Commercialised	Applied	1
Commerciansed	Granted	-

3.17 No. of research awards/ recognitions received by faculty and research fellows of the institute in the year

Total	International	National	State	University	Dist	College
64	13	40	10	-	01	-

3.18 No. of faculty from the Institution:

Who are Ph.D Guides	99
Students registered under them	165

3.19 No. of Ph.D. awarded by faculty from the Institution: 167

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones) (CSIR, UGC, CSSGGS, DBT, DST)

JRF	SRF	Project Fellows	Any other
20	15	31	245

3.21 No. of students Participated in NSS events:

University level	State level	National level	International level
800	-	-	-

3.22 No. of students participated in NCC events:

University level State level		National level	International level		
50	85	09	-		

3.23 No. of Awards won in NSS: Nil

3.24 No. of Awards won in NCC:

ſ	University level State level		National level	International level		
	-	12	-	-		

3.25 No. of Extension activities organized

University forum	NCC	NSS
-	05	01

3.26 Major Activities during the year in the sphere of extension activities and Institutional Social Responsibility

National Cadets Corps

NCC units organised "Swachh Bharat Abhiyan" and seminars on "E- Payment", "Blood Donation" and "Organ Donation".

National Service Corps

- NSS Department celebrated "*Swachh Bharat Pakhwada*" from to 15 August, 2016, Organized the Awareness program on paper bag on 03-08-2016. NSS volunteers also planted 150 saplings near new sports hostel building on 04-08-2016.
- The volunteers cleaned area of GNDU campus on 05-08-2016. They also organised the cleanliness and tree plantation camp at village Rania and Elementary School on 06-08-2016.
- Slogan writing competition was also organized by NSS department on 08-08-2016. They also organised a lecture on First Aid which was delivered by Dr. Bhupinder Singh on 09-08-2016. Cleaning of the Camps was done by Unit I & II volunteers on 10-08-2016. While the Bhai Gurdas Library was cleaned on 11-08-2016.
- Dr. Rajesh Kumar Social Science Department delivered a lecture on International Youth Day at Guru Nanak Auditorium on 12-08-2016. Unit I & II celebrated Tiranga march on 22-08-2016, Digital India workshop was organized by NSS units on 26 August, 2016 in which 220 volunteers from various affiliated college participated. "Swachh Bharat Pakhwara " was again celebrated from 1 to 15 November 2016. Unit I & II cleaned the book racks and books in Bhai Gurdas Library on 02-11-2016.
- Under the Pakhwara, a blood donation camp was organized on 3 November 2016 in collaboration with Guru Nanak Dev Hospital. 200 volunteers participated and 170 volunteers donated blood. Unit I &II cleaned the Botanical Garden and water body area around V.C office on 04-11-2016. The Residential area was cleaned on 07-11-2016.
- An awareness training camp on first aid by Murgency Inc was held on 08-11-2016. Dr. Sandeep Sharma Head, Computer Science Department delivered a lecture on Digital India on 09-11-2016. Unit II cleaned grounds around Asia House, Arts Block, and student cafe on 10-11-2016. Unit I & II cleaned the statue of Maharaja Ranjit Singh in front of Maharaja Ranjit Singh Bhawan on 11-11-2016. Cleaning of the verka booth and Administrative block was done on 14-11-2016.
- On 25 January 2017 National Youth Day was celebrated in collaboration with Punjab Pollution control board in which 300 volunteers of University campus participated. Yoga day was celebrated by I and II on 21-06-2017.

Lifelong Learning

 Lifelong Learning department conducted Short Term/ Crash Courses of 20 Days for Basic Hair Dressing & Makeup (started on 16-06-2016), Aerobics & Yoga (started on 21-06-2016), Photography (started on 05-10-2016), Spa Therapy & Skin Treatment (started on 10-10-2016), Coral Draw (started on 03-01-2017), Personality Development (started on 16-01-2017), Fabric Painting (started on 08-01-2017), Boutique Training (started on 08-02-2017), Music & Dance (started on 01-03-2017), Professional Makeup & Artistry (started on 01-03-2017), Communication Skill (started on 01-03-2017).

- To showcase the creative designing by the Young & Budding Artists, the department organized special Shows & Exhibitions at a large scale. Two days "Naqshaa-e-Ranga Rang) was organized on 21-22 November 2016. Designing "Choti Si Asha" Seven Days "Talent Hunt" program including variety of items such as Best Out of Waste (05-09-2016), Diya Making, Candle & Pot Decoration (06-09-2016), Flower Arrangement 07-09-2016, Phlkari, Mehndi, Nail Art, Eye Makeup (08-09-2016), Rangoli (09-09-2016), Non Gas Cooking (10-09-2016) was also organized.
- To fulfill Social Responsibility the department of Lifelong Learning started six months certificate course in cutting & Tailoring for female jail inmates at central jail, Amritsar being financed by the department twice a year.
- The department organised three month orientation course from 10th August 2016 for illiterate menial staff of the Guru Nanak Dev University for enhancing their literate levels & general skills. They were trained to put their full signature, writing an official letter etc.

Criterion – IV

4. Infrastructure and Learning Resources

4.1 Details of increase in infrastructure facilities:

Facilities	Existing	Newly created	Source of Fund	Total
Campus area	35,09,286 sqft			35,09,286 sqft
Class rooms	252 in main campus	17 (University Business School building in main campus	Capital Works (University funds) 2015-2016	Rs.9.85 Lacs
		04 (Asia House Building)	Grants from MPLAD Fund	Rs. 75.00 Lacs
Laboratories	228 in main campus	15 (Lab 7+ workshop 8) R.C Sathiala	Development of R.C Sathiala	Rs. 3.25 crore
		02 (University Business School Building in main campus)	Capital works 2015-2016	Rs. 9.85 crore
Seminar Halls	09 in main campus	02 (University Business School Building in main campus)	Capital works 2015- 2016	Rs. 9.85 crore
No. of important equipments purchased (> 1.0 lakh) during the current year.	Annexure IV	66 (Teaching Departments in Main Campus and Four RC)	UGC, University Budget, DST, CSIR, DBT, TEQIP, AICTE, ICAR.	66
Value of the equipments purchased during the year (Rs. in Lakhs)	-	Rs.71375706	UGC, University Budget, DST, CSIR, DBT, TEQIP, AICTE, ICAR.	Rs.71375706
Others	-	-	-	-

4.2 Computerization of administration and library

Library functions such as House Keeping, Circulation, Acquisition, Cataloguing of new books, Bibliographic services have been fully computerized.

	Existing		New	ly added	Total		
	No.	Value	No.	Value	No.	Value	
Text Books	36395	-	1685	12,26,645	38080	-	
Reference Books	8015	-	193	93,709	8208	-	
e-Books			-	-	-	-	
Journals	182 (Foreign-64 Indian-118)	57,03,579	-	-	182	84,80,826 (57,03,579+ 8,79,957+	
e-Journals	a) 169 IEEE ASPP+POP(E- Journals +Conference Proceeding) Subscribed b) 15000+ through INFLIBNET	8,79,957 Free	-	-	-	- 8,79,957+ 18,97,290)	
Digital Database	ScopusProvided by INFLIBNET(Freely available)1. SciFinder Scholars2. MathSciNet3. Royal Society of Chemistry (6 Databases)4. ISID (Institute for studies in Industrial Development)5. JCCC(J- Gate)6. Web of Science	18,97,290	-	-	01		
CD & Video	2233 (CDs with Books) 2100 (CDs with Ph.D Thesis/ M.Phil Dissertations)	-	90 289	-	2323 2389	-	
Other (specify)	-	-	-	-	-	-	

4.3 Library services

4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others			
Existing		All the demonstrate officers and control library are well equipmed with									
Added	2757		All the departments, offices and central library are well equipped with computers along with internet facilities.								
Total	2757										

4.5 Computer, Internet access, training to teachers and students and any other programme for technology up gradation (Networking, e-Governance etc.)
 One Short Term Course on E-Learning Technologies for Effective Teaching Research & Extension was conducted by the HRDC from 17.8.2016 to 23.8.2016, which was attended by participants (32 Faculty Members and 12 Research Scholars).

4.6 Amount spent on maintenance in lakhs:

ICT Campus Infrastructure and facilities Equipments Others	10762.49 (Total expenditure of the University excluding salary)	3653.48(Expenditure from grants from the different funding agencies)		
Total	14415.97			

Criterion – V

5. Student Support and Progression

5.1 Contribution of IQAC in enhancing awareness about Student Support Services

To increase the student's awareness about the Student Support Services IQAC tries to by ensure the allotment of Teacher mentors in each Department through the help of HODs. The students are encouraged to contact their respective mentor for any kind of guidance and help. The office of the Dean, Students' Welfare also looks after the wellbeing of the students during their stay in the campus. The career counselling and guidance to students is provided by the Placement department by organising special lectures as well as the visits of various corporate/industrial houses for campus placement. To make the system more transparent and accessible to all stakeholders, the University uploads important information on its website. Similar support systems also exist in the regional campuses. IQAC monitors all activities to take place in coordinated way.

5.2 Efforts made by the institution for tracking the progression

The Guru Nanak Dev University Alumni Association makes keen efforts to register all alumni as its members. In this regards, it has been made mandatory for all the final year students to obtain no due from the associations' office. A portion for the Achievers Alumni has also been kept on the website, which provides brief profile of the renowned Alumni.

727

05

UG	PG	Ph.D.	Others
4860	6293	1267	308

5.3 (a) Total Number of students

(b) No. of students outside the state:

(c) No. of international students:

- Demand ratio: 2.38
- Dropout %: 0.97%

101011

No	%	No	%	Women
5096	44%	6530	56%	

Total = 11923

Last Year						This Year					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total
9961	2162	23	634	23	12803	9040	2069	73	696	45	11923

5.4 Details of student support mechanism for coaching for competitive examinations (If any)

- Library
- Reading Room
- Computer Lab.
- Employment Information Cell

No. of students beneficiaries: 311

5.5 No. of students qualified in these examinations

NET	SET/SLET	GATE	CAT	IAS/IPS etc	State PCS	UPSC	Others
08	-	-	-	-	01	-	29

5.6 Details of student counselling and career guidance

The teachers from various faculties in the University, who are attached with the All India Services Pre-Examination Training Centre and Centre of Preparation for Competitive Examinations for coaching and other services, are always available for the counselling and guidance of the students.

No. of students benefitted: 38

5.7 Details of campus placement

On Campus			Off Campus
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
32	1007	604	29

5.8 Details of gender sensitization programmes

Gender Champions Club

04/08/2016	University Appointed one Nodal teacher for Gender Champions club. The club will work in close collaboration with Dean, Student Welfare, president-cum-convener ICASH and IQAC office.
04/08/2016	Circular from Dean Academic Affairs to all Heads of Departments regarding appointment of "Gender Champions" were circulated and the name of one boy and one girl student were to be recommended by Board of Control of each department.
22-08-2016	60 students selected as Gender Champions in University Campus.

08-11-2016	First meeting of Gender Champions with Dean Academic Affairs, Dean Students' Welfare, President, ICASH, Director and Assistant Directors, IQAC and Nodal Teacher. 45 Gender Champions attended the meeting. Nodal Teacher informed about vision and objectives of Government of India regarding engagement of Gender Champions who will facilitate enabling environment in their schools/colleges/Universities. Roles and Responsibilities of Gender Champions were discussed. Students actively participated in discussion and no. of suggestions came up. Gender Champions were sensitized and instructed to organize different activities in their respective departments on the issue of Gender equality.
16-11-2016	Street play " <i>Aurat Hona Gunah hai</i> " was played at Guru Nanak Bhawan Auditorium by students of the university.
08/03/2017	Meeting of Gender Champions. Lecture by Prof. Gurpreet Bal, Sociology Department, Guru Nanak Dev University, on "Gender sensitization of Gender Champions". <i>Kavi Darbar</i> was also organized by Gender Champions where students recited poems on the issue.

Each Gender Champion was issued; Gender Champion Badge, Identity Card. Certificates of appreciation have been given to all those Gender Champions who have organized some activity in their department, students who participated in different events organized by Gender Champions and students who have won different prizes in these events

5.9 Students Activities

5.9.1 No. of students participated in Sports, Games and other events

University level	National level	International level
1300	1900	20

No. of students participated in cultural events

University level	National level	International level
102	-	-

5.9.2 No. of medals /awards won by students in Sports, Games and other events

Sports	University level	National level	International level
Sports	3700	600	09

Cultural	University level	National level	International level
Cultural	83	-	-

5.10 Scholarships and Financial Support

	Number of students	Amount (Rs.)
Financial support from institution	2838	11,10,16,095
Financial support from government	-	-
Financial support from other sources	-	-
Number of students who received International/ National recognitions	-	-

5.11 Student organised / initiatives

Fairs	University level	National level	International level
Fails	24	-	-

Exhibitions	University level	National level	International level
Exhibitions	05	-	-

5.12 No. of social initiatives undertaken by the students: 42

5.13 Major grievances of students (if any) redressed:

- The non-issue of the DMC.
- Delay in declaration of results.
- Delay in the payment of Ph.D scholarships.

Criterion – VI

6. Governance, Leadership and Management

6.1 State the Vision and Mission of the Institution

Mission:

The University exists on the universal principles of academic excellence and is providing continuous service to the country by imparting skills, knowledge and aptitude that are congruent with our cherished goals and needs. This can be done by introducing certain changes, bringing modifications in the existing structures and strengthening healthy practices. There have been four components of the mission of the University as stated in the Act. These are:

- Dissemination and production of knowledge in science and technology and other disciplines.
- Teaching and research on the philosophy of Guru Nanak Dev Ji.
- Promotion of research in Punjabi language and literature.
- Supporting and spreading education among the educationally backward communities.

Vision: The University aspires to be an important institution of learning and research, both at the national as well as international levels. It aims to achieve these goals through the following actions:

- Providing state of the art infrastructure, research facilities, qualified faculty and good ambience in the University campus.
- Integrating teaching and research programmes to promote holistic development of the students.
- Providing better access to education to underprivileged sections of the society through the development and expansion of the University through regional campuses and constituent colleges.
- To constantly engage the students in various activities to help them develop communication skills and leadership qualities and to make them understand public responsibilities, and the ability to work as a team for nation-building. This will lead to their overall development and growth.
- Building strong research infrastructure through the development of world-class laboratories and enriching the University library and the departmental libraries.

Following areas have been identified for the future research of the University:

- Focus Area: Materials Science: (a) Materials for Energy Conversion and Storage; and (b) Electronic and Optoelectronic materials.
- Holistic Area: Health Care, Drug Development and Sports Medicine
- Holistic Area: Environmental Management (in respect of Punjab)
- Holistic Area: Comparative Literature, Languages and Cultural Formations
- Holistic Area: Development and Nation-Building
- Genetic basis of cancer and type2 Diabetes mellitus in Punjab

6.2 Does the Institution has a management Information System

Management Information System (MIS) is being used in Examination Branch, Accounts Branch, Library, etc. They are using their own in-house developed and customised softwares.

6.3 Quality improvement strategies adopted by the institution for each of the following:

6.3.1 Curriculum Development:

- The University adopt systematic approach for the design and development of curriculum by various bodies i.e. Board of Control (B.O.C.)/Board of Studies (B.O.S.), Faculty meeting and Academic Council.
- Various Expert Committees are constituted for the design of new courses.
- Inputs are also taken from various National Curricular Resources like UGC, AICTE, DST, DBT, etc as well as from industry for the start of new courses in order to assure the employability, innovation, and to promote research component.
- The introduction of new programmes of studies is encouraged.

6.3.2 Teaching and Learning:

- Academic calendar is prepared by the University to plan teaching, learning and evaluation schedule each year.
- Course outlines and recommended readings are uploaded on the University website.
- The learning techniques are constantly improved and changed on the initiatives of the faculty members and these are made part of the curricular design.
- Proactive policy of inviting experts and people of eminence to give lectures. Well known scholars delivered public lectures on the topic of their choice to students all through the academic year.
- The University organises seminars/conferences in which the students participate.
- Encourages blended learning by using e-learning resources. The use of multimedia in many courses has become part of the teaching-learning process.
- Students are encouraged to write assignments, make presentations and have practical exposure to ground realities outside of the University set up.
- Under the CBCS, the evaluation of the teachers by the students has been introduced for improving the teaching process in the University.

6.3.3 Examination and Evaluation

An integrated examination platform exists in the University for pre-examination processes–Time Table generation, OMR, student list generation, invigilators, squads, attendance sheet, and online payment gateway.

• It has well-developed system functioning under the Conduct Branch. Similarly,

the post-examination processes involving attendance capture, OMR-based exam result, auto processing, generic result processing, and certification are well managed under different sections of the Examination Branch in which Secrecy and Certificate sections are involved.

- For doctoral level candidates from the department of engineering and technology, life sciences, physical planning and architecture, sciences, sports medicine and physiotherapy and the department of psychology, the thesis is evaluated by two Indian examiners and one foreign examiner.
- For all other departments, three examiners from India or abroad in the concerned specialisation evaluate the thesis. For all examinations under CBCS, teachers are responsible for the evaluation, and it is mandatory for them to show the evaluated answer books to the students and satisfy their queries, if any.

6.3.4 Research and Development

- The University has a Research Committee responsible for the promotion and development of research. The composition of the committee is as follows:
 - i. Vice-Chancellor (Chairman)
 - ii. Dean, Academic Affairs
 - iii. Director Research
 - iv. Dean, Faculty of Life Sciences
 - v. Dean, Faculty of Sciences
 - vi. Dean, Faculty of Arts & Social Sciences
 - vii. Dean, Faculty of Languages
- The University encourages research by facilitating the implementation of Research Schemes/Projects positive and pro-active manner.
- Interdepartmental research collaborations are also promoted.
- The University has a strong culture of inviting eminent researchers to enable interaction with their researchers.

6.3.5 Library, ICT and physical infrastructure / instrumentation:

Library

- University Library has fully air conditioned reading hall for the students which is open 24 hours throughout year.
- Continues alerts are sent to the faculty members and research scholars regarding latest arrivals, e- journals, new additions and free trial access from different publishers.
- Every year an exhibition of Manuscripts, Rare books, Rare Documents and photographs is organized.

ICT

• Web Site: University Library has its own web page. The address of this website is http://brary.gndu.ac.in. This website can also be accessed from

the Guru Nanak Dev University <u>www.gndu.ac.in</u> under the option "Centre/ Facilities ".

- Web OPAC : Web OPAC is available at http://library.gndu.ac.in. Access of books, Ph.D. thesis and manuscripts is available on this site.
- OPAC: Library has prepared Databases of books in English, Hindi and Punjabi Languages. As soon as new books are purchased and processed their bibliographic description is added to OPAC. Four Terminals have been dedicated for the readers to use OPAC for their search of books on first and second Floor. In addition to OPAC this facility is also available on INTERNET with University Campus to benefit the students/ faculty members by giving access to catalogue at their respective departments.
- **Digital Section** : CDs MPhil. Dissertations and Ph.D. thesis, CDs of books, census reports, gazetteers are available in this section. Students, researchers and faculty members can have access to these CDs, e- journal and databases in this section.
- **DELNET**: University Library is a member of DELNET(Developing Library Network, New Delhi). It helps the faculty members and researchers to procure those books, articles and documents from other educational institutions which are not available in our University Library.
- Library has also member of INFLIBENT which is providing 15000 E-Journals & Six Database.
- Library has established Electronic Thesis and Dissertations Lab (ETD Lab.). Library has already uploaded more than 900 Ph.D. full text these on Shodhganga.

Physical infrastructure /instrumentation:

• Bhai Gurdas Library has (1,50,000 sq. ft. + 36800 sf. ft.) area and (500+ 300) seating capacity.

6.3.6 Human Resource Management:

- The University has an institutionalised process of managing human resources. Teachers are encouraged to academically recharge and rejuvenate through participation in orientation courses, refresher courses, workshops, seminars and conferences.
- As and when required, teachers are given appropriate leave such as study leave, duty leave, sabbatical leave, special casual leave for various academic purposes.
- There is also a provision in the calendar of the University that under certain circumstances the teachers could transform their medical leave into academic leave.
- The University has also provision to give travel grants to teachers so as to enable them to attend national and international seminars/conferences.

6.3.7 Faculty and Staff recruitment:

All the Departments are asked well in advance about their faculty requirements for the next academic session. Based on their requirements, the new faculty is appointed by following the UGC guidelines for appointments. Special cognisance is taken to recruit faculty in emerging areas of research in social sciences, sciences and engineering courses.

6.3.8 Industry Interaction / Collaboration:

- To develop enduring network and relationship that is based on mutual trust between the parties.
- To highlight the importance of collaboration with industry and society.
- Documentation of measurable deliverables as a part of the academic qualification systems.
- A Specific challenge in supporting innovation activities will be to identify forms for the commercialisation of research innovations if the researchers themselves do not want to bring the idea on to commercial level.
- To develop to supporting systems for recourse- efficient utilisation of results, so that researchers can continue to focus on their research activities.
- University research and education can benefit from close collaboration with knowledge ushers in several ways.
- External funding places demands for up-to-date and relevant research topics.
- University degree courses are exposed to competition through the increased mobility of students. Courses involving prospective employers are attractive since they improve the opportunities to get a job after graduation.
- A well developed network and effective dialogue with actors within the industry and other sectors of society contributes to the external analysis that universities must priorities in order to keep pace with a changing world with new challenges.

6.3.9 Admission of Students:

Admission notices are published in both regional and national newspapers. The admission process of the University ensures transparency. The University Prospectus is made available on the website of the University with comprehensive information regarding the criteria of admission to various courses, number of seats, dates of filling the admission forms and the deadline for depositing the admission fee. All applications for admission along with admission fee are submitted online.

6.4 Welfare schemes for:

> Teaching and Non teaching

- The University has initiated various welfare schemes, like the group insurance scheme under which a very small amount of money is deducted from the salary, but at the time of illness of the employee lump sum money is given to him/her.
- The University's Medical Committee periodically diagnoses the employees who suffer from chronic illnesses such as diabetes, hypertension, etc. and provide reimbursement of their expenses on medicines.
- In addition, provision of various kinds of loans exists in the University; for example, house construction loan, loan for purchase of vehicle, and class IV employees are given loan to buy food grains after *Rabi* crops are harvested.
- The University also provides the interest free loan from the Provident Fund of the concerned employee in cases of emergencies.

> Students

- In the office of the Director, Youth Welfare regular cultural programmes are organised in the campus and Director youth welfare looks after the cultural activities in coordination with the office of Dean Students' Welfare.
- An Inter-departmental cultural festival *Jashan* is organised every year. The University boasts of the availability of the best sports facilities for the students. Twenty four hours services of Health Centre are available to the students for any medical issues.
- Various types of Scholarships are also offered to the University students: Grant of Full Fee/Half Fee Concession, Grant of Facilities to Physically handicapped students, Sports incentives, Employee ward Concession, Brother-Sister Concession, Riots affected/terrorist affected Concession, Full Fee and Funds Concession to very poor students, Fee Concession to Children of Gallantry Award Winner and Poor Aid Fund.

6.5 Total corpus fund generated: Rs.5,12,39,127

6.6 Whether annual financial audit has been done: Yes

6.7 Whether Academic and Administrative Audit (AAA) has been done?

Audit Type	External		In	ternal
	Yes/No	Agency	Yes/No	Authority
Academic	Yes	NAAC	Yes	-
Administrative	Yes	NAAC	Yes	-

6.8 Does the University declare results within 30 days?

For UG Programmes	Yes
For PG Programmes	Yes

6.9 What efforts are made by the University for Examination Reforms?

- Evaluation system has been made more transparent by incorporative the following initiative:
 - SMS facility launched.
 - Automatic Assignment of registration number, roll numbers.
 - Online Application for Award Absentee.
 - Online Application for Practical Award Entry.
 - Online Application for Re-evaluation.

6.10 What efforts are made by the University to promote autonomy in the affiliated/constituent colleges?

- In order to promote autonomy to affiliated /constituent colleges, appropriate support and encouragement is provided both at the academic as well as administrative end.
- The University interacts with the affiliated colleges through the mediation of the College Development Council which is headed by the Dean. Meetings of the Council are periodically held.
- The University remains in constant touch with its affiliated colleges and informs and encourages them to apply for various grants.
- For the development of the curriculum for these colleges, the participation of the college faculty is ensured.
- The University has been encouraging the colleges to apply for the autonomous status.

6.11 Activities and support from the Alumni Association

- Guru Nanak Dev University Alumni Association(AAGNDU) was setup in the year 2007. In the beginning, the offline membership facility was available and its membership reached more than 10800. The University has rededicated itself to the cause of the "Alumni Association" by launching a website http://gndualumani.net/ to strengthen the relationship with alumni settled in India and abroad. This online portal has become more popular and 3300 alumni have registered online on it in the initial stage.
- The Alumni of the University are making their presence felt in diverse fields in the country and abroad. They are holding key positions in the Judiciary, IFS, IAS, PCS, Indian Police Services, Federal Services and Punjab Civil Services.
- Our alumni have equally credible achievements in academics occupying the posts of Vice Chancellors of the universities and have also excelled in research in their respective fields .The alumni have equally excelled in UGC ,Computers, Pharmaceutical and other top industries have attained the top position in multinational industrial houses.

- A portion for the Achievers Alumni has also been kept on the website, which provides brief profile of the renowned Alumni. Thus, the website has become a platform for the Alumni to stay together through Alumni Association.
- In previous year, a new feature of "SMS service" is started on website, which expedited the communication with the registered alumni. At present date, about 7700 alumni have registered themselves on the University Alumni website. The office has now started collecting details of perspective alumni from the departments and campuses and reconcile the list to strengthen the database. It helps in approaching the alumni in an early manner.
- A meeting of the executive council of AAGNDU formed previous year has been organised and members also discussed about the current position and progress of AAGNDU. The members also discussed and evaluate the nominations, for the members required for Executive Council of AAGNDU for next term.
- The regular meetings with Teacher- in-charge of all the departments held in the office of Dean Alumni helped in making the connectivity between in charges, alumani- alumni office. Dr. Gurtej Singh Sandhu (top 4 world rank Scientist) the Eminent alumnus of GNDU, has been declared the sole recipient of Andrew S. Grove award 2018 by Institute of Electrical and electrical and Electronics Engineers. Dr. Gurtej Sandhu poster displayed for University at US Airports. Dr. Gurtej Singh Sandhu is Director of Advanced Technology developments at Micron Technology Inc., USA. He has pioneered a number of process technologies and has more than more 800 U.S. Patents to his credit.
- S. Manjit Singh Najjar, Vice President from abroad of AAGNDU has initiated the process in foreign country to unite the Alumani under the roof of Alumni Association, Guru Nanak Dev University. S. Manjit Singh Nijjar is attending the meeting with alumani well-settled in USA, Canada, UK and other countries. In the previous year, S. Manjit Singh Nijjar visited USA and Canada to have a meet with the alumni of GNDU. Later he also visited UK to meet Dr. Sanjit Dhami (Professor, University of Leicester) to discuss the activities and progress of Alumni Association, Guru Nanak Dev University. He brings the laurels to the university while appearing in an interview with Sikh Channel UK, which watch is live in more than 130 countries worldwide and discussed his association with Alumni Association Guru Nanak Dev University.
- The office of Alumni Association receives the queries from the alumni regarding administrative work like obtaining transcription and general problems etc. and the office helped to resolve the queries at its best. The office also connecting the alumni with the connecting the alumni with the University by spreading the events performed at the departments or at the University.

The office publishes the upcoming events on alumni website, to be organized • by different departments. An Alumni Meet was organised at Department of Electronics Technology in March 2017. The alumnus from Batch 1988-1992 were participated in the event's. Ms. Tanya Bansal (Faculty Assistant / Assistant Director, School of Architecture, Planning & Perseveration, University of Maryland) along with her Director, Dr. McFarland visited University to deliver lecturer (s) for the students and faculty of planning & Architecture department. Dr. Anil K. Rattan (Associate Director, Shire, USA and member Alumnus of AAGNDU from Abroad visited the office of Dean Alumni to discuss the activities of the Alumni Association. He also delivered a lecture faculty and students of Life Science Department. The office for the forwarded the email of IQAC to about 20000 alumni and various e-groups regarding seeking "Public Perception for University Ranking under NIRF". The office of the alumni association wishes strong bonds with the alumni in future and looks forward with participation of executive council to connect with each and every alumnus of the University.

6.12 Activities and support from the Parent – Teacher Association

Parents are routinely informed regarding their wards. Sometimes they are also requested to visit the University as and when need arises.

6.13 Development programmes for support staff

One Professional Development Programme for Non- Academic Staff was conducted by the HRDC from 29.9.2016 to 30.9.2016, which was attended by non- teaching employees of the University.

6.14 Initiatives taken by the institution to make the campus eco-friendly

For the conservation of environment in the University various initiatives taken over a period of time are indicated below:

- To plant more tress in the vacant spaces in the university Campus.
- Proper disposal of the house hold wastage in the university campus.
- To regulate the unnecessary four wheelers traffic in the university campus, especially in the academic area.
- To improve land scraping in the campus by preparing beds for flowers in all seasons.
- Ban on use of tobacco in any form.
- Sensitization programme on ban on the use of plastics.

Criterion – VII

7 Innovations and Best Practices

7.1 Innovations introduced during this academic year which have created a positive impact on the functioning of the institution. Give details.

Following innovations have been introduced over a period of time which created a positive impact on the functioning of the university:

- Continuation of University with Potential for Excellence (UPE) Scheme.
- Established University Institute of Engineering and Technology (UIET).
- Award of DST-PURSE Grant to the Departments.
- Centre on Potential for Excellence in Particular area (CPEPA, Life Sciences) in progress.
- Introduction of Choice-Based Credit System.
- Transparency in evaluation by showing answer books to the students after evaluation.
- Establishment of Emerging Life Science Block The Central Instrumentation Facility.
- Extending knowledge to communities through the Department of Lifelong Learning.
- Introduction of Capacity Enhancement Programme.
- Recruitment of ex-servicemen to provide re-employment opportunities as security personnel.

7.2 Provide the Action Taken Report (ATR) based on the plan of action decided upon at the beginning of the year.

The University prepares a schedule for its various activities like admission, teaching, research, university industry linkage (UIL), extension/outreach, examinations, vacations, etc. to be followed in the academic session. The Office of Dean (Academic Affairs) monitors the effective implementation of this schedule. Regular Alumni meets are conducted and leading cooperate houses are invited for campus placement of the students. Various Committees are constituted to look after overall development of University.

7.3 Give two Best Practices of the institution.

I. Title of the Practice: MYAS-GNDU Department of Sports Sciences & Medicine

The University has been awarded to establish MYAS-GNDU Department of Sports Sciences & Medicine to be established in 2018 and is the only Department of Sports Sciences & Medicine in any state university in India. This is the only Department in India, which offers Ph.D. program in Sports Medicine and Sports Physiotherapy, both research based programs. It has one of the most comprehensive research laboratories in the fields of Neurophysiology, Motion Analysis, Human Performance, Sports Psychology, Exercise Physiotherapy, Kinanthropometry, Exercise Physiology, Isotonic and VO₂ calculation. On the teaching aspect, this Department was the first to introduce Masters in Sports Physiotherapy (newly changed course name as Masters' in Physiotherapy (Sports Physiotherapy) in South-Central Asia, which is internationally 'M' Level accredited by the Health Professionals Council of U.K. and Global Accrediting Agency. We are also recognized department of International Council of Sports Science and Physical Education (ICSSPE). This department has been established in collaboration with MYAS in order to generate human resource specialized in the field of Sports Sciences in order to achieve this. The department will run dedicated courses in Sports Sciences including Sports Nutrition, Sports Psychology, Sports Physiology and Sports Physiotherapy. Students will receive on field training and attachments to teams. The department has MoU with following Universities abroad for research and faculty exchange: Post Graduate Institute of Medicine, University of Colombo, Bloomsburg University, Pennsylvania, USA, Human Performance Lab, University of Graz, Austria, Karl Franzens Medical University, Graz, Austria and University Sains Malaysia, Malaysia, Sports Authority of India, Sri Guru Ram Das Institute of Medical Sciences & Research and Fortis Escorts Hospital, Amritsar.

Goal: The goal is to produce Sports Scientists in various fields with application to sports persons. This includes the fields of nutrition, physiology and physiotherapy to enhance performance of athletes. This also includes rehabilitation of injured athletes so that they can reach their maximum potential. Pre participation examination of athletes and pre conditioning will reduce the chance of injury. Sport psychology course has been started with the aim of generating sports psychologist who can provide psychological support and counseling to enhance performance.

The Practice: The department will run dedicated courses in Sports Sciences including Sports Nutrition, Sports Psychology, Sports Physiology and Sports Physiotherapy. The courses will be launched in July 2018. This is the only state university in India to be beginning so many specific courses in this field. The department is already running Masters in Physiotherapy (Sports) since 1994 when the department was named "Department of Sports Medicine and Physiotherapy" and this program has been successfully running since then. The department was also first to start MD (Sports Medicine) program in India.

II. Title of the Best Practice: "Genetic basis of Cancer and Type 2 Diabetes Mellitus in Punjab"

The Life Science Faculty of the University has been awarded CPEPA Schemes (Centre with Potential for Excellence in Particular Area) by UGC. Under this scheme, extensive research is being carried out from multiple aspects to better understand the genetic basis of "Genetic basis of Cancer and Type 2 Diabetes

Mellitus in Punjab". The study under this scheme focuses on following salient features:

- Increased industrialization, urbanization and population explosion has resulted in pollution of every ecosystem. It is well documented that some of the persistent toxicants such as heavy metals and pesticides have the potential to interfere in various metabolic pathways ultimately resulting in the carcinogenesis. Presently in Punjab, the risk of cancer disease is spreading at an alarming rate due to increased industrialization and highest use of pesticides in agriculture. Therefore, it is imperative to have knowledge of level of pollution of various ecosystems and its impact assessment in the population of Punjab with respect to Cancer.
- At present Punjabi population is predominately following modern way of sedentary living and ingesting high calorie diet which has created new physiological condition, affecting the level of expression of various genes in metabolic disorders. Understanding the molecular genetic basis of complex traits, finding potentially susceptible alleles will help in identifying individuals at higher risk of metabolic disorders like Type 2 Diabetes Mellitus (T2DM) and Hypertension.
- According to American Diabetes Association, Diabetes Mellitus is a group of metabolic diseases characterized by hyperglycaemia resulting from defects in insulin secretion, insulin action, or both. The high prevalence of diabetes in patients of mental illness is attributed to various factors such as side effects of anti- psychotic drugs, inappropriate lifestyle and stress among many other factors.
- A questionnaire was prepared after the comprehensive survey of literature. The detailed information about the patients and unrelated control individuals along with the family history was recorded in the questionnaire. A total of 200 unrelated healthy individuals were randomly selected from villages near Amritsar city of Punjab. After obtaining written informed consent from these individuals, blood samples were collected for extensive research on various parameters of the scheme.

The Studies aimed at following objectives:

- Epidemiological studies of T2DM in Punjab
- Identification of functional polymorphism of candidate genes in cancer and T2DM
- To analyse the polymorphisms in the adiponectin (45(T/G),276(T/G) and + 1021(T/G), -11377(C/G), -11391(G/A), peroxisome proliferator activated receptor (PPAR) (Pro 12 Ala, C 1431T) and transcription factor 7- like 2(TCF7L2), rs 7903146 12255372) genes in T2DM Cases.
- To analyse the relationship of the studied polymorphisms and their functional products.
- To study the levels of cholesterol, HDL, LDL and TG in cases and control.
- To analyse the association of various genotypes with profiles of obesity (BMI, WC and WHR) and clinical parameters.
- Testing of Anti- Cancer activity of synthetic and natural compounds.

• Estimation of heavy metals and genotoxicity studies on water/ soil extracts

Significant outcomes of the study are being presented at national/international scientific meets and published in journal of national/international repute.

7.4 Contribution to environmental awareness / protection.

The University is trying its level best to address growing environment challenges and make this campus Green, Clean and Eco-friendly. It is continuously involved in:

- Encouraging students to participate in the various activities for eco-friendly campus with the help of NSS unit of the University.
- Developing the green belts in the university campus.
- NSS units runs various programmes on environment protection under *Swacch Bharat Abhiyan- Sawasts Bharat Abhiyan* in the University. These units also conduct tree plantation drives in the campus.
- Solid waste management through Vermi Composting is regular practices.
- Rain water harvesting units in progress in campus.
- Conservation of Biodiversity in the Botanical Garden of the University.
- University is recycling its waste water through Effluent Treatment Plant.

7.5 Whether environmental audit was conducted?

Environmental Audit is a specialized field under Environmental Protection Act(1986),GOI. This includes mass balance approach related to use of air, water, soil, electricity, heating, ventilation, air conditioning use in the campus. Environment audit is a yearly activity & look forward to improvements in the management of resources in yearly basis. University got NOC from PPCB related to Sewage Treatment Plant(STP) & submits Environment Audit report to PPCB on yearly basis.

7.6 Any other relevant information the institution wishes to add.

Guru Nanak Dev University has emerged amongst the top ranking institutions of the country, as per the National Institutional Ranking Framework of the Ministry of Human Resource Development, Government of India. It is important to mention here that the Guru Nanak Dev University is regularly ranked among the top universities of the country, according to academic surveys conducted by various independent agencies. Recently, the University secured 23th rank in the category of multidisciplinary universities in All India as per the survey conducted by popular news magazine 'The Week'. The Ministry of Human Resource Development, Government of India has selected this University for establishment of a Centre under GIAN (Global Initiative of Academic Networks) Programme. The University is going to start University Institute of Technology (UIT) which is offering courses like Civil, Mechanical, Electrical and Chemical Engineering in the main campus. The University has always strived hard to make the benefits of Higher Education accessible to the rural masses. In consonance with this policy, a few colleges were set up in rural areas like Chungh, Mithra, Verka, Narot Jaimal Singh, Sathiala, Patti, Kishankot, Sujanpur, Pathankot, Nakodar and Phillaur under the Punjab Govt./UGC scheme beside three University Colleges running successfully at Nairi (Pathankot),

Jalandhar and Mukhandpur. Four Regional Campuses–Gurdaspur, Jalandhar, Sathiala and Fattu Dhinga are also doing well. The University has established Emerging Life Sciences Block which has expensive scientific equipment for quality research. The newly constructed Sri Guru Granth Sahib Bhawan reflects the Sikh architecture. In this Centre, research work related to the studies of Sri Guru Granth Sahib is systematically undertaken. An Astro Turf for hockey, a swimming pool of international standards, a velodrome, a Gymnasium hall, shooting range and many other state-of-the art sports facilities are the prized possessions of the University.

8. Plans of institution for next year

- The anticipated future developments are focussed to link research and teaching in applied sciences. Future is predicated that MYAS-Sports Sciences and Medicine, Information Technology, Nanotechnology, Basic and Applied Sciences and Centre for Data Analytics will attain more visibility. The future plan is to develop modern and updated infrastructure and highly qualified and competent faculty in these sciences. Focus will be on developing multi-disciplinary collaborative projects.
- The future orientation is also to develop a strong research and teaching base by promoting research in the Social Sciences, Languages and Legal Studies.
- Punjab has been the land of Gurus and the Sufi saints. They have been the citadels of a composite religious tradition in which equality of communities and men were the core values. We plan to continue to further strengthen our research and teaching in the areas of religious studies, secularism and Sufi and Sikh literature.

Prof. Renu Bhardwaj Director, Internal Quality Assurance Cell, Guru Nanak Dev University, Amritsar **Prof. Jaspal Singh Sandhu** Vice Chancellor, Guru Nanak Dev University, Amritsar

Annexure I

Abbreviations:

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
CGPA	-	Cumulative Grade Point Average
СОР	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
CPEPA	-	Centre with Potential for Excellence in Particular Area
DPE	-	Department with Potential for Excellence
DSW	-	Dean Students' Welfare
GATE	-	Graduate Aptitude Test
GOC	-	General Orientation Course
HOD	-	Head of the Department
NET	-	National Eligibility Test
PEI	-	Physical Education Institution
SAP	-	Special Assistance Programme
SF	-	Self Financing
SLET	-	State Level Eligibility Test
TEI	-	Teacher Education Institution
UPE	-	University with Potential for Excellence
UPSC	-	Union Public Service Commission

1.	Summer Vacations	30.05.2016 to 01.07.2016
2.	Semester-I	04.07.2016 to 18.11.2016
3.	Examination Schedule	Starts from 21.11.2016
4.	Winter Vacations	19.12.2016 to 30.12.2016
5.	Semester-II	02.01.2017 to 01.05.2017
6.	Examination Schedule	Starts from 05.05.2017

Academic Calendar for the Session 2016-17

Annexure III

Course/Programme wise distribution of pass percentage

Title of the Programme	Total no. of	Percentage of Students as per the following CGPA out of 10.0					
	students appeared	CGPA>8.42 (75% and above)	CGPA 6.75-8.42 (60% to <75%)	CGPA 5.62-6.74 (50% to <60%)	CGPA < 5.62 (<50%)	Passed %	
B.Sc. (Hons.School) Chemistry, 6th Semester	79	29.11	44.30	16.46	0.00	89.87	
B.Sc (Hons.School) Economics, 2nd- Semester	79	12.66	40.51	18.99	6.33	78.49	
B.Sc (Hons.School) Economics, 4th- Semester	52	25.00	50.00	23.08	1.92	100	
B.Sc (Hons.School) Economics, 6th- Semester	51	23.53	60.78	13.73	1.96	100	
Masters of Business Administration (FYIC), 2nd-Semester	94	21.51	34.41	22.58	12.90	90.43	
Masters of Business Administration (FYIC), 4th-Semester	75	26.67	36.00	24.00	12.00	98.67	
Master of Computer Applications (FYIC)/(FY & SMIC), 2nd-Semester	102	10.78	28.43	29.41	26.47	95.09	
Master of Computer Applications (FYIC)/(FY & SMIC), 4th-Semester	96	18.75	23.96	36.46	19.79	98.96	
B.Tech. (Food Technology)- 2nd Semester	49	10.20	46.94	20.41	16.33	93.88	
B.Tech. (Food Technology)- 4th Semester	50	32.00	36.00	26.00	4.00	98	
B.Tech. (Food Technology)- 6th Semester	46	15.22	36.96	41.30	6.52	100	
B.Tech. (Food Technology)- 8th Semester	37	24.32	32.43	40.54	2.70	99.99	
B.Tech. (Computer Science & Engg.)-2nd Semester	204	25.49	45.59	18.63	7.84	97.55	
B.Tech. (Computer Science & Engg.)-4th Semester	186	30.11	41.94	22.58	4.84	99.47	
B.Tech. (Computer Science & Engg.)-6th Semester	165	47.27	38.79	12.73	1.21	100	
B.Tech. (Computer Science & Engg.)-8th Semester	165	55.15	42.42	2.42	0.00	99.99	
B.Tech (Electronics & Comm. Engg.)-2nd Semester	114	16.67	40.35	16.67	16.67	90.36	
B.Tech (Electronics & Comm. Engg.)-4th Semester	159	18.24	45.28	25.16	8.18	96.86	
B.Tech (Electronics & Comm. Engg.)-6th Semester	154	34.42	50.65	12.99	1.30	99.36	
B.Tech (Electronics & Comm. Engg.)-8th Semester	173	27.17	65.90	6.36	0.58	100.01	
B.Tech. (Urban & Regional Planning)-2nd Semester	23	13.04	43.48	21.74	8.70	86.96	
B.Tech. (Urban & Regional Planning)-4th Semester	21	9.52	57.14	23.81	4.76	95.23	
B.Tech. (Urban & Regional Planning)-6th Semester	31	19.35	35.48	41.94	3.23	100	
B.Tech. (Urban & Regional Planning)-8th Semester	38	26.32	36.84	28.95	0.00	92.11	
Bachelor of Architecture-2nd Semester	80	8.75	48.75	31.25	8.75	97.5	

Bachelor of Architecture-4th Semester	78	8.97	47.44	37.18	6.41	100
Bachelor of Architecture-6th Semester	73	0.00	52.05	42.47	5.48	100
Bachelor of Architecture-8th Semester	77	3.90	61.04	29.87	5.19	100
Bachelor of Architecture-10th Semester	72	1.39	43.06	45.83	9.72	100
B.Sc.(Hons.School)Human Genetics, 2nd						
Semester	29	13.79	41.38	20.69	6.90	82.76
B.Sc.(Hons.School)Human Genetics, 4th Semester	20	25.00	35.00	35.00	5.00	100
B.Sc.(Hons.School)Human Genetics, 6th Semester	30	36.67	53.33	10.00	0.00	100
B.Sc.(Honours School) Physics, 2nd Semester	69	31.88	33.33	18.84	5.80	89.85
B.Sc.(Honours School) Physics, 4th Semester	66	36.36	40.91	21.21	0.00	98.48
B.Sc.(Honours School) Physics, 6th Semester	56	41.07	44.64	12.50	0.00	98.21
B.Tech. (Electronics Communication System Engineering), 4th Semester	1	0.00	0.00	100.00	0.00	100
B.Tech. (Electronics Communication System Engineering), 6th Semester	17	11.76	23.53	58.82	5.88	99.99
B.Tech. (Electronics Communication System Engineering), 8th Semester	36	8.33	80.56	11.11	0.00	100
Bachelor of Pharmacy, 2nd Semester	43	37.21	37.21	23.26	0.00	97.68
Bachelor of Pharmacy, 4th Semester	41	26.83	43.90	17.07	9.76	97.56
Bachelor of Pharmacy, 6th Semester	42	30.95	40.48	23.81	0.00	95.24
Bachelor of Pharmacy, 8th Semester	42	26.19	59.52	14.29	0.00	100
Bachelor of Laws (Hons) (Three Year Course), 4th Semester	3	0.00	0.00	0.00	100.00	100
Bachelor of Laws (Hons) (Three Year Course), 6th Semester	131	0.76	32.82	41.22	25.19	99.99
B.A. LL.B. (Hons.)-FYIC, 2nd Semester	107	0.00	34.58	37.38	19.63	91.59
B.A. LL.B. (Hons.)-FYIC, 4th Semester	108	1.85	54.63	36.11	7.41	100
Bachelor of Library & Information Science (Hons.), 2nd Semester	28	25.00	28.57	28.57	14.29	96.43
B.A. (Hons. School) Punjabi, 2nd-Semester	25	8.00	48.00	40.00	4.00	100
B.A. (Hons. School) Punjabi, 4th-Semester	26	7.69	26.92	19.23	26.92	80.76
B.A. (Hons. School) Punjabi, 6th-Semester	25	16.00	40.00	32.00	12.00	100
B.Tech. (Computer Engineering), 6th Semester	48	20.83	56.25	14.58	8.33	99.99
B.Tech. (Computer Engineering), 8th Semester	44	27.27	63.64	9.09	0.00	100
B.A. (Hons.) Social Sciences, 2nd Semester	86	23.26	41.86	15.12	13.95	94.19
B.A. (Hons.) Social Sciences, 4th Semester	79	26.58	32.91	26.58	11.39	97.46
B.A. (Hons.) Social Sciences, 6th Semester	87	24.14	49.43	19.54	6.90	100.01

Bachelor of Laws (Three Year Course), 2nd Semester	107	0.00	18.69	28.04	36.45	83.18
Bachelor of Laws (Three Year Course), 4th Semester	126	0.00	45.24	31.75	15.87	92.86
Bachelor of Tourism & Travel Management, 2nd Semester	22	13.64	4.55	40.91	9.09	68.19
Masters of Business Administration (FYIC), 6th-Semester	75	18.67	38.67	25.33	16.00	98.67
Master of Computer Applications (FYIC)/(FY & SMIC), 6th-Semester	93	15.05	60.22	24.73	0.00	100
Master of Computer Applications (FY & SMIC), 10th-Semester	76	18.42	50.00	25.00	3.95	97.37
B.A. LL.B. (Hons.)-FYIC,6th Semester	95	3.16	29.47	54.74	12.63	100
Master of Commerce, 2nd-Semester	118	14.41	47.46	27.97	9.32	99.16
Master of Commerce, 4th-Semester	113	15.93	53.10	23.89	7.08	100
Masters of Business Administration, 2nd- Semester	114	28.95	28.95	26.32	12.28	96.5
Masters of Business Administration, 4th- Semester	80	26.25	41.25	27.50	3.75	98.75
M.Sc.(Hons.School) Economics, 2nd- Semester	67	11.94	52.24	22.39	8.96	95.53
M.Sc.(Hons.School) Economics, 4th- Semester	68	26.47	60.29	13.24	0.00	100
Master of Business Economics, 4th- Semester	16	25.00	62.50	12.50	0.00	100
Master of Computer Applications(TYC), 2nd-Semester	68	17.65	35.29	17.65	23.53	94.12
Master of Computer Applications(TYC), 4th- Semester	60	46.67	36.67	16.67	0.00	100.01
Master of Computer Applications(TYC), 6th- Semester	54	46.30	51.85	1.85	0.00	100
Master of Computer Applications (FYIC)/(FY & SMIC), 8th-Semester	57	26.32	50.88	22.81	0.00	100.01
M.Tech. (Urban Planning), 2nd-Semester	23	39.13	43.48	17.39	0.00	100
M.Tech. (Urban Planning), 4th-Semester	20	20.00	75.00	5.00	0.00	100
M.Sc. Biotechnology, 2nd Semester	27	33.33	51.85	11.11	3.70	99.99
M.Sc. Biotechnology, 4th Semester	16	25.00	62.50	12.50	0.00	100
M.Sc. (Hons.School) Chemistry, 2nd Semester	61	21.31	45.90	24.59	6.56	98.36
M.Sc. (Hons.School) Chemistry, 4th Semester	58	13.79	60.34	18.97	3.45	96.55
M.Sc. (Food Technology), 2nd Semester	29	20.69	62.07	17.24	0.00	100
M.Sc. (Food Technology), 4th Semester	31	38.71	48.39	9.68	3.23	100.01
Master of Pharmacy, 2nd Semester	15	40.00	33.33	26.67	0.00	100
Master of Pharmacy, 4th Semester	19	73.68	21.05	5.26	0.00	99.99
M.Tech. (Computer Science & Engineering) Two Year Course, 2nd Semester	58	34.48	51.72	12.07	0.00	98.27
M.Tech. (Computer Science & Engineering) Two Year Course, 4th Semester	54	46.30	50.00	3.70	0.00	100

Master of Planning (Infrastructure), 2nd	17	11.76	64.71	23.53	0.00	100
Semester	17	11.70	04.71	23.33	0.00	100
Master of Planning (Infrastructure), 4th Semester	8	25.00	50.00	12.50	12.50	100
Master of Computer Applications (TYC)(Software Systems), 6th Semester	15	66.67	33.33	0.00	0.00	100
Masters in Hospital Administration, 4th Semester	19	26.32	73.68	0.00	0.00	100
M.Sc. (Hons.) Chemistry, 4th Semester	1	0.00	0.00	0.00	0.00	0
Master of Arts in English (Hons), 4th Semester	2	0.00	0.00	50.00	50.00	100
Master of Arts in Music (Vocal) (Hons.), 4th Semester	1	0.00	100.00	0.00	0.00	100
M.Phil. Punjabi , 2nd Semester	18	38.89	61.11	0.00	0.00	100
M.Phil. Music (Vocal & Inst.), 2nd Semester	27	70.37	25.93	0.00	0.00	96.3
M.Phil. Sanskrit, 2nd Semester	8	62.50	37.50	0.00	0.00	100
M.Phil. Hindi, 2nd Semester	20	0.00	90.00	10.00	0.00	100
M.Phil. Religious Studes, 2nd Semester	14	42.86	57.14	0.00	0.00	100
Master of Commerce(Hons), 4th-Semester	1	0.00	0.00	100.00	0.00	100
Master of Business Economics (Hons), 4th- Semester	1	0.00	0.00	0.00	100.00	100
M.Sc. (Hons. School) Physics, 2nd-Semester	40	12.50	75.00	7.50	0.00	95
M.Sc. (Hons. School) Physics, 4th-Semester	32	53.13	37.50	6.25	3.13	100.01
M.Tech. (ECE*) Specialization (Communication Systems), 2nd Semester	27	25.93	55.56	7.41	7.41	96.31
M.Tech. (ECE*) Specialization (Communication Systems), 4th Semester	29	55.17	44.83	0.00	0.00	100
M.Sc. (Honours School) Human Genetics, 2nd Semester	22	31.82	54.55	13.64	0.00	100.01
M.Sc. (Honours School) Human Genetics, 4th Semester	18	38.89	44.44	5.56	11.11	100
Master of Architecture (Urban Design), 4th Semester	6	0.00	50.00	50.00	0.00	100
M.P.A. Music (Vocal), 2nd Semester	31	64.52	25.81	0.00	0.00	90.33
M.P.A. Music (Vocal), 4th Semester	26	73.08	19.23	0.00	0.00	92.31
M.P.A. Music (Instrumental), 2nd Semester	18	72.22	27.78	0.00	0.00	100
M.P.A. Music (Instrumental), 4th Semester	14	57.14	42.86	0.00	0.00	100
Master of Arts in Psychology, 2nd Semester	34	32.35	41.18	11.76	2.94	88.23
Master of Arts in Psychology, 4th Semester	36	27.78	52.78	19.44	0.00	100
M.B.A. Financial Services, 2nd Semester	29	24.14	44.83	31.03	0.00	100
M.B.A. Financial Services, 4th Semester	46	19.57	65.22	13.04	2.17	100
M.B.A.Marketing and Retail Management, 2nd Semester	33	15.15	45.45	24.24	12.12	96.96

M.B.A.Marketing and Retail Management,						
4th Semester	30	10.00	40.00	33.33	10.00	93.33
Master of Arts in Political Science, 2nd Semester	46	8.70	43.48	41.30	4.35	97.83
Master of Arts in Political Science, 4th Semester	46	15.22	54.35	28.26	0.00	97.83
M.Sc. Chemistry, 2nd Semester	50	10.00	40.00	28.00	18.00	96
M.Sc. Chemistry, 4th Semester	51	11.76	56.86	27.45	0.00	96.07
Master of Arts in English, 2nd Semester	31	3.23	41.94	35.48	6.45	86.65
Master of Arts in English, 4th Semester	37	5.41	37.84	48.65	8.11	100.01
Master of Arts in History, 2nd Semester	28	3.57	42.86	53.57	0.00	100
Master of Arts in History, 4th Semester	27	7.41	51.85	40.74	0.00	100
Master of Arts in Hindi, 2nd Semester	14	0.00	14.29	57.14	21.43	92.86
Master of Arts in Hindi, 4th Semester	26	0.00	76.92	19.23	3.85	100
Master of Arts in Philosophy, 2nd-Semester	8	87.50	12.50	0.00	0.00	100
Master of Arts in Philosophy, 4th-Semester	10	80.00	20.00	0.00	0.00	100
Master of Arts in Religious Studies, 2nd Semester	10	50.00	50.00	0.00	0.00	100
Master of Arts in Religious Studies, 4th Semester	11	63.64	36.36	0.00	0.00	100
Master of Arts in Sanskrit, 2nd Semester	9	33.33	55.56	11.11	0.00	100
Master of Arts in Sanskrit, 4th Semester	8	62.50	37.50	0.00	0.00	100
Master of Arts in Sociology, 2nd Semester	20	10.00	15.00	40.00	35.00	100
Master of Arts in Sociology, 4th Semester	22	0.00	18.18	54.55	27.27	100
M.Sc. Molecular Biology & Biochemistry, 2nd Semester	50	6.00	44.00	30.00	18.00	98
M.Sc. Molecular Biology & Biochemistry, 4th Semester	44	18.18	52.27	29.55	0.00	100
M.Sc. Human Genetics, 2nd Semester	20	15.00	25.00	40.00	20.00	100
M.Sc. Human Genetics, 4th Semester	14	28.57	35.71	35.71	0.00	99.99
LL.M. (One Year Course), 2nd Semester	38	0.00	0.00	0.00	100.00	100
Master of Arts in Punjabi, 2nd Semester	47	31.91	44.68	21.28	2.13	100
Master of Arts in Punjabi, 4th Semester	46	39.13	54.35	2.17	2.17	97.82
M.Sc. Microbiology, 2nd Semester	46	15.22	28.26	30.43	19.57	93.48
M.Sc. Microbiology, 4th Semester	42	16.67	54.76	28.57	0.00	100
M.Sc. Fermentation & Microbial Technology, 4th Semester	19	15.79	21.05	42.11	21.05	100
M.Sc. Physics, 2nd Semester	59	23.73	57.63	16.95	1.69	100

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60	36.67	55.00	5.00	0.00	91.72
48	25.00	66.67	6.25	0.00	91.732
42	26.19	35.71	28.57	7.14	97.61
29	13.79	62.07	17.24	6.90	100
24	16.67	66.67	16.67	0.00	100.01
14	28.57	28.57	42.86	0.00	100
		56.86		0.00	100
48	39.58	47.92	12.50	0.00	100
9		55.56		0.00	100
8	50.00	50.00	0.00	0.00	100
44	11.36	29.55	22.73	20.45	84.09
40	27.50	47.50	17.50	7.50	100
24	4.17	79.17	16.67	0.00	100.01
20	30.00	70.00	0.00	0.00	100
9	0.00	33.33	44.44	11.11	88.88
14	35.71	57.14	0.00	0.00	92.85
23	30.43	26.09	30.43	13.04	99.99
11	45.45	54.55	0.00	0.00	100
5	20.00	60.00	0.00	0.00	80
1	100.00	0.00	0.00	0.00	100
3	100.00	0.00	0.00	0.00	100
2	100.00	0.00	0.00	0.00	100
1	100.00	0.00	0.00	0.00	100
2	50.00	50.00	0.00	0.00	100
2	100.00	0.00	0.00	0.00	100
6	100.00	0.00	0.00	0.00	100
7	71.43	28.57	0.00	0.00	100
	48 42 29 24 14 51 48 9 8 44 40 24 20 24 20 9 14 20 9 14 20 9 14 20 24 20 9 14 20 11 3 21 11 3 2 11 3 2 11 3 5 11 6	48 25.00 42 26.19 29 13.79 24 16.67 14 28.57 51 29.41 48 39.58 9 33.33 8 50.00 44 11.36 40 27.50 24 4.17 20 30.00 44 35.71 20 30.00 14 35.71 20 30.00 14 35.71 23 30.43 11 45.45 5 20.00 1 100.00 3 100.00 3 100.00 2 100.00 2 50.00 2 100.00 2 100.00	48 25.00 66.67 42 26.19 35.71 29 13.79 62.07 24 16.67 66.67 14 28.57 28.57 51 29.41 56.86 48 39.58 47.92 9 33.33 55.56 8 50.00 50.00 44 11.36 29.55 40 27.50 47.50 24 4.17 79.17 20 30.00 70.00 9 0.00 33.33 14 35.71 57.14 23 30.43 26.09 11 45.45 54.55 5 20.00 60.00 1 100.00 0.00 3 100.00 0.00 3 100.00 0.00 2 100.00 0.00 3 100.00 0.00 2 100.00 0.00	48 25.00 66.67 6.25 42 26.19 35.71 28.57 29 13.79 62.07 17.24 24 16.67 66.67 16.67 14 28.57 28.57 42.86 51 29.41 56.86 13.73 48 39.58 47.92 12.50 9 33.33 55.56 11.11 8 50.00 50.00 0.00 44 11.36 29.55 22.73 40 27.50 47.50 17.50 24 4.17 79.17 16.67 20 30.00 70.00 0.00 9 0.00 33.33 44.44 14 35.71 57.14 0.00 23 30.43 26.09 30.43 11 45.45 54.55 0.00 23 30.00 0.00 0.00 3 100.00 0.00 0.00 <t< td=""><td>48 25.00 66.67 6.25 0.00 42 26.19 35.71 28.57 7.14 29 13.79 62.07 17.24 6.90 24 16.67 66.67 16.67 0.00 14 28.57 28.57 42.86 0.00 51 29.41 56.86 13.73 0.00 48 39.58 47.92 12.50 0.00 9 33.33 55.56 11.11 0.00 44 11.36 29.55 22.73 20.45 40 27.50 47.50 17.50 7.50 24 4.17 79.17 16.67 0.00 20 30.00 70.00 0.00 0.00 21 0.00 33.33 44.44 11.11 14 35.71 57.14 0.00 0.00 20 30.03 26.09 30.43 13.04 11 45.45 54.55 0.00</td></t<>	48 25.00 66.67 6.25 0.00 42 26.19 35.71 28.57 7.14 29 13.79 62.07 17.24 6.90 24 16.67 66.67 16.67 0.00 14 28.57 28.57 42.86 0.00 51 29.41 56.86 13.73 0.00 48 39.58 47.92 12.50 0.00 9 33.33 55.56 11.11 0.00 44 11.36 29.55 22.73 20.45 40 27.50 47.50 17.50 7.50 24 4.17 79.17 16.67 0.00 20 30.00 70.00 0.00 0.00 21 0.00 33.33 44.44 11.11 14 35.71 57.14 0.00 0.00 20 30.03 26.09 30.43 13.04 11 45.45 54.55 0.00

Annexure IV

List of Existing Important Equipment

UPE: Material Science

High Resolution Transmission Electron Microscope Vibrating Sample Magnetometer Pulse Laser Deposition System Vector network Analyser Spectroscopic Ellipsometry Dynamic Light Scattering Brunauer-Emmett-Teller (BET) surface analyzer Semiconductor IV-CV Characterisation Systems Software Virtual Nano Lab Silvaco Quantum 3D PVD System (Multi target) with electron beam gun SAXS and high temperature stage

UPE: Health Care, Drug Development and Sports Medicine

NMR spectrometer (500 MHz) Motion Analysis Equipment Flash Chromatography

UPE: Environmental Management

Next Generation Sequencer Accessories of SEM Atomic Absorption Spectrometer Amino Acid Analyser CHNSO Analyzer Preparative/ Semi-prep. HPLC Ion Chromatography Freeze Drier Mobile Environmental Analysis lab Software for Remote Sensing Five parts Haematology Analyser Standard Radon Equipment

CPEPA

Cytogenetic Workstation Real Time PCRs (2 nos) Ultracentrifuge

PURSE

Automated DNA Sequencer 24 capillary Scanning Electron Microscope (SEM)

DBT

Inverted Microscope with Fluorescent Attachment

University Funds

Confocal Microscope LC MS system Scanning Electron Microscope Flow Cytometer

List of Equipment in the Departments:

Faculty of Life Sciences

Department of Biotechnology

- 1. Gel Documentation System
- 2. High Speed Centrifuge
- 3. Deep Freezer -80°C
- 4. UV-VIS Spectrophotometer
- 5. CO₂ Incubators
- 6. Stereo Microscope
- 7. qRT-PCR Machine
- 8. Walk-in Cold Room
- 9. Cryomicrotome
- 10. ELISA Plate Reader
- 11. Inverted Microscope
- 12. Upright Fluroscent Microscope
- 13. HPLC
- 14. Incubator Shaker
- 15. Refrigerated Centrifuge
- 16. AKTA Prime Plus
- 17. 3100 Offgel Fractionator
- 18. Protein Purification System
- 19. Distillation Unit
- 20. Laminar Flow Hoods
- 21. Lyohilizer
- 22. Pulse filed Electrophoresis Apparatus
- 23. Fermenter
- 24. Real time PCR System
- 25. Automatic Liquid Scintilation Counter
- 26. Horizontal Laminar Flow
- 27. Laminar Air Flow Cabinet
- 28. Transillunator
- 29. Microrocessor Photosynthesis Control Panel
- 30. Gene Pulser Excel Electrophoration System
- 31. GL 115 Pathology Work Station

Department of Botanical & Environmental Sciences

- 1. AAS
- 2. GCMS
- 3. Gel Docs
- 4. PCR
- 5. Deep freezer -40°C, -80°C
- 6. CO₂ incubator
- 7. Lyophilyzer
- 8. Inverted microscope
- 9. Infra Red Gas Analyzer
- 10. Rotary evaporator
- 11. Centrifuge
- 12. Spectrophotometer
- 13. Vapour pressure osmometer
- 14. Fluorescent microscope
- 15. Seed Germinator
- 16. Colony Counter

Department of Human Genetics

- 1. DNA Sequencer ABI-PRISM 377
- 2. Fluorescent Microscope
- 3. Cytogenetic Work Station Fluorescent Microscope BX51 (CytovisionSoftware)
- 4. Cytogenetic Work Station with AHBT3 Olympus Microscope (VysisSoftware)
- 5. Water Purification System Elix 3 (Millipore)
- 6. Trinocular Inverted Microscope
- 7. Photographic System Model PM 30 (Olympus)
- 8. Electronic Balance
- 9. Icematic Flaker
- 10. Stadiometer
- 11. Harpenden-Type Calliper
- 12. Lange's Skinfold Callipers
- 13. Electronic Weighing Machine Gym Model
- 14. Blood Analyzer Semi Automatic
- 15. Blotting System
- 16. Refrigerated Centrifuge
- 17. Body Fat Analyzer
- 18. Laminar Hoods
- 19. B.O.D. Incubator
- 20. Deep Freezer -20°C
- 21. Gel Documentation System
- 22. Hybridization Incubator
- 23. Thermocyclers
- 24. CO₂ Incubators
- 25. ELISA Systems
- 26. RT-PCR
- 27. Electrophoretic Systems
- 28. Nano-Drop
- 29. Thermobrite
- 30. Personal Exposimeter
- 31. Cytospin
- 32. Deep Freezer-80°C

Department of Microbiology

- 1. High Performance Liquid Chromatography
- 2. Fast Protein Liquid Chromatography
- 3. Lyophilizer
- 4. Two Dimensional Gel Electrophoresis
- 5. Gradient PCR
- 6. Bench Scale Fermentor
- 7. Centrifuge C-24BL
- 8. Gas Chromatography
- 9. Flash Chromatography
- 10. Rota Vapour
- 11. Sonicator
- 12. Freezer-20°C
- 13. Freezer-80°C
- 14. Plant Growth Chamber
- 15. Spectrophotometer UV1601
- 16. Fluoroscent Plate Reader
- 17. Protein Purification System
- 18. Incubator Shakers

19. Anaerobic Chamber

Department of Molecular Biology & Biochemistry

- 1. Water Purification System
- 2. Refrigerator Centrifuge
- 3. Thermocycler
- 4. UV-VIS spectrophotometer
- 5. Microscope Flourence
- 6. FPLC
- 7. 2D Electrophoresis
- 8. Gel Documentation System

Department of Pharmaceutical Sciences

- 1. Particle size Analyser
- 2. Rehometer
- 3. Brookfield Viscometer
- 4. Non Invasive Blood Pressure Measuring
- 5. HPLC
- 6. J.R.
- 7. Diffusion Cell
- 8. Dissolution apparatus autosampler
- 9. Probe Sonicator
- 10. Freezer Drier
- 11. FTIR
- 12. UV Spectrophotometer
- 13. Rotary tablet machine
- 14. Rotary Evaporator

Department of Zoology

- 1. Turbidity meter and Thermoreacter
- 2. Muffle furnace 150x150x300mm
- 3. Double Beam UV-VIS spectrophotometer
- 4. Nikon Trinocular Research Microscope Model E20 with accessories
- 5. Benchtop freezer dryer
- 6. Water Purification System with prefilter, ultrapure, RO System
- 7. Humidity Chamber
- 8. Microplate Reader
- 9. Wildlife Photography equipment
- 10. Microprocessor based UV Visible Spectrophotometer
- 11. BOD incubator
- 12. Automatic Microplate Absorbance Reader
- 13. Vertical Laminar Flow Cabinet
- 14. Horizontal Laminar Flow
- 15. Deep Freezer -40°C
- 16. Refrigerated Incubator Shaker

Faculty of Sciences

Department of Chemistry

- 1. JEOL-FT NMR-AL 300 MHz spectrophotometer
- 2. Varian fluorospectrophotometer
- 3. Varian IR spectrophotometer
- 4. (TGA)/ differential scanning calorimetrtic analyzer (DSC)
- 5. CHNS analyzer
- 6. Polarized optical microscope (POM)
- 7. Chiral HPLC

- 8. Bruker's Apex-II CCD diffractometer
- 9. UV-vis spectrophotometer
- 10. Biotage initiator microwave
- 11. HP-TLC
- 12. X-ray powder diffractometer
- 13. Tensiometer
- 14. Fluorescence life time TSPC

Department of Food Science & Technology

- 1. UV/VIS Spectroscopy
- 2. Freeze Drier
- 3. Differential Scanning Calorimeter
- 4. Rapid Visco-Analyzer
- 5. Spray Drier
- 6. GPC
- 7. Hunter Color Lab.
- 8. Watr Activity Meter
- 9. HPLC
- 10. Farinograph
- 11. Viscoamylograph
- 12. Alveograph
- 13. Falling Number Apparatus
- 14. McGill Sheller/Polisher
- 15. Komat Oil Expeller
- 16. Hammer Mill
- 17. Barbender Flour Mill
- 18. Reel Type Baking Oven
- 19. Fermenter with Refrigeration Unit
- 20. Brookfiled Viscometer
- 21. Dough Mixer
- 22. Cabinet Driers
- 23. Texture Analyser
- 24. Dynamic Rheometer
- 25. Evaporator
- 26. Fluidized Bed Drier
- 27. Single Screw Extruder
- 28. FTIR
- 29. Mixograph
- 30. Atomic Absorption Spectrometer
- 31. Instron Universal Testing Machine
- 32. Bioreactor
- 33. Electrophorosis

Department of Physics

- 1. X-Ray Diffraction
- 2. Photoluminescence
- 3. UV-Visible
- 4. FTIR
- 5. Atomic Absorption Spectroscope
- 6. Atomic Force Microscope
- 7. Raman Spectrophotometer
- 8. RF Sputtering Unit
- 9. Planetary Ball Mill
- 10. Thermal Evaporation Unit

- 11. Sputtering Unit
- 12. Source Meter
- 13. High Temperature Furnace
- 14. LCR Meter

Faculty of Sports Medicine & Physiotherapy

Department of Sports Medicine & Physiotherapy

- 1. Biomechanical EMG Analyser
- 2. Isotonic Strength Performance System
- 3. Computer Multimedia Projector
- 4. Dual Biaxial Electronic Cyclonometer
- 5. Gas Analyser (VO₂ Max)
- 6. Ergometer Cycle
- 7. Reaction / Movement Time Panel
- 8. Isotonic Strength Performance System
- 9. Treadmill Test
- 10. Semi Automatic Blood Chemistry Analyser
- 11. Biofeedback System Procomp 5
- 12. Multiple Site Bone Strength Sonometer
- 13. USB A/D Converter
- 14. Zephyr Bioharness Team System
- 15. Ultrapure Water Purification System
- 16. Fixed Channel for MyoSystem
- 17. Body Comparison Analyser
- 18. Portable Lactate Analyser
- 19. Computerize Spirometer
- 20. Mini Omni Bone Sonometer
- 21. Neurovision Hardware Software Kit
- 22. On field Motion Analysis System
- 23. Stability Platform with Digital Control
- 24. Cervical Spine Evaluation & Training System
- 25. Telemetric VO₂ Max System
- 26. Functional Monitoring & Physical Activity System
- 27. Isometric Evaluation System for Upper Body
- 28. Gait Analysis System
- 29. 16 Channel Telemetric EMG System
- 30. Anthropometric Rods
- 31. Harvest SmartPrep 2 MCS
- 32. Arthometer for Knee
- 33. Microwave Therapy
- 34. Isokinetic System
- 35. Centrifuge plus Rotor Head
- 36. Digital UV Spectrophotometer