

*Guidelines for the Creation of the*  
**Internal Quality Assurance Cell (IQAC)**  
**and Submission of Annual Quality**  
**Assurance Report (AQAR) in Accredited**  
**Institutions**  
*(Revised in October 2013)*



**राष्ट्रीय मूल्यांकन एवं प्रत्यायन परिषद्**

विश्वविद्यालय अनुदान आयोग का स्वायत्त संस्थान

**NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL**

*An Autonomous Institution of the University Grants Commission*

P. O. Box. No. 1075, Opp: NLSIU, Nagarbhavi, Bangalore - 560 072 India

# NAAC

## **VISION**

*To make quality the defining element of higher education in India through a combination of self and external quality evaluation, promotion and sustenance initiatives.*

## **MISSION**

- ☞ To arrange for periodic assessment and accreditation of institutions of higher education or units thereof, or specific academic programmes or projects;*
- ☞ To stimulate the academic environment for promotion of quality of teaching-learning and research in higher education institutions;*
- ☞ To encourage self-evaluation, accountability, autonomy and innovations in higher education;*
- ☞ To undertake quality-related research studies, consultancy and training programmes, and*
- ☞ To collaborate with other stakeholders of higher education for quality evaluation, promotion and sustenance.*

## **Value Framework**

To promote the following core values among the HEIs of the country:

- Contributing to National Development*
- Fostering Global Competencies among Students*
- Inculcating a Value System among Students*
- Promoting the Use of Technology*
- Quest for Excellence*

# ***Guidelines for the Creation of the Internal Quality Assurance Cell (IQAC) and Submission of Annual Quality Assurance Report (AQAR) in Accredited Institutions***

## **Introduction**

In pursuance of its Action Plan for performance evaluation, assessment and accreditation and quality up-gradation of institutions of higher education, the National Assessment and Accreditation Council (NAAC), Bangalore proposes that every accredited institution should establish an Internal Quality Assurance Cell (IQAC) as a post-accreditation quality sustenance measure. Since quality enhancement is a continuous process, the IQAC will become a part of the institution's system and work towards realisation of the goals of quality enhancement and sustenance. The prime task of the IQAC is to develop a system for conscious, consistent and catalytic improvement in the overall performance of institutions. For this, during the post-accreditation period, it will channelize all efforts and measures of the institution towards promoting its holistic academic excellence.

The guidelines provided in the following pages will guide and facilitate the institution in the creation and operation of the Internal Quality Assurance Cell (IQAC). The work of the IQAC is the first step towards internalization and institutionalization of quality enhancement initiatives. Its success depends upon the sense of belongingness and participation it can inculcate in all the constituents of the institution. It will not be yet another hierarchical structure or a record-keeping exercise in the institution. It will be a facilitative and participative voluntary system/unit/organ of the institution. It has the potential to become a vehicle for ushering in quality enhancement by working out planned interventionist strategies to remove deficiencies and enhance quality like the "Quality Circles" in industries.

## **Objective**

*The primary aim of IQAC is*

- To develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution.
- To promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.

## **Strategies**

*IQAC shall evolve mechanisms and procedures for*

- a) Ensuring timely, efficient and progressive performance of academic, administrative and financial tasks;

- b) The relevance and quality of academic and research programmes;
- c) Equitable access to and affordability of academic programmes for various sections of society;
- d) Optimization and integration of modern methods of teaching and learning;
- e) The credibility of evaluation procedures;
- f) Ensuring the adequacy, maintenance and proper allocation of support structure and services;
- g) Sharing of research findings and networking with other institutions in India and abroad.

## **Functions**

*Some of the functions expected of the IQAC are:*

- a) Development and application of quality benchmarks/parameters for various academic and administrative activities of the institution;
- b) Facilitating the creation of a learner-centric environment conducive to quality education and faculty maturation to adopt the required knowledge and technology for participatory teaching and learning process;
- c) Arrangement for feedback response from students, parents and other stakeholders on quality-related institutional processes;
- d) Dissemination of information on various quality parameters of higher education;
- e) Organization of inter and intra institutional workshops, seminars on quality related themes and promotion of quality circles;
- f) Documentation of the various programmes/activities leading to quality improvement;
- g) Acting as a nodal agency of the Institution for coordinating quality-related activities, including adoption and dissemination of best practices;
- h) Development and maintenance of institutional database through MIS for the purpose of maintaining /enhancing the institutional quality;
- i) Development of Quality Culture in the institution;
- j) Preparation of the Annual Quality Assurance Report (AQAR) as per guidelines and parameters of NAAC, to be submitted to NAAC.

## **Benefits**

*IQAC will facilitate / contribute*

- a) Ensure heightened level of clarity and focus in institutional functioning towards quality enhancement;
- b) Ensure internalization of the quality culture;
- b) Ensure enhancement and coordination among various activities of the institution and institutionalize all good practices;
- c) Provide a sound basis for decision-making to improve institutional functioning;
- d) Act as a dynamic system for quality changes in HEIs;

- e) Build an organised methodology of documentation and internal communication.

## **Operational Features of the IQAC**

Quality assurance is a by-product of ongoing efforts to define the objectives of an institution, to have a work plan to achieve them and to specify the checks and balances to evaluate the degree to which each of the tasks is fulfilled. Hence devotion and commitment to improvement rather than mere institutional control is the basis for devising procedures and instruments for assuring quality. The right balance between the health and growth of an institution needs to be struck. The IQAC has to ensure that whatever is done in the institution for “education” is done efficiently and effectively with high standards. In order to do this, the IQAC will have to first establish procedures and modalities to collect data and information on various aspects of institutional functioning.

The coordinator of the IQAC and the secretary will have a major role in implementing these functions. The IQAC may derive major support from the already existing units and mechanisms that contribute to the functions listed above. The operational features and functions discussed so far are broad-based to facilitate institutions towards academic excellence and institutions may adapt them to their specific needs.

## **Monitoring Mechanism**

The institutions need to submit yearly the Annual Quality Assurance Report (AQAR) to NAAC. A functional Internal Quality Assurance Cell (IQAC) and timely submission of Annual Quality Assurance Reports (AQARs) are the Minimum Institutional Requirements (MIR) to volunteer for second, third or subsequent cycle’s accreditation. During the institutional visit the NAAC peer teams will interact with the IQACs to know the progress, functioning as well quality sustenance initiatives undertaken by them.

The Annual Quality Assurance Reports (AQAR) may be the part of the Annual Report. The AQAR shall be approved by the statutory bodies of the HEIs (such as Syndicate, Governing Council/Board) for the follow up action for necessary quality enhancement measures.

The Higher Education Institutions (HEI) shall submit the AQAR regularly to NAAC. The IQACs may create its exclusive window on its institutional website and regularly upload/report on its activities, as well as for hosting the AQAR.

The NAAC Accredited institutions need to submit only the soft copy as word file (.doc/.docx) through e-mail ([naac.aqar@gmail.com](mailto:naac.aqar@gmail.com)). The file name needs to be submitted with Track ID of the institution and College Name. For example MHCOGN16601-Samudra Arts and Science College, Taliamegu-Maharashtra.doc or EC\_32\_A&A\_143 dated 3-5-2004-Samudra Arts and Science College, Taliamegu-Maharashtra.doc. The Higher Education Institutions need not submit the printed/hard copy to NAAC. The acknowledgements would be sent to the institutions through e-mail.

## **The Annual Quality Assurance Report (AQAR) of the IQAC**

All NAAC accredited institutions will submit an annual self-reviewed progress report to NAAC, through its IQAC. The report is to detail the tangible results achieved in key areas, specifically identified by the institutional IQAC at the beginning of the academic year. The AQAR will detail the results of the perspective plan worked out by the IQAC. *(Note: The AQAR period would be the Academic Year. For example, July 1, 2012 to June 30, 2013)*

## Part – B

### 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	01	-	-	-
PG	01	-	-	-
UG	-	-	-	-
PG Diploma	-	-	-	-
Advanced Diploma	-	-	-	-
Diploma	-	-	-	-
Certificate	-	-	-	-
Others	-	-	-	-
<b>Total</b>	02	-	-	-

Interdisciplinary	01*	-	-	-
Innovative	-	-	-	-

\*M.Phil. Biotechnology jointly with Departments of Genetics, Microbiology, Plant Molecular Biology and Biotechnology

1.2 (i) Flexibility of the Curriculum: CBCS/Core/Elective option / Open options : **Core**

(ii) Pattern of programmes:

Pattern	Number of programmes
Semester	03 (M.Sc., M.Phil, Ph.D Course work)
Trimester	-
Annual	-

1.3 Feedback from stakeholders\* Alumni  Parents  Employers  Students   
(On all aspects)

Mode of feedback : Online  Manual  Co-operating schools (for PEI)

*\*Please provide an analysis of the feedback in the Annexure*

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

M.Sc syllabus revised in 2009 to accommodate semester system. New papers like proteomics and metabolomics, bioinformatics, microbial pathogenicity introduced. Significant revision in 2009 with the introduction of semester system (replacing Annual system). New papers introduced as mentioned above. Some papers which were reported by students to be not of much help like classical metabolism and microbiology were replaced. All other papers were revised with new and modern topics reflecting advances in research. Unlike before, papers like Proteins, Enzymes and Developmental Biology are being taught exclusively by departmental faculties. Theme based topics have been introduced for the Seminar paper, where 2-3 students prepare a topic together and present them separately covering a wide range of knowledge. Labs are being assigned to M.Sc. students at the beginning of second year so that they can work on specific research problems for a full year leading to Dissertation. The curriculum is expected to undergo another revision in 2015.

1.5 Any new Department/Centre introduced during the year. If yes, give details.

- National DNA Sequencing Facility at South Campus – Phase IV and Phase V
- A Virtual Centre of Excellence for Co-ordinated Research on Tuberculosis : Development of Alternate Strategies
- Centre of Excellence for Research on Hepatitis C Virus – Phase II (In collaboration with Prof. Saumitra Das, IISc., Bangalore)

## Criterion – II

### 2. Teaching, Learning and Evaluation

2.1 Total No. of permanent faculty

Total	Asst. Professors	Associate Professors	Professors	Others
07	01	02	04	-

2.2 No. of permanent faculty with Ph.D.

07

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

Asst. Professors		Associate Professors		Professors		Others		Total	
R	V	R	V	R	V	R	V	R	V
-	01	-	01	-	-	-	-	-	02

2.4 No. of Guest and Visiting faculty and Temporary faculty

-      -      -



2.5 Faculty participation in conferences and symposia:

No. of Faculty	International level	National level	State level
Attended	59	41	-
Presented papers	59	41	-
Resource Persons	05	05	-

*Details in Annexure.*

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

The M.Sc. programme in addition to theoretical knowledge provides considerable emphasis on the hand on experience in the fore-front areas of biochemistry through a **dissertation based on research work and thesis writing**. Special emphasis on critical review of literature and presentation by way of **training in seminars**. Very well equipped international, standard laboratories **expose students to cutting edge research**. Participation of the students in **activities like poster presentations, quiz, collage** etc. during the science day function and within the department. Participation of the students in **seminars/workshops conferences** being organized in the department and elsewhere. **Interactive practical and discussions** on various topics. **Personal guidance. Tutorials and assignments** .

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

~1125 (2009-2014)

2.8 Examination/ Evaluation Reforms initiated by the Institution (for example: Open Book Examination, Bar Coding, Double Valuation, Photocopy, Online Multiple Choice Questions)

Reforms related to Semester system of teaching and examination - Semester-round assessment (internal assessment) accounts for 30% of marks in each paper; Mid-term exam, seminars, discussions, term papers, projects, assignments; Continuous, year-round evaluation of students for dissertation paper based on pre-defined criteria

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

07

2.10 Average percentage of attendance of students

90%

2.11 Course/Programme wise distribution of pass percentage : (2009-2014)

Title of the Programme	Total no. of students appeared	Division				
		Distinction %	I %	II %	III %	Pass %
M.Sc. Biochemistry	53	20%	88.67%	7.54%	-	98.12%
M.Phil. Biotechnology	2	-	100%	-	-	100%
Ph.D	17	-	-	-	-	100%

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

Year round assesment and classroom discussions, Through counselling, Through Feedback / suggestions from students and teachers, Performance at national level exams and various entry / admission interviews, public exams results

2.13 Initiatives undertaken towards faculty development

<i>Faculty / Staff Development Programmes</i>	<i>Number of faculty benefitted</i>
Refresher courses	-
UGC – Faculty Improvement Programme	-
HRD programmes	-
Orientation programmes	-
Faculty exchange programme	-
Staff training conducted by the university	-
Staff training conducted by other institutions	-
Summer / Winter schools, Workshops, etc.* <i>*(junior faculties have visited academic institutes abroad in summer for 2-3 months)</i>	3
Others	-

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
Administrative Staff	01	-	-	-
Technical Staff	03	-	-	-

## Criterion – III

### 3. Research, Consultancy and Extension

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

- R&D Grant to all faculties and Travel grant once in 3 years for conference abroad
- PURSE Grant to Departments
- “Good Practice” Award to Departments
- Achievements published in Research Spotlight on DU Website

#### 3.2 Details regarding major projects

	Completed	Ongoing	Sanctioned	Submitted
Number	24	11	-	2
Outlay in Rs. Lakhs	1814.16479	1292.90672	-	176.3472

#### 3.3 Details regarding minor projects

	Completed	Ongoing	Sanctioned	Submitted
Number	34	1	-	5
Outlay in Rs. Lakhs	87.1	4.5	-	14.8

#### 3.4 Details on research publications

	International	National	Others
Peer Review Journals	73	10	-
Non-Peer Review Journals	-	-	-
e-Journals	31	-	-
Conference proceedings	8	-	-

#### 3.5 Details on Impact factor of publications:

Range  Average  h-index  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	Received
Major projects	2009-14	UGC (SAP)	50 lacs	42.63473 lacs
	2012-15	UGC (Infrastrucutre)	60 lacs	60 lacs
Minor Projects	-	-	-	-
Interdisciplinary Projects	-	-	-	-
Industry sponsored	-	-	-	-

Projects sponsored by the University/ College	2009-10	DU – Excellence Grant	49.5 lacs	49.5 lacs
Students research projects <i>(other than compulsory by the University)</i>	-	-	-	-
Any other(Specify)	-	-	-	-
Total			159.5 lakhs	152.13473 lakhs

3.7 No. of books published i) With ISBN No.  Chapters in Edited Books

ii) Without ISBN No.

3.8 No. of University Departments receiving funds from

UGC-SAP  CAS  DST-FIST   
DPE  DBT Scheme/funds

3.9 For colleges Autonomy  CPE  DBT Star Scheme   
INSPIRE  CE  Any Other (specify)

3.10 Revenue generated through consultancy

3.11 No. of conferences organized by the Institution

Level	International	National	State	University	College
Number	01	01	01	09	-
Sponsoring agencies	Indian Carcogenesis Society; Private sponsors	UGC, DBT	DBT	UGC, DBT, DST, DU	-

3.12 No. of faculty served as experts, chairpersons or resource persons

3.13 No. of collaborations International  National  Any other

3.14 No. of linkages created during this year

3.15 Total budget for research for current year in lakhs :

From Funding agency  From Management of University/College

Total

3.16 No. of patents received this year

Type of Patent		Number
National	Applied	3
	Granted	2
International	Applied	-
	Granted	-
Commercialised	Applied	-
	Granted	1

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
53	19	19	2	13	-	-

3.18 No. of faculty from the Institution   
who are Ph. D. Guides   
and students registered under them

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

3.20 No. of Research scholars receiving the Fellowships (Newly enrolled + existing ones)

JRF  SRF  Project Fellows  Any other

3.21 No. of students Participated in NSS events:

University level  State level   
National level  International level

3.22 No. of students participated in NCC events:

University level                      State level  
National level       International level

3.23 No. of Awards won in NSS:

University level       State level   
National level       International level

3.24 No. of Awards won in NCC:

University level       State level   
National level       International level

3.25 No. of Extension activities organized

University forum       College forum   
NCC       NSS       Any other

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

- -
- -

## 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	~69 acres	-	-	~69 acres
Class rooms	1	1 (from 2009)	DU	2
Laboratories	M.Sc.	2	DU	2
	Ph.D.	7	DU	7
Seminar Halls	1	-	DU	1

No. of important equipments purchased ( $\geq$ 1-0 lakh) during the current year.	73	8	DBT, DST, CSIR, ICMR, DU, UGC	81
Value of the equipment purchased during the year (Rs. in Lakhs)	671.03832	72 lacs		743.03832
Others	X	X	X	X

#### 4.2 Computerization of administration and library

Most of the administrative work in the department is done on computers.

#### 4.3 Library services: (2009-14)

	Existing		Newly added		Total	
	No.	Value	No.	Value	No.	Value
Text Books	0	0	73	1.94 lacs	73	1.94 lacs
Reference Books	-	-	-	-	-	-
e-Books	-	-	-	-	-	-
Journals	15	5 lacs	-	-	15	5 lacs
e-Journals	-	-	-	-	-	-
Digital Database	-	-	-	-	-	-
CD & Video	-	-	-	-	-	-
Others (specify)	-	-	-	-	-	-

#### 4.4 Technology up gradation (overall)

	Total Computers	Computer Labs	Internet	Browsing Centres	Computer Centres	Office	Departments	Others
Existing	30	04	Available	Available	-	05	10	04
Added	-	02	-	-	-	-	05	-
Total	30	06	-	-	-	05	15	04

#### 4.5 Computer, Internet access, training to teachers and students and any other programme for technology upgradation (Networking, e-Governance etc.)

Internet access is available to all department members. No training or other programme.

4.6	Amount spent on maintenance in lakhs :	
i)	ICT	-
ii)	Campus Infrastructure and facilities	-
iii)	Equipments	198.57012
iv)	Others	-
	<b>Total :</b>	198.57012

## Criterion – V

### 5. Student Support and Progression

#### 5.1 Contribution of IQAC in enhancing awareness about Student Support Services

IQAC contributes in enhancing awareness about student support services by regularly releasing notifications related to the various Committees set up to address student related issues. These include anti-ragging committee, sexual harassment committee, anti-smoking committee, etc.

#### 5.2 Efforts made by the institution for tracking the progression

Efforts are made by the department for tracking the progression by convening the committee meetings as and when required to discuss the issues arising out of student complaints and solutions are provided by the committee members in discussion with the concerned students.

#### 5.3 (a) Total Number of students

UG	PG	Ph.D.	Others
-	53	31	2 (M.Phil)

#### (b) No. of students outside the state

20
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#### (c) No. of international students

-
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Men	No	%	Women	No	%
	15	16		78	84

Last Year (2009-14)						This Year (2013-14)					
General	SC	ST	OBC	Physically Challenged	Total	General	SC	ST	OBC	Physically Challenged	Total



61	14	4	13	-	92	29	4	2	5	-	40
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Demand ratio 1:20

Dropout % 2

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

N.A.

No. of students beneficiaries

5.5 No. of students qualified in these examinations

NET	<input type="text" value="75"/>	SET/SLET	<input type="text" value="-"/>	GATE	<input type="text" value="85"/>	CAT	<input type="text" value="-"/>
IAS/IPS etc	<input type="text" value="-"/>	State PSC	<input type="text" value="-"/>	UPSC	<input type="text" value="-"/>	Others	<input type="text" value="-"/>

5.6 Details of student counselling and career guidance

Counselled and guided by individual faculties round the year.

No. of students benefitted

5.7 Details of campus placement

<i>On campus</i>			<i>Off Campus</i>
Number of Organizations Visited	Number of Students Participated	Number of Students Placed	Number of Students Placed
-	-	-	-

5.8 Details of gender sensitization programmes

None

5.9 Students Activities

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

State/ University level  National level  International level

No. of students participated in cultural events

State/ University level  National level  International level

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

Sports :  National level  International level   
State/ University level

Cultural:  National level  International level   
State/ University level

5.10 Scholarships and Financial Support

	Number of students	Amount
Financial support from institution (DU)	20 (4 fellowships per year)	8,000 (Rs.400 per fellow)
Financial support from government (UGC-non NET) JRF/SRF by CSIR, UGC, ICMR, DBT	03 (Ph.D students) 50 (Ph.D students, over 5 years)	5,000 p.m. per student 16000+HRA for JRF 18000+HRA for SRF (for each student)
Financial support from other sources (UGC-SAP- Infrastructure)	30 (M.Sc students, for 3 years)	3,000 p.a. per student
Number of students who received International/National recognitions	-	-

5.11 Student organised / initiatives

Fairs:  National level  International level   
State/ University level

Exhibition:  National level  International level   
State/ University level

5.12 No. of social initiatives undertaken by the students -

5.13 Major grievances of students (if any) redressed: \_\_\_\_\_

**Criterion – VI**

**6. Governance, Leadership and Management**

6.1 State the Vision and Mission of the institution

Create, Innovate, Sustain and Promote high standards of academic excellence. To impart research based knowledge to students with emphasis on hands-on-training to motivate and inspire future citizens of India who will excel in their chosen area of interest. To imbibe the best practise in education and research and maintain the highest level of integrity and operate in the cutting edge of life sciences research. To translate the knowledge into meaningful outcome that will benefit human kind and alleviate their suffering. To create an all-inclusive vibrant academic programme that will attract the best minds and trigger their thought process.

6.2 Does the Institution has a management Information System

None

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

6.3.1 Curriculum Development

The department has developed a very dynamic curriculum that can reflect and upgrade the needs of changing times, rapid growth in knowledge and requirements. The papers are research heavy and allows for changes in curriculum without actually changing the framework dramatically. The year long research project in a specific lab allows the student to imbibe new areas of knowledge with a hands-on-approach, while the first year of practical classes with all the faculties allows them to learn the diverse classical techniques and research methods quickly. The open-ended term paper allows both teachers and students to soak in emerging new knowledge through seminars and thorough reading of research papers. New areas are included in the curriculum through time to time revisions of the same. Student and alumni feedback are used judiciously for curriculum development along with advice from experts.

### 6.3.2 Teaching and Learning

The emphasis is on mutual learning amongst students and teachers. The department has created an ambience that fosters knowledge transfer through discussions and hands-on-training. The favourable student : teacher ratio ensures personal care for students and cater to their quest for knowledge appropriately. The opportunity for one-to-one discussion, association with research scholars and accessibility of teachers allows students to learn outside the classroom as well. Teaching is also done through assignments, re-analysis of research data, re-interpretation and search for alternatives. The stress is on analytical learning. Students are given free access to libraries and journals. They have ample computer access and round the clock access to internet. They are allowed to attend conferences, write review and author papers. Constant questioning in classes are encouraged.

Teaching is carried out by a combination of the following:

- PowerPoint lectures by teachers
- Interactive discussion with students during the lectures
- Periodic question-answer sessions during the classrooms teaching
- Writing assignments given to students
- Seminars by the students

### 6.3.3 Examination and Evaluation

The faculty are involved in paper setting and evaluation of courses offered to MSc, MPhil and PhD students and they ensure that the papers are of standard quality and analytical enough to evaluate students properly. Assessment is also continuously done throughout the year for a better understanding of a student's potential and weaknesses, which can later be discussed and improved. Written, oral, assignments, seminars etc are modes of examination and assessment.

### 6.3.4 Research and Development

One of the stand out research theme of the department relates to development of strategies to combat various major human diseases that ails India and the world. These diseases include infectious diseases like tuberculosis, malaria, influenza, leishmaniasis and chikungunya, which take a major toll on health management in India. Other diseases include life style diseases and metabolic disorders like cancer, channelopathies, blood disorders and cardiovascular diseases, which still are the major killers worldwide. The goal of the department is to cover the wide spectrum of diseases as above so as enhance the rate of success. The strategy is to equip ourselves with a multitude of expertise that intervene these diseases at various steps to enhance success. Thus, the departmental research ranges from molecular understanding of

### 6.3.5 Library, ICT and physical infrastructure / instrumentation

Sophisticated cutting edge instruments purchased in the department for student teaching and research. Students are sent to other institutions in India and abroad for exposure to infrastructure /instruments. In addition to University libraries, the department maintains its own library and purchases books on student demands. Utmost freedom is allowed to use computers and several softwares are purchased for students.

### 6.3.6 Human Resource Management

N.A.

### 6.3.7 Faculty and Staff recruitment

The department is recruiting faculty and non-teaching staff as per the guideline of the University and UGC. The emphasis is to hire the best.

### 6.3.8 Industry Interaction / Collaboration

Industry collaborations invited for translational research as and when required. Department of Biochemistry has transferred technologies and commercialized products along with industries in the recent past. Detection of *M. tuberculosis* in culture - transferred to M/s SPAN Diagnostics Limited, Surat and is likely to be available in the market shortly as the product has received approval from Drug Controller General of India.

### 6.3.9 Admission of Students

The department does not strategise much with the admission process since our proven method of admitting the best meritwise has achieved wonders for us.

Teaching	-
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6.4	Welfare schemes for	Non teaching	-
		Students	University fellowships to needy and meritorious students (M.Sc) and for Ph.D students as well.

6.5 Total corpus fund generated

6.6 Whether annual financial audit has been done Yes  No

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

Audit Type	External		Internal	
	Yes/No	Agency	Yes/No	Authority
Academic	-	-	-	-
Administrative	-	-	-	-

6.8 Does the University/ Autonomous College declares results within 30 days?

For UG Programmes Yes  No

For PG Programmes Yes  No

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

N.A.

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

N.A.

6.11 Activities and support from the Alumni Association

N.A.

6.12 Activities and support from the Parent – Teacher Association

N.A.

6.13 Development programmes for support staff

N.A.

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

Bio-waste management regularly done in the department through Delhi Pollution Control Committee (DPCC) approved agency. The campus has placed bins at several specific points where waste can be segregated before disposal of both Biodegradable and Non-biodegradable waste. Smoking is prohibited. Rain water is harvested. Trees and plantations are taken good care of.

## 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.

None

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

Not applicable

7.3 Give two Best Practices of the institution (*please see the format in the NAAC Self-study Manuals*)

- The students and faculty members observe very high standards in respect of ethics for publication, use of animals for research, biosafety etc. Any project involving radioactivity is monitored by departmental radiation safety officer. Every departmental member is regularly exposed to procedures to safeguard any type of malpractices.
- All the laboratory supervisors ensure that the research work undertaken under their guidance and supervision is original. They also ensure that the work is carried out by the student(s) themselves. For writing the thesis/reports/scientific manuscripts the supervisors ensure that these are original writings. Plagiarism is avoided at all costs using appropriate softwares and alertness by supervisors.
- It is also ensured that all research projects are routed through appropriate committees like Institutional Bio-safety Committee (IBSC) & Animal ethics committee and Institutional Ethics Committee.
- The supervisors ensure that Good Microbiological Practices (GMP) and Good Laboratory Practices (GLP) are followed during research including the P3 level containment practices as and when appropriate.
- The bio-waste is decontaminated prior to disposal. Biosafety guidelines as per DBT norms are being followed. Bio-waste management regularly done in the department through Delhi Pollution Control Committee (DPCC) approved agency.

***\*Provide the details in annexure (annexure need to be numbered as i, ii,iii)***

7.4 Contribution to environmental awareness / protection

The handling of microbes and radio-isotopes, animals, laboratory maintenance, biosafety and waste disposal awareness is regularly taught to MSc and research scholars. All such activities are under stric vigil of the faculties.

7.5 Whether environmental audit was conducted? Yes  No

7.6 Any other relevant information the institution wishes to add. (for example SWOT Analysis)

**Strength:**

- Highly active research in the areas of frontiers of modern biology with special emphasis on human diseases. The emphasis is also laid on the translational aspect of the research work through interaction and participation of industry.
- The M.Sc. programme in addition to theoretical knowledge provides considerable emphasis on the hand on experience in the fore-front areas of biochemistry through a dissertation based on research work and thesis writing.
- Special emphasis on critical review of literature and presentation by way of training in seminars.
- Very well equipped international standard laboratories
- Financial support from FIST and UGC-SAP programme. Also, high level funding for research from funding agencies such as DBT, DST, UGC, ICMR and CSIR.

**Weaknesses:**

- Space constraints to further expansion.
- Shortage of grant for post-graduate teaching and departmental infrastructures.

**Opportunities:**



## 8. Plans of institution for next year

- Future plans of the department include elevation of its teaching and research performance to an even higher stratum that suits the dynamics of the changing times and caters to the emerging needs of the country.
- The department envisions the need to convert the classical knowledge of biochemistry into more meaningful deliverables required to alleviate human suffering in general. With the tremendous progress both academically as well as technically, the need to translate conventional knowledge into innovations for management as well as amelioration of human diseases will be emphasized. Hence, the department will expand its ongoing programme in the areas of diagnostics, prophylactics and therapeutics for diverse human diseases.
- While the existing tuberculosis, malaria and hepatitis research will continue, the department will venture into several other areas like cardiovascular diseases, cervical and breast cancer, ciliopathies, channelopathies, optogenetics, hemoglobinopathies and neurodegenerative diseases with research programme on innovations in mechanistic understanding, target identification and validation, small molecule and peptide screening and newer tools for diagnostics and prophylactics.
- The department will be committed to creation of manpower for both basic mechanistic investigations as well as applied translational aspects of human diseases. It will expand its scope through initiation of research projects in relevant areas, like hard-core immunology and systems biology, via newly appointed faculties to complement the existing strengths.
- The teaching curriculum will witness constant innovations and further hands-on knowledge.

Name \_\_\_\_\_

Name \_\_\_\_\_

\_\_\_\_\_  
*Signature of the Coordinator, IQAC*

\_\_\_\_\_  
*Signature of the Chairperson, IQAC*

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## Annexure I

### **Abbreviations:**

CAS	-	Career Advanced Scheme
CAT	-	Common Admission Test
CBCS	-	Choice Based Credit System
CE	-	Centre for Excellence
COP	-	Career Oriented Programme
CPE	-	College with Potential for Excellence
DPE	-	Department with Potential for Excellence
GATE	-	Graduate Aptitude Test
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 Excellence
- UPSC - Union Public Service Commission

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