



## **QUALITY ASSURANCE POLICY**

**NATIONAL UNIVERSITY OF SCIENCES AND TECHNOLOGY  
(NUST)**

**Sector H-12 Islamabad, Pakistan**

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## **ABBREVIATIONS**

a. AA	Academic Audit
b. Acad	Academics
c. ACM	Academic Council Meeting
d. AT	Assessment Team
e. DLQEC	Director Local Quality Enhancement Cell
f. HEC	Higher Education Commission
g. HEI	Higher Education Institution
h. HoD	Head of Department
i. HQ	Headquarters
j. IEEE	Institute of Electrical and Electronics Engineering
k. RIPE	Review of Institutional Performance Enhancement
l. IT	Information Technology
m. MS	Master of Science
n. MPhil	Master of Philosophy
o. NBEAC	National Business Education Accreditation Council
p. NCEAC	National Computing Education Accreditation Council
q. NUST	National University of Sciences and Technology
r. NOC	No Objection Certificate
s. PCATP	Pakistan Council of Architect & Town Planers
t. PEC	Pakistan Engineering Council
u. PG	Postgraduate
v. PGP	Postgraduate Programs
w. PhD	Doctor of Philosophy
x. PT	Program Team
y. PQR	Pakistan Qualification Register
z. QA	Quality Assurance
aa. QEC	Quality Enhancement Cell
bb.SARs	Self-Assessment Reports
cc. SOP	Standard Operating Procedure
dd.UG	Undergraduate

## **Section – 1**

### **Introduction**

#### **1. Background**

Globally, higher education systems are actively developing and implementing learning outcomes initiatives in accountability and quality assurance frameworks. Well defined objectives of teaching and learning quality are perceived to be beneficial in several ways. They will provide clear understanding of educational value to students, employers, and other stakeholders at-large. They are also expected to enhance institutional and programmatic improvement in monitoring, curriculum development, and teaching/learning practices. Well defined outcomes and structured processes offer better control of educational quality, what has been considered intangible in the world of quality assurance and accountability. Over and above, these policy guidelines will help harmonize/align NUST quality policy with National and International standards and best practices.

##### **1.1 Vision**

To ensure the highest quality of education at NUST, compatible with international standards and in line with the United Nations Sustainable Development Goals (SDGs).

##### **1.2 Mission**

To promote a culture of quality and to proactively devise quality assurance policies, strategies and monitoring and evaluation guidelines in line with our vision.

##### **1.3 Objectives/Tasks**

Main objectives of QA policy are as follows:

- a. Implementation of Quality Assurance Framework prescribed by Higher Education Commission of Pakistan.
- b. Assuring that university programs meet the regulatory and reporting requirements of Accreditation Councils and HEC.

- c. To establish an effective system of Self-Assessment at all institutions of NUST for Continuous Quality Improvement.
- d. Developing procedures and ensuring their implementation through Internal and External Quality Audits of NUST Institutions.
- e. Collection and provision of university data for university ranking by national and international bodies.
- f. Providing support for capacity building of faculty / staff involved in quality assurance measures.
- g. Providing support for recognition of Achievements and Awards of faculty/students.

## 1.4 Basic Principle of Quality Assurance (QA) Policy

QA policy of NUST is having a holistic approach, based on self-assessment keeping focus on Quality improvement through comprehensive framework as depicted below:



## **1.5 Establishment of QA Directorate**

NUST was among the first group of HEIs that opted to join Quality Enhancement program of HEC. NUST therefore established its Quality Assurance Directorate (QAD) in 2005. The organizational structure of QAD has been evolving over the period. Existing QA organogram along with Non-Gazetted Staff of QA&NIO Dte is placed as **Annex - A**.

## **Section – 2**

### **Self-Assessment, Accreditation and General QA Policy**

#### **2. Implementation of Quality Assurance**

The details of various measures to be taken for ensuring quality at all the institutions of NUST, following activities will be undertaken in accordance with the instructions laid down by HEC and various Accreditation councils/bodies.

##### **2.1 Self-Assessment**

To carry out self-assessment and prepare Self-Assessment Reports (SARs) of all the Academic Programs of NUST, HEC Manual will be taken as guideline. Procedure and responsibility of writing of SARs is as follows:

##### **2.2 Self-Assessment Process**

Self-Assessment Reports are one of the most extensive works which is to be performed by the institutions. Each academic program shall undergo a self-assessment every year (assessment cycle). All the head of HEIs are responsible to ensure writing of SAR as prescribed in HEC Manual. DLQECs at each institution are responsible for, coordinating and follow up on the self-assessment (SA) activities.

##### **2.3 Role and Responsibilities of DLQEC**

###### **2.3.1 DLQEC is responsible for:**

- a) Initiation of Self-Assessment Process
- b) Review of SARs for completion as per SA Manual
- c) Formation of Assessment Team
- d) Scheduling of AT visit
- e) Receiving the AT Report & Department's Implementation Plan
- f) Verification of the Rubric Evaluation done by AT

- g) Submission of the Executive Summary (along with implementation Plan) to HOI / Rector through QAD
- h) Ensure timely filling of feedback forms.
- i) Submission of SARs (hard & soft copy) to Quality Assurance directorate for onward submission to HEC
- j) Follow up of Implementation Plan till its completion.

## **2.4 SAR Writing**

The procedure for writing of SARs is as follows:

- a. DLQEC initiates the SA one semester prior to the end of the assessment cycle through the Vice Chancellor / Rector Office in which the program is offered. However, if the program is undergoing the SA for the first time, the department will be given one academic year for preparation.
- b. Upon receiving the initiation letter the department shall form a program team (PT). The PT will be responsible for preparing a self-assessment report (SAR) about the program under consideration. The team will be the contact group during the assessment period.
- c. The department shall submit the SAR to the LQEC through the concerned Dean. The LQEC reviews the SAR within one month to ensure that it is prepared according to the required format.
- d. The Head of the Institution forms a program assessment team (AT) in Consultation with the DLQEC's recommendations within one month. The AT Comprises of 2-3 faculty members from the university. The AT must have at least one expert in the area of the assessed program.
- e. The LQEC plans and schedules the AT visit period in coordination with the department that is offering the program.
- f. The AT conducts the assessment, submits a report, and presents its findings in an exit meeting that shall be attended by the DLQEC, Dean, PT and faculty members.
- g. The LQEC shall submit an executive summary on the AT findings to the Head of the Institution.
- h. The Department shall prepare and submit an implementation plan to LQEC based on the AT findings. The plan must include AT findings, and the corrective actions to be taken, assigning of responsibility and a



time frame for such actions. Table A.2 in Appendix A of HEC manual provides a format for preparing a summary of the implementation plan.

- i. The LQEC shall follow up on the implementation plan to ensure departments are adhering to the implementation plan. The academic department shall inform the LQEC each time a corrective action is implemented. LQEC shall review the implementation plan once in a semester to assess the progress of implementation and submit the progress to Dte of QA.

## **2.5 Program Team (PT)**

PT is a group of professionals which is nominated by the head of the department.

It is responsible for writing of SAR and acts as a contact/focal group during the period of assessment process.

## **2.6 Composition of PT**

<b>No. of Students in the Program</b>	<b>Program Team</b>
300	1 Chairman & 3 Members
Between 300 to 1000	1 Chairman & 5 Members
More than 1000	1 Chairman & 6 Members

## **2.7 Desired Skills of PT**

- a. Demonstrate commitment to the principles of quality in higher education and the policies set by the Higher Education Commission of Pakistan.
- b. An enquiring disposition.
- c. Power of analysis and judgment.
- d. Ability to work in teams.
- e. Time management skills.
- f. Experience of organization and management, particularly in relation to teaching and learning matters.

- g. High standards of oral and written communication skills.
- h. Self-motivated and willing to work for quality improvement.

## **2.8 Responsibilities of PT**

- a. Compiling the report by responding to each criteria/standard given in the SA Manual and integrating the collected information/feedback.
- b. Collecting relevant data on faculty, students, libraries, laboratories, and infrastructure.
- c. Getting SA proformae filled by faculty, students, alumni, and employers.
- d. Writing summaries of feedback received through proformae.
- e. Analyzing the feedback and drawing conclusions.
- f. Writing a foreword giving brief history of the program, particulars of the PT, date of starting/finalizing report writing.
- g. The report may be signed by the convener/chairperson of the program team.

## **2.9 Assessment Team (AT)**

AT is a group of professionals who will review the SAR prepared by the PT and give its findings in the form of a report (AT Report)

## **2.10 Composition of AT**

<b>No. of Students in the Program</b>	<b>Program Team</b>
300	1 Chairman & 3 Members
Between 300 to 1000	1 Chairman & 5 Members
More than 1000	1 Chairman & 6 Members

## **2.11 Desired Skills of AT**

- a. Demonstrate commitment to the principles of quality in higher education and the policies set by the Higher Education Commission of Pakistan.
- b. An enquiring disposition.
- c. Power of analysis and judgment.
- d. Ability to work in teams.
- e. Time management skills.
- f. Experience of organization and management, particularly in relation to teaching and learning matters.
- g. High standards of oral and written communication skills.
- h. Self-motivated and willing to work for quality improvement.

## **2.12 Responsibilities of AT**

- a. Check completeness of the SAR as per SA manual
- b. Look at the comprehensiveness / relevance of responses to various criteria and standards.
- c. Verify the data / information given in SAR.
- d. Confirm the summaries of the feedback/surveys made by the PT
- e. Review the conclusions drawn by the PT from the feedback proforma.
- f. List down the findings from the assessment exercise.
- g. Carry out rubric evaluation of SAR.
- h. Write down the AT report.

## **2.13 Internal Academic Audit**

- a. QA Dte plans, coordinates and executes periodic internal academic audit of all NUST institutions.
- b. Prepare Internal Audit program at the start of the calendar year and disseminate it to all the institutions.
- c. Carry out detailed academic audit of the institution. Scope of the university Internal Quality Audit for NUST institutions is placed at **Annex-B**.

- d. During the visit, a presentation by the Institution is given to the panel members. Evaluation of documents is carried out. The panel members carry out inspections of laboratories, classrooms, and library etc. The panel members also conduct interviews of students and faculty prior to the debriefing to head of the institution.
- e. After the visit QA Dte gets the feedback from all panel members and prepares Post visit report. The Post visit report is presented to Rector through Pro Rector (Acad). After receiving comments from the Rector, the report is dispatched to the head of the institution for taking appropriate actions according to the recommendations given in the report. QA Dte. keeps monitoring the progress on the panel recommendations, from the institutions.

#### **2.14 Accreditation**

- a. Accreditation / Re-accreditation of all UG programs of all NUST institutions are to be processed through QA Dte (AA). It will be institution responsibility to take financial approval of accreditation fee from Finance Dte as prescribed by accreditation council. ACM approval of the program prior to the accreditation request will be mandatory.
- b. Institutions will present all change of scope cases to ACM. After the approval case will be processed through QA Dte (AA) for necessary change in scope visit by the accreditation council.
- c. Institution will ensure that the batches are accredited well before graduation.

#### **2.15 Procedure for approval of PG programs**

HEC prescribed minimum standards/guidelines for the launch of new programs at the graduate level. It requires to provide evidence of compliance with the following standards/guidelines to obtain approval from the HEC before starting the graduate programs.

## **2.16 Faculty and supervisory requirement**

- a. At least two (2) full time faculty members holding PhD degrees in the relevant field shall be available/appointed to the department to launch an MS/MPhil/Equivalent program that may be increased up to three (3) if a PhD program is also to be launched in the same discipline and department.
- b. The minimum appointment tenure for full-time faculty members must not be less than the duration of the intended degree program.
- c. The teacher to student ratio shall be 1:12, where a supervisor can supervise a total of twelve (12) MS/MPhil/PhD students at a time with no more than five (5) of these students being PhD students. Graduate teaching and supervision load shall be adjusted, accordingly.

## **2.17 Determining relevance of faculty with subject/degree program**

- A. Wherever required, the subject and supervisory relevance of faculty members shall be determined based on:
  - i. Qualifications including bachelor, master, and doctoral degrees.
  - ii. The research includes thesis/dissertation and published articles.
  - iii. Experience consisting of teaching and administrative domains.
- B. To ascertain the relevance of the faculty in the related discipline to the program and supervision of theses, the university shall:
  - i. Constitute a Relevance Assessment Committee (RAC)/equivalent body, with the approval of the Vice Chancellor/Rector/Head of the HEI.
  - ii. The RAC shall consist of at least five (5) members:
    - a. Respective Dean of the university
    - b. Director QEC of the university
    - c. Two External subject expert not less than a professor /Associate Professor level
    - d. Program Team/Assessment Team member who was involved in preparing Self-Assessment Report of the program.
  - iii. The RAC shall submit a report with detailed reasons and rationale for the assessment decision.

- iv. The Report shall be effective with the approval of relevant statutory bodies.

## **2.18 Review of Institutional Performance Enhancement (RIPE)**

HEC has introduced a revamped version of these IPE standards as Review of Institutional Performance and Enhancement (RIPE).

A total of 16 standards have been designed to support all the quality assurance measures within the University.

### **Strategic Development**

Standard 1: Vision, mission, goals, and strategic planning

Standard 2: Governance, leadership, and organization

Standard 3: Institutional resources and planning

Standard 4: Audit and finance

Standard 5: Affiliated colleges/institutions

Standard 6: Internationalization of higher education and global engagement

### **Academic Development**

Standard 7: Faculty recruitment, development, and support services

Standard 8: Academic programs and curricula

Standard 9: Admission, progression, assessment, and certification

Standard 10: Student support services

Standard 11: Impactful teaching and learning and community engagement

Standard 12: Research, innovation, entrepreneurship, and industrial linkage

### **Institutional Development**

Standard 13: Fairness and integrity

Standard 14: Public information and transparency

Standard 15: Institutional effectiveness, quality assurance and enhancement

Standard 16: CQI and cyclical external quality assurance

## **2.19 Membership**

Process membership cases with Quality Assurance Agencies/Network on behalf of NUST. Membership fee will be catered for by QA Dte in annual budget, however all the payments in Local Currency (LC) or Foreign Exchange (FE) will be made by Finance Dte. List of current memberships is as follows: -

- a. International Network of Quality Assurance Agency for Higher Education (INQAAHE)
- b. Asia-Pacific Quality Network (APQN)
- c. Association of Commonwealth Universities (ACU)
- d. The Talloires Network
- e. International Association of University Presidents (IAUP)
- f. Association of Management Development Institutions in South Asia (AMDISA)
- g. United Nations Academic Impact (UNAI)
- h. Inter University Consortium for Promotion of Social Sciences (IUCPP)
- i. Association of Quality Assurance Agencies of the Islamic World (QA-Islamic)
- j. Any other approved by competent authority

## **2.20 Pakistan Qualification Register (PQR)**

QAD will also maintain data of Pakistan Qualification Register parallel with Academic Directorate.

## **2.21 Continuous Quality Improvement (CQI)**

### **2.21.1 Feedback**

To ensure Continual Quality Improvement (CQI) and to improve the standard of faculty, services and academic programs, multiple inputs (feedback) will be taken from students, faculty and administrative staff periodically. Similarly feedback from alumni, employers and other stake holders are obtained for the improvement of ongoing programs. The detail of Feedback forms is as follows:

- a) Alumni Survey
- b) Employer Survey

- c) Faculty Course Review Report
- d) Faculty Survey
- e) Research Student Progress Review Form
- f) Student Course Evaluation Questionnaire
- g) Survey of Department Offering Ph.D. Programs
- h) Survey of Graduating Students
- i) Teacher Evaluation Form
- j) Faculty Resume

Analysis of feedback from various stakeholders is required for improvement of the respective programs and for making part of SARs. Information & Communication Technologies Directorate (ICT) will be responsible to upload the forms on Campus Management System (CMS), whereas institutions will ensure filling of feedback forms so that ICT directorate can enable and facilitate analysis to the respective institution/directorate for CQI. The content of the feedback forms can be changed by the competent authority are and when required by the institutions.

## **2.22 General QA related Activities:**

To encourage quality related activities of HEIs seminars, conferences, meetings national and international events, etc. will be arranged at university level on a regular basis. Record of all such activities will be compiled and maintained at the QA Dte. The Dte will also be responsible to update and maintain QA website. Similarly, to encourage the faculty, students and staff various honors and awards are given by government, non-government organizations and international agencies. HEC, Best Teacher nominations, National and International Award cases will be processed through QA directorate.

## **2.23 National and International Ranking:**

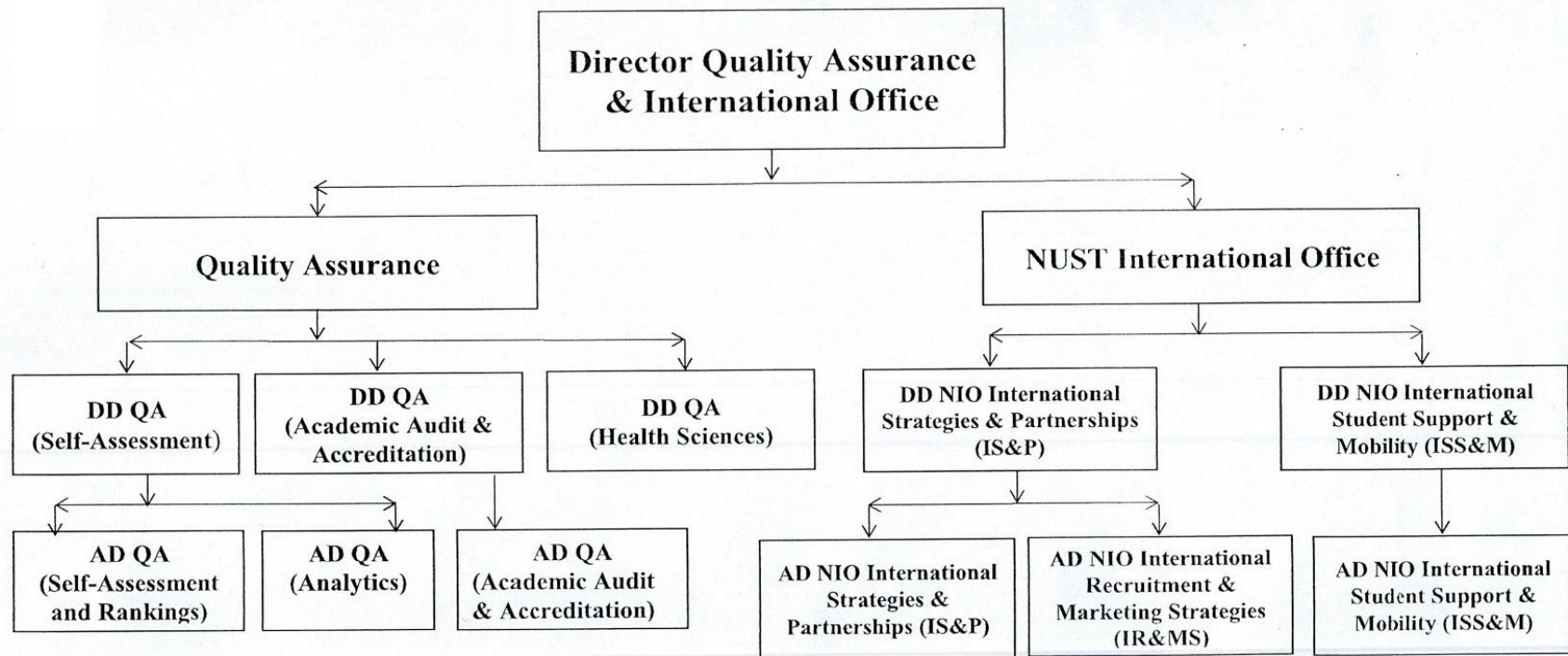
To strengthen the culture of transparency and to improve the competition among universities NUST participates in national (HEC ranking) and international ranking like Quacquarelli Symonds (QS) world universities ranking and Time Higher Education (THE). QA Dte will be the focal point for collecting the required data from all the NUST institutions for onward submission to the concerned ranking agencies.



## ORGANIZATIONAL CHART

### Revised Organogram

#### Quality Assurance (QA) & NUST International Office (NIO) Directorate



**Non-Gazetted Staff**  
**(QA &NIO Dte)**

<b>Category</b>	<b>EBPS</b>	<b>No. of Posts</b>
Data Analyst	16	01
Superintendent	16	01
Assistant	14/15	01
DPA	11/12/14	01
DPS	15/16	02
UDC	9/12	02
LDC	7/9	01
Naib Qasid	1/2/3	03

## **SCOPE OF UNIVERSITY'S INTERNAL QUALITY AUDIT OF NUST INSTITUTIONS**

The quality audit of NUST institutions shall cover the following points pertaining/applicable to the specific institution. The available documents relevant to the various aspects of Audit Scope may be kept in the room reserved for the panel interviews during the audit visit.

### **a) Management and Program Mission, Objectives & Outcome**

- i. Evidence of graduating students performing the desired outcomes.
- ii. Results of previous assessment and consequent improvement of program.

### **b) Curriculum Design and Organization**

- i. Faculty members' Course folders
- ii. Departmental Students' Folders
- iii. Examination record and compliance of NUST Exam Policy
- iv. Teachers' Evaluation Record based on the classroom visits by HoD
- v. Guest lectures / educational visits arranged by the department
- vi. Students' attendance / Shortage of attendance
- vii. Weekly Timetable of all programs

### **c) Compliance of HEC Quality Criteria**

- i. Record of Implementation of Plagiarism Policy
- ii. SAR writing / preparation record: -
  - a. List of Program Teams of each program
  - b. List of Assessment Teams of each program
  - c. SARs which are ready

### **d) Laboratories and Computing Facilities**

- i. Adequacy of equipment as per program requirement and student strength
- ii. Record of serviceability of available Lab equipment

- iii. Manuals for practical's
- iv. Safety Regulations / Instructions
- v. Logbooks of major equipment
- vi. Utilization Rate (UR)
- vii. Lab Staff details (Name, Qualification, Grade, Date of Employment)
- viii. Internet facility in institution/hostel

**e) Students**

- i. Student population – Course/Section-wise
- ii. Orientation process/Student Guidelines
- iii. Student Counseling System
- iv. Extra-curricular activities/students' clubs/sports facilities
- v. Student interaction with institution's administration
- vi. Record of Internship and placement of graduates

**f) Student Related Feedback/Surveys**

- i. Student Course Evaluation Questionnaire
- ii. Survey of Graduating Students
- iii. Survey of Alumni
- iv. Survey of Employers
- v. Research Student Progress Review Form
- vi. Survey of Department offering PhD Programs

**g) Faculty**

- i. Evidence of Orientation process of New Faculty
- ii. Process being followed for Mentoring of New / Junior Faculty
- iii. Workload of Faculty; Additional responsibilities
- iv. Lecture-wise course breakdown of course(s) taught by the faculty members
- v. Faculty Dossiers (with HoD)
- vi. Details of Calculating Student / Teacher Ratio
- vii. Procedure to ensure effective teaching / learning processes
- viii. Details of Faculty research grants; obtained and utilization
- ix. Copies of Faculty Publications in last five years
  - a. ISI / Scopus Indexed journals

- b. HEC approved journals
- c. Others
- x. Textbook(s)/Book Chapters written by faculty member(s)
- xi. Detail of patents applied/approved

**h) Faculty Related Feedback / Surveys**

- i. Faculty Course Review Report
- ii. Faculty Survey
- iii. Faculty Resume
- iv. Teachers Evaluation Form

**i) Institutional Facilities**

Details of following: -

- i. Class sizes (theory & practical sessions)
- ii. Cafeteria
- iii. Hostel accommodation
- iv. Sports Facilities (including swimming pool, Gymnasium etc.)
- v. Transport arrangements for students
- vi. Adequacy of secretarial support, technical staff and office equipment

Databases / Record keeping of following

- i. Alumni; alumni donations
- ii. Employers (of NUST graduates)
- iii. Peers (Peers are the academics / scholars / researchers working in other Pakistani / foreign universities known to our faculty members)
- iv. HEC Department-wise Information Proformae

**j) Library**

- i. Details of Budget / availability of funds for library upgradation
- ii. Library operational / maintenance procedures (SOPs)
- iii. Details of Library equipment (PCs, photocopier, scanner etc.)

**k) Industrial Linkage**

- i. Details of Industrial Liaison office

- ii. Details of projects/funding obtained from industry
- iii. Record of Visits conducted to the industry
- iv. Methodology of Commercialization of Research Findings

**l) Civic Engagement**

- i. List of Research Projects related to Community
- ii. Details of Services / help rendered to the Society

**m) Administrative / Technical Staff**

- i. Administrative/Technical sections in the institutions.
- ii. Details of Administrative/Technical Staff

**List of Documents**

- Record of Institution's SOPs/Policies
- Implementation on the decisions of Academic Council Meeting
- Minutes of Departmental Board of Studies Meetings
- Minute of Faculty Board of Studies Meetings
- Record of Students counseling/advising
- Record of actions taken for plagiarism, cheating, malpractice by faculty/students/staff etc.
- Alumni data (Soft record)
- Record of students educational, industrial visits
- Faculty mentoring policy and its implementation record
- Fire Safety SOP
- Record of feedback taken as per QA Dte. Forms and actions taken on the feedback
- Action Taken on the Previous visit of Accrediting Council/Internal Quality Audit Visit (as applicable)
- Record of Alumni Donations
- Community/Services record
- Evidence of Annual Budget requests from the institution to Finance Dte. for last 03 year