Musaliar College of Engineering & Technology Pathanamthitta

Internal Quality Assurance Cell (IQAC)

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Introduction

1.   The Musaliar Education Trust, a charitable trust, was founded in the year 2001 by a group of well established Administrators, educationalists and technocrats having vast experience in the Educational, Engineering, Administration and Management fields. The Trust started an Engineering Institution, 'Musaliar College of Engineering and Technology' on a scenic hillock over an area of 12.5 acres with unique teaching-learning environment in 2002 with the aim ofimparting quality engineering education to future generations,specially for the upliftment of the socially, educationally and economically challenged sections of society.

2.   Monitoring of the various activities and taking timely corrective measures wherever required for the betterment of various systems was the strength of the institution. Quality monitoring in various forms existed in the institution eversince its birth. However a formal 'Quality Assurance System'-the 'Internal Quality Assurance Cell' (IQAC) - of Musaliar College of Engineering and Technologywas established in 2015 in line with the guide lines of National Assessment and Accreditation Council.

Objective

3.   The objectives of IQAC are:-

(a)   To develop a system for conscious, consistent and catalytic action to improve the academic and administrative performance of the institution.

(b)   To promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices.

(c)   To implement the Outcome Based Education in all the departments of the institution.

Functions

4.   The main functions of IQAC are:-

(a)   Development and application of quality benchmarks.

(b)   Defining parameters for various academic and administrative activities of the institution.

(c)   Budgeting and monitoring the implementation of approved budget.

(d)   Quality assurance of all capital and revenue works.

(e)   Facilitating a learner-centric environment conducive to quality education and faculty maturation to adopt for participatory teaching and learning process.

(f)   Collection and analysis of feedback from all stakeholders on quality-related institutional processes.

(g)   Dissemination of information on various quality parameters to all stakeholders.

(h)   Organization of inter and intra institutional workshops, seminars on quality related themes and promotion of quality circles.

(i)   Documentation of the various programs/activities leading to quality improvement.

(j)   Acting as a nodal agency of the Institution for coordinating quality-related activities, including adoption and dissemination of best practices.

(k)   Development and maintenance of institutional database through MIS for the purpose of maintaining /enhancing the institutional quality.

(l)   Periodical conduct of Academic and Administrative Audit and its follow-up.

(m)   Actions to implement the Outcome Based Education in all the departments of the institution.

(n)   Knowledge enrichment and career planning of staff.

(o)   Preparation and submission of the Annual Quality Assurance Report (AQAR) as per guidelines and parameters of NAAC (post accreditation activity).

Composition of the IQAC

5.   The composition of the IQAC would be as below:-

Sl No	Designation	Appointments	Remarks
1	Chairman	Head of the Institution	Principal
2	Management Representative	Chairman/Treasurer, MET	As per requirement
3	Coordinator	Dean/HoD	
4-10	Department Representatives	Asso/Asst Professors	One act as Member Secretary
11	One nominee from Alumni*		Faculty working in MCET/ Alumni president/secretary
12	One nominee from Employers* /Industrialists/stakeholders		
13	One nominee from PTA*		PTA Vice president/ one nominee of PTA executive
14	One nominee from Students *		Chairman/Vice chairman of Students Union

*The nominated members shall hold the responsibility for a period of two years, normally.

IQAC Meeting

6.   The IQAC should meet at least bimonthly. There should be minimum three meetings in a semester as below:-

(a)   Before commencement of the semester for planning semester preparations.

(b)   Mid Semester meeting for analysis of test results and review of academic improvement programs.

(c)   After the semester for analysis/assessment of previous semester activities and take corrective actions wherever required.

7.   The minimum quorum for the meeting shall be 50% of the total number of members. The agenda, minutes and Action Taken Reports are to be documented and maintained electronically in a retrievable format.

8.   All functions of IQAC be performed during the above meetings and if required additional meeting be held as per the requirements.

Department Quality Assurance Cell (DQAC)

9.   Department Quality Assurance Cell be formed at each department for implementation of policies/guidelines issued by IQAC as well as to ensure quality of various departmental activities. DQAC to organise meetings regularly as mentioned below in respect of a semester and minutes of meetings need to be forwarded to IQAC.

(a)   Ensuring pre-semester preparations, like justified subject allocation in terms of knowledge and experience, course planning, lesson plan and mapping of Course Objectives, tools for achieving Course Objectives, adequacy of academic requirements, lab preparedness etc.

(b)   Before scheduled class tests to ensure adequate syllabus coverage, quality of question papers, assignments etc.

(c)   To analyse the results and review teaching-learning process to make recommendations.

10.   DQAC shall forward suggestions and improvements made in the respective department to IQAC for analysis and implementation at other departments. The suggested structure of DQAC is as below:-

Sl No	Designation	Appointment	Remarks
1	Chairman	Head of Department	
2-4	Three Faculty members	Asso/Asst Professors	One nominated as Secretary
5	One lab staff		As per requirement only
6	One nominee from each class		As per requirement only
7	PTA representative of each class		As per requirement only
8	Class Advisors		As per requirement only

IQAC Initiatives

11.   Ever since its formation, IQAC has taken many initiatives for improving Academic systems, infrastructure maintenance, Environment improvement and in Administration. The details are in the subsequent paragraphs.

Academics

12.   <u>Pre-Semester Preparation</u>.   IQAC insisted on completing the pre-semester preparations and ensuring the same by verifications. The pre-semester preparations included:-

(a)   Subject allocation according to the specilaisation/expertise and difficult subjects to experienced faculty.

(b) Issuing of Academic Calendar.

(c) Preparation of Time Table.

(e) Preparation of Lesson plans.

(f) Lecture notes / Resource materials.

(g) Questions bank.

13. <u>Standardising Teaching-Learning method</u>. An effort was put in standardising Teaching-Learning methods following Blooms Taxonomy in which following aspects are taken care:-

(a) Defining Course Objectives (CO) and Program Objectives (PO).

(b) Teaching and evaluation system to assess the level of achievement of COs & POs.

(c) Use of appropriate teaching materials including NPTEL videos and other resources.

(d) Following standard text books.

(e) Organising tutorials and practical exercise with more faculties.

(f) Defining structure of lecture to orient, teach and consolidate in which:-

(i) First 5 mts – Recapitulation by asking questions to students at random.

(ii) Next 45 mts – Topic for the day.

(iii) Last 5 mts – summing up of the lecture by a student at random.

14. <u>Evaluation System</u>. Assessing the assimilation by students an important factor of Teaching-Learning system. While routine lecture has a very limited scope of checking assimilation, Structured examinations are the common direct methods for checking the assimilations. Following are the initiatives by IQAC for evaluations:-

(a) <u>Good Morning Test.</u> The University prescribes two examinations in a semester for internal assessment. The first examination is almost 1 ½ months after the class start, which is too late for identifying the potentials of students and taking appropriate remedial actions for weak students. Hence the 'Good Morning Test' is introduced to assess the assimilation status of students after 2 weeks of class start. The salient features of 'Good Morning Test' are as below:-

(i) The first hour of every day is earmarked for 'Good Morning Test'.

(ii) Only one subject per day and the syllabus for the test is previous one weeks coverage.

(iii) Four to five probable questions are given in advance of which selected few questions are asked in the test.

(iv) Students are to write all tests of a Course in one book let.

(v) Correct answers are dictated during the debrief session after evaluation and the students are to copy the correct answers to their answer books which serves as a reference book during the University examination preparation.

(vi) Students with above average, average and below average status are identified and appropriate methods are employed for enhancement of knowledge.

(b)   <u>Class Tests.</u>   Two class tests are conducted as per University guidelines for awarding internal marks. IQAC issued guidelines for framing the questions of class tests so that the quality of questions are ensured in terms of difficulty value, meeting COs, Syllabus coverage, etc through the Department Quality Assurance Committee (DQAC).

(c)   <u>Assignments.</u> Topics which are important and could not be covered in Good Morning /Class Tests are normally given as assignments. Here also, the quality of assignments is ensured.

15.   <u>Mentoring.</u>   One faculty member is nominated as Staff Advisor for not more than 20 students to mentor the students with a motto - "Know Your Students". The Staff Advisor acts as a 'Friend, Philosopher and Guide' to students in their academic and non-academic areas. The system is aimed to achieve the following:-

(a)   Closely monitor students' progress and identify their strength and weakness.

(b)   Render advises to promote their talents.

(c)   Organize academic exercises/remedial/Tuition/coaching classes as per their performance and capability.

(d)   Counsel students wherever required in academic and non-academic matters.

(e)   Keep close liaison with parents on sharing information.

(f)   Appraise the HoD/Principal wherever required.

16.   <u>University Examination Feedback System.</u>   Immediately after the University Examination, the questions are to be analysed and a preliminary report is to be submitted by the respective faculty in a specified format with prediction of expected result. Again on declaration of results, a detailed analysis is to be carried out by the respective faculty bringing out whether the result is commensurating with the efforts taken, if not reasons for the mismatch or low results. This has brought in accountability in the teaching-learning system.

17.   <u>Knowledge Enrichment Programs</u>. IQAC organizes knowledge enrichment programs as per the needs of faculties, staff and students.

(a)   <u>Faculty Development Programs.</u>   IQAC facilitates faculties to take part in knowledge enhancement programs either internally or externally. Eight such programs were organized for faculties during last 3 years. In addition most of the faculties were motivated to attend Faculty Development Programs at other institutions.

(b)   <u>Non-teaching & Office staff</u>.   IQAC organized eight programs are Technical and Non-technical staff which included courses on CNC machine, MS office, Auto CAD etc.

(c)   <u>Students</u>.   Certain expert lectures are also organized by IQAC for the benefit of students for updating them with the current trends in technology.

18.   <u>Class room projection system</u>.   Almost all class rooms are fitted with projection systems for the use of ICT enabled lectures. This was achieved due to the initiatives of the IQAC and contributed positively in improving quality of lecture classes.

Infrastructure

19.   IQAC collates the requirements of infrastructure augmentation, maintenance including Lab requirements from the user departments/sections during the month of Oct – Nov and present to the Governing Body for approval. Procurement/maintenance is carried out as per priority.

20.   Procurement System. Guidelines for procurement have been formulated with the initiative of IQAC. As per the guidelines annual requirements are projected as budget requirements by the users and are examined by Governing Body and budget allocation is made accordingly. The Procurement Board takes care of the requirements once it is approved at appropriate level.

21.   Inventory Management.   Inventory Management System has been revamped with detailed stock verification including serviceability check/categorization. Expenditure on up-gradation/component replacements are reflected on respective equipment to reveal a true picture. Annual stock verifications are carried out regularly.

22.   Maintenance System: Maintenance procedure has been streamlined into three areas namely:-

   (a)   Civil works, Plumbing and furnishers.

   (b)   Electrical works

   (c)   IT & Communication Systems.

The local maintenance team in each category takes care of the maintenance wherever possible and jobs beyond the scope of the local team are out sourced as per the procedures laid down.

Environment

23.   Special initiatives were taken in keeping the environment neat and clean. More number of trees are planted during every year to keep the campus clean. Waste management is done in more scientific way by means like Biogas plant. Proper dust bins are provided at all prominent places and rooms to keep the area clean.

Administration

24.   Organization.   Organizatin of the College, Departments and Sections are refined by the IQAC and issued. The following are other initiatives in the governance area:-

   (a)   HR Management.   Documentation of personnel is improved with introducing service books, effective monitoring of attendance with biometric system, leave management etc. Annual Performance Appraisal Reporting System of faculties and other staff has been revised. The new system takes a holistic approach of assessment.

   (b)   Staff Hand book.   A staff handbook has been prepared as a ready reference on administrative matters. The hand book covers code of conduct, duties and responsibilities, Recruitment policy, Discipline, Leave policy, travel policy, sexual harassment at work place and Annual Performance Appraisal System.

   (c)   Accounting Systems: Guidelines for accounting system has been formulated and issued. Regular internal auditing has been instituted.

Monitoring System

25.   Various improvement systems are introduced by IQAC to fulfill its functions and monitoring the implementation very important. Periodical audits are carried out IQAC to assess the implementation and effectiveness. Feedback systems of different nature with standardized formats are used for data collection. Formats used are attached.