IIT MADRAS IS AWARDED ISO 9001

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The Corporate Sector, world over, has recognized the importance of Quality in their products, processes and services for achieving and sustaining competitiveness. During nineties, nearly 3000 Indian companies sought and obtained ISO 9000 Certification. This has not only helped them to strengthen internal working but also facilitated in having a competitive edge in the global market. After the manufacturing sector, the service sector such as hospitals and hotels have also opted for getting ISO-9000 Certification. Education sector was rather slow to realize the potential of ISO 9000 as a step to achieve and subsequently ensure Excellence and Quality. IIT-Madras being an autonomous and unitary institution, it has both the responsibility and control over the design of academic systems and research and development processes. In September 96, the Quality Policy for the Indian Institute of Technology-Madras was enunciated.

The **Quality Policy** highlights main functions of IIT-Madras and reads as :

- Impart Quality Education in Technology and Science for Professional Excellence and Instill Commitment to Sustainable Development.
- Perform World Class Research to Advance the Frontiers of Knowledge.
- Provide Innovative Solutions through Research, Consultancy and continuing Education for satisfying Current and Future Industrial and R & D Needs.
- Extend Expertise towards improvement in the Quality of Technical Education.
- Achieve Excellence in the Support Services of the Institute through Continuous Improvement and Teamwork.

The Quality Policy was arrived at in participative fashion. It addressed the desire of the Institute to continue to excel by objectively and collectively stating the foundations of all of its activities. It also reflected various changes, transformations that have taken place in the Institute during the past forty years. Some of the important changes are listed as below -

- Changes in UG and PG Course Duration;
- Introduction of New Academic Disciplines;
- Increased Number of Students at UG and PG Level;
- Changed Governmental Funding Pattern;
- Introduction of User Oriented Programs to meet Industry Requirements and
- Substantial & Periodic Changes in Existing Course and New Syllabus Design.

To implement each of these changes

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one needs to undertake systematic and detailed planning of various activities. This resulted in generation of large number of additional or modified documents for various processes and procedures. Apart from generating and maintaining documents to describe activities and carrying out activities according to the written documents, verification of the same is one important step in ISO-9000 process. The main or key feature of the IIT has been its Academic Program and the Research and Consultancy activities undertaken by the Faculty and Staff of the Institute. Sections directly dealing with the academic and research activities were identified and considered for the ISO-9001 certification at the first instance. Toning and interfacing work of various key sections was necessary, as the organization has grown tenfold in 40 years in terms of all the operations.

The main stakeholder for the academic program is the student of the Institute who is the internal customer. In the teaching-learning process, Central Library, Central Workshop and Computer Center contributes substantially to student's knowledge and skills. Additionally academic section maintains student's academic records. It also keeps records pertaining to the efficacy of the teaching or course content and indirectly the quality of teaching or knowledge disseminated to the student. Thus, these four sections formed one cluster towards the main objective of IIT. With the increased student strength or changes in pattern for degree programs, all the subsystems mentioned above must upgrade themselves to address the critical issues pertaining to various resources - human, financial and infrastructure. With the advances in technology, there are major changes, which need to be carefully addressed. These could be, for example, arising out of extensive usage of digital libraries, extensive use and applications of NC--CNC machines or Web and PC based courses, communication networks etc.

For the remaining two aspects, the main stakeholder is the Industry representing external customer. In recent times, IIT has initiated User Oriented Program to cater to the human resource development needs of the Industry. Such a post graduate program involves close interaction between key Industry and allied departments of IIT. The participants are mainly sponsored by the Industry and invariably more than one academic department of IIT is involved in running the program. Such full-fledge academic program needs different design with focus on Industry requirements compared to the conventional academic programms. It was possible to define customer satisfaction as the objectives were defined much sharply. User Oriented Program was thus included to demonstrate design capability as per the requirement of ISO-9001.

The next aspect of the Research which IIT deals with is Sponsored Research and Consultancy activity undertaken by the Faculty and Staff. The problem solving ability and expertise available at the IIT is the main highlight of this part of work carried out by the Faculty and Staff. The Center for Industrial Consultancy and Sponsored Research (IC & SR) acts as a nodal agency and facilitator in this work. IC & SR creates database of all the active researchers in the Institute with regard to the expertise available. It also helps them administratively in procuring the equipment and for hiring the staff. In addition to providing review mechanism

for major industry cell projects, it is also entrusted with the responsibility to formulate policies for smooth conduct of various projects.

Starting with the organizational sturcture and the decision matrix tree, objectives and realizable and measurable quality parameters for each of the sections were developed. Inter linking connections between the sections and the apex structure of the Institution was established. In all the cases, the persons who actually deal with the activities did a systematic generation of procedures and documents largely based on well-established systems of the past, at the section level. It has helped to streamline the processes and workflow in the concerned units. The Internal Quality Audits and the Certification Audit conducted by RWTUV resulted in refinement of many of the existing systems and procedures.

Internally, voluntary compliance does bring about self-imposed discipline in the system and ownership of the cause by the participants. Externally, the main aim of IIT-Madras efforts in ISO-9000 was bridging the gap between Industry and Education in terms of Quality so that IIT-M output's relevance and efficacy is immediate. With an active involvement of more than two hundred faculty and staff of the Institute, I.I.T. - Madras was awarded ISO-9001 Certificate by RWTUV, the German certifiing agency, in March 99. Initially Certificate is applicable to six key sections of the Institute that were involved in this exercise. As a compliance of the requirements, RWTUV has cerfitied that ***"IIT-Madras has estalished and applies a quality system for Design of Academic and User Oriented Programs; Support Services : Library, Computer Centre, Workshop, Industrial Consultancy & Sponsored Research."***

It is believed that Indian Institute of Technology - Madras is the first Academic Institute of its kind, which is the recipient of this honour. With an able and active support of the top management and administration, Dr. S. S. Gokhale, Professor and Head of Aerospace Engineering served as the Management Representative and spearheaded the ISO-9000 efforts. Dr. K. V. Krishnamurthy, formerly General Manager, R & D, Sundaram Fasteners assisted IIT-Madras as a consultant on this project.

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