

ACTION PLAN OF THE INSTITUTE

The Institute has prepared an action plan for the effective implementation of TEQIP. Institute has received **200 lacs** for the project till date, out of which expenditure already made and committed (March 2014) is of **130 lacs** and procurement plan is ready with the Institute of **520 lacs** which will be implemented phase wise as per the outcome of the newly framed curriculum. The Institute along with the other TEQIP institutes of the state has implemented the Choice Based Credit System for the engineering courses as per the guideline of the AICTE. Outcome Based Education is planned following for a systematic approach. The Institute has planned activities around the following seven strands to achieve the TEQIP objective at the Institute level and action plan for the same is as follows

1. Curriculum Design

Since curriculum is central to educational transformation, the existing curriculum is redesigned with a focus on 'Learning Outcomes'. This exercise will also involve revisiting the framework of courses, introducing some industry related modules, to enhance the employability of the students. Since there is now a growing consensus on integral education, technical curriculum will also be strengthened with the introduction of the 'Choice- based Credit System' and some programmes related to liberal arts and social sciences. The faculties of the Institute have actively participated in reframing.

The teachers of the Institute have also undergone a specially designed training to effectively implement the new curriculum. As the first semester has already started and many activities like curriculum design, workshop for the faculties teaching first semester students, etc are completed. It is proposed to sign MoU with Knowledge Consortium of Gujarat(KCG), Gandhinagar to promote the activity at the Institute level. The action plan for the activities to be undertaken soon is prepared, as detailed below, and the estimated overall budget of Rs. 25 lacs.

Action Plan of this Strand

- The exercise for revising the curriculum of the second and the third semester will commence in November 2013. About ten teachers from of the institute will participate in this programme.
- About ten teachers will participate in a programme for designing the assessment tools and instructional materials for the first semester scheduled to be held in November 2013.
- Capacity building programmes will be organised for about ten faculty members for effective implementation of the active learning strategies.
- Design of courses from Semester 3 - 4 for all the programs during December/January 2014 and average 12 faculties will be participating for all the branches of the Institutes.

- Orientation program for faculty members of all the courses is planned in February /March 2014.

2. Research, Consultancy, Incubation, Patents

It is widely acknowledged fact that quality research is required to complement quality teaching. It is the need of the hour to enhance research competence of the faculty and encourage them for quality research through incentives. The faculty would be guided for undertaking higher studies, including PhD and publishing papers in a sustained manner. It is also deemed necessary to orient them regarding intellectual property rights and filing of patents with respect to their research. It is proposed to sign MoU with Institute for Plasma Research (IPR), Ahmedabad to promote the research activity at the Institute level. **Estimated cost for this strand's activities is about 25 lacs.**

The following will be the action plan for this strand:

- e-journals, related to all UG and PG programmes, will be subscribed in all institutions by December 2014.
- Enrollment of minimum 5 faculties for PhD and 10 for M. E./M. Tech. by November / December 2014 from the Institutes under the TEQIP Scheme.
- Organization of workshops for the research and intellectual property rights by November/December 2013 and 40 faculty members from different Institutes will be participating in these workshops.
- Deputation of 05 teachers for Post-doctoral work by the end of March 2014.
- Introduction of a scheme of rewards for faculties, students, and institutes for doing quality research.
- Provision for financial support to register Indian patents, and deputation of about 80 faculty members to attend National/International conferences by Dec 2014.

3. Training and Capability Building

To enhance teacher quality, faculty development programs are required in terms of the updating of knowledge content and innovative pedagogical practices like Active Learning Methods (ALM) to transact the new curriculum. It is common knowledge that use of Information and Communication Technology in education as a pedagogical tool has transformed education. The faculty would be oriented and trained to integrate the use of Information & Communication Technology (ICT) as a pedagogical tool has transformed education. The faculty would be oriented and trained to integrate the use of ICT in the classroom teaching, student assignments and projects. Short term training programs are of vital significance and the faculty should be encouraged to attend the same to enhance their competence in terms of content knowledge and pedagogical innovations. It is proposed to sign MoU with Indian Institute of Technology (IIT), Gandhinagar,

Ahmedabad to promote the activity. Estimated cost for this strand activity is about **26 lacs**.

The action plan for this strand is as follows:

- Training/workshops will be conducted in collaboration with IIT Gandhinagar
- All faculty members will undergoes need based training programme by March 2014 .
- Training Laboratory Assistants/Technicians for well equipped and managed laboratories for the laboratory assistance of the Institute by December 2013.
- Training administrative staff for modern office practices and customer friendly approach by March 2014 .

4. Extension (Placement & Industry Interaction)

As employability of engineers is a major concern in technical education, it is high time that the engineers passing out of the system should have appropriate training to render them readily employable. Measures for enhancing the number of placements will be undertaken. Industry Interaction will be integrated into students' education for their hands-on training in the subject and application of the same. It is proposed to sign MoU with Knowledge Consortium of Gujarat(KCG), Gandhinagar to promote the activity at the Institute level. Estimated cost for the activities of this strand is about **12 lacs**.

The plan of activities of this strand is as follows:

- Develop fully fledged placement cell at the Institute level with all facilities
- Prepare institute brochure and dedicated website
- Prepare detail industry list of local/State/National levels & identifying region wise industry /contact person for Industrial Define Project(IDP)/Training/Expert by November 2013
- Arrange expert lecture/talk on soft skills development or counseling of students at least once in a week. All Institute students is target group
- Organize industry institute interaction meet zone wise once in a year.
- Arrange 1/2 days short training programs on career avenues/ skill development at least once in a month for the students.
- Alumni Association activities to be established at Institute level.
- IIM students are given project on Improving Employability Quotient for all TEQIP/Non-TEQIP Institutions. Their recommendations will be incorporated in this action plan.
- Student Team of the Institute will work with the team of IIMA students

- Arrange a student's Industrial Define Project(IDP) / User Define Project(UDP) exhibits involving industry personnel once in a year for final years students

5. Academic and Administrative Audit

World over, education processes and norms of quality are benchmarked on well defined criteria. Institutes and programs are evaluated on the basis of documented facts. India has already adopted such norms of standardized best practices and accreditation has hence, emerged as a major theme in the debate on quality and excellence in Technical Education. As accreditation is the order of the day, the thrust would be on accreditation for all TEQIP Institutes. For this, the institutes will be facilitated for requisite training for their appropriate accreditation. Measures would be taken to put in place a system of Academic and Administrative Audit (AAA) in the State. It will serve to complement the National Board of Accreditation (NBA) and work as continuous and concurrent audit. It is proposed to sign MoU with Knowledge Consortium of Gujarat (KCG), Gandhinagar to promote the activity. Estimated cost for the activities of this strand is about **12 lacs**.

The action plan for this strand is as follows:

- Apply for accreditation of some UG programmes by National Board of Accreditation by October 2013.
- The experts should be trained to access the GBAP-AAA score
- A separate GBAP-AAA cell with necessary support staff and requisite infrastructure is constituted.
- Apply for GBAP-AAA score in a span of two to three years and assessment of strengths and weakness for each department.
- The accreditation should be made compulsory every five years for each department.

6. Assessment

Assessment is the mechanism through which the quality of education is at times determined and it is this part of the process of education. To ensure that quality learning and quality teaching are evaluated on the crucible of quality assessment, the process and norms of examinations require to be conceptualized in the context of the technological advancements and global best practices in this regard. Under TEQIP II, Assessment has been re-defined keeping in view the new curriculum and pedagogical practices as well as the learning outcomes and graduate attributes defined by NBA. It is proposed to sign MoU with Knowledge Consortium of Gujarat (KCG), Gandhinagar to

promote the activity at the Institute level. Estimated cost for activities of this strand is about **25 lacs**.

Plan of activities:

- ODOLE (On Demand Online Examination) planned to start and Institute faculty will be organizing and conducting the exam.
- Preparing of the Question Bank for final examination of the first semester by January 2013. Institute faculties will be participating in developing question bank.

7. Institute Management and Social Networking

Every transformation has a lot to do with the quality of leadership. Educational reform is no exception and hence it would be ideal to strengthen leadership practices in technical education. Institutes with appropriate educational management practices are likely to perform better against constraints and therefore it is the key to enhancement of quality in education. With this objective in view, the Principals/Heads of Institutes will be trained accordingly at Indian Institute Management(IIM), Ahmedabad for addressing the needs of leadership at TEQIP Institutes. There is a virtue in tapping the potential of social networking on the internet for the educational objectives. The institution's willingness to reach out to the students through social media would serve to engage them better. It is proposed to sign MoU with Indian Institute of Management (IIM), Ahmedabad, to promote the activity at the Institute level. Estimated cost for these strand activities is about **2 lacs**.

The action plan:

- Training Heads of Institutions /Departments in advanced administration and management with effective teamwork. Principal and all Head of Department(HOD) will be participating in the training program
- Study various activities in engineering colleges and propose training/good governance practices. Principal and All HODs will be participating in the training program.
- Training Administrative staff for modern office practices and customer friendly approach.
- Training Librarians for strengthening the library and improved library management. Librarian of the Institute will be trained.