

**TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME-II  
(TEQIP-II)**

**Revised Institutional Development Proposal  
for  
Sub-Component 1.2: Scaling-up Postgraduate Education  
and  
Demand-driven Research & Development and Innovation**

**Submitted by**



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## **The Foundation:**

The journey of a thousand miles starts with one little step. The idea of establishing a Technological University in Konkan region as an instrument of economic development was conceived by the Government of Maharashtra in 1981. Considering the report of an Expert Committee, the Government established Dr. Babasaheb Ambedkar Technological University; *vide* Act No. XXII of 1989. The University is situated at Lonere in a rural setting, which provides an environment, ideal and conducive for nurturing academic progress, pursuit of research and contemplation. The University has well structured governing mechanisms as provided in the University Act. The **distinct character** of the University is its **unitary status** with **entire Maharashtra as its area of activity**.

## **Vision, Mission and Values:**

Commensurate with the provisions of the University Act, the university has the following strategic intent in terms of vision, mission and values:

**Vision:** To provide integrated technology education of the highest quality at all levels for overall economic development and for transferring the knowledge, experience and expertise to the backward region and become a leading Centre of Excellence in the field of Engineering, Technology and Science as a real ‘Seat of Learning’ with national character and international outlook.

**Mission:** The university is committed to provide quality technical education, research and development services to meet the needs of industry, business, the service sector, and the society at large.

**Our Core Values:** Strength, Endurance, Openness, Effectiveness, Commitment to Quality.

## **Strategic Planning:**

### **SWOT Analysis**

Recently, an elaborate assessment of the university in terms of its strengths, weaknesses, opportunities and threats (SWOT analysis) was carried out through participation of various stake-holders. A consolidated list of its major strengths, weaknesses, opportunities and threats was then prepared.

**Strengths:** The strengths of the university include its sprawling campus of 475 acres away from hustle and bustle of cities, autonomy and well-structured governance, UGC recognition under 2(f) and 12(B), well qualified and stable faculty, presence of academic systems like credit-based continuous assessment system, transparency in evaluation, etc.

**Weaknesses:** The weaknesses include frequent power cut-offs, inadequate hostel facility, remoteness of location, lack of campus amenities such as schooling, hospital, etc.

**Opportunities:** The opportunities for the university include opportunity of expansion in postgraduate education, research and innovation; industrial collaborations for R&D projects, consultancy, continuing education for their employees; public-private partnership, etc.

**Threats:** There are threats like attracting and retaining talented faculty, competition from foreign universities and private universities, etc.

### **Strategic Plan**

Based on the SWOT analysis, the strategic plan was prepared. Accordingly, some of the broad objectives for the next 5-10 years will be as follows:

- To expand facilities for undergraduate and post-graduate education by increasing intake capacity of existing programmes on immediate basis and by starting new programmes at a later stage.
- To enhance doctoral research by giving fellowships to PhD students
- To carry out sponsored research projects from industry leading to innovation in products and services
- To establish Technology Business Incubators (TBIs) on the campus
- To increase consultancy services and number of problem-solving projects from industry
- To introduce entrepreneurship development programmes and motivate students to become entrepreneurs
- To enhance training programmes and continuing education programmes for industry and academia
- To start part-time and joint M.Tech. programmes from current academic year.
- To start five-year integrated M.Tech. programme on the lines of IITs from current academic year

### **Specific Objectives under TEQIP-II**

Based on the above Strategic Objectives, we then went on to derive **Specific Objectives** for the TEQIP project. We would like to mention here that these objectives are not just for the project duration but we will continue with them even after the completion of the project as explained later under Item 2.14 (item on sustainability). The specific objectives are as follows:

- To increase intake capacity of existing 6 M.Tech. programmes from 18 to 36.
- To admit 10 full-time doctoral students in various disciplines by giving them fellowships
- Each department will seek funding support for research work from agencies like DST, UGC, AICTE, BENS, MNES, etc.
- Each department will take at least one collaborative R&D project/consultancy project from industry leading to innovations and increase in IRG.
- To involve M.Tech. and doctoral students in the above projects
- To involve 3<sup>rd</sup> year and final year UG students in the above projects
- To conduct need-based training and continuing education programmes for industry and increase IRG.
- To restructure PG curricula to align them with market requirements
- To impart need-based training to faculty in pedagogy and subject/domain knowledge
- To impart need-based training to technical and supporting staff and boost their morale.
- To enhance finishing school activity for SC/ST/OBC and academically weak students and thereby improve their transition rate, pass rate, skills and employability.

### **Current Status of the Project & Requirements of Additional Funds**

All the TEQIP activities are in full swing and the initial targets will be completed by December 2015. As a result, the initial allocation of Rs. 12.5 crores will get exhausted. Thereafter, additional funds of Rs. 5 crores will be required to meet the revised targets to be achieved till the end of the project, i.e. October 2016. The activity-wise justification for the additional requirement of funds is given below.

**Procurement:** Currently, about 100 research scholars, including 23 full-time research scholars taken under TEQIP, are pursuing their Ph.D. at this university. It will be necessary to add some more equipment to cater to their research projects. The additional funds as mentioned in the chart above will be of great help in this direction.

**Assistantships:** Till-date, 23 full-time research scholars have been admitted for Ph.D. under TEQIP. About 15 more full-time research scholars (under TEQIP) are proposed to be added during the next academic year. Besides, 60 non-GATE M.Tech. students will keep on receiving fellowship through TEQIP. Additional funds as mentioned above will help us to add 15 more full-time research scholars as mentioned above.

**R&D:** It is proposed to hold department-wise national as well as international conferences during the next academic year. Besides, the number of PG/PhD students presenting their papers in national/international conferences is increasing day by day, Such students will have to be provided travel grant support. The additional funds as mentioned in the chart above will be of great help to fulfill these requirements.

**Faculty & Staff Development:** The faculty and staff members will keep on receiving financial support for various need-based training and development programs in-house as well as outside. Besides, large number of faculty members are expected to present their research papers in overseas conferences. The additional funds as mentioned in the chart above will be of great help to fulfill these requirements.

**Industry-Institute Interaction:** It is proposed to organize large number of programs for enhancing employability/placement of the students. Such programs will include diagnostic tests, soft-skill and aptitude development, etc. Besides, it is proposed to organize industry-institute meets. The additional funds as mentioned in the chart above will be of great help to fulfill these requirements.

**Management Capacity Development:** It is proposed to organize need-based MDPs on the campus of SoM (IIT-B) and IIMs. The additional funds as mentioned in the chart above will be of great help to fulfill these requirements.

**Institutional Reforms:** ISO certification work is in its concluding stages. Next cycle of revision of curricula will be undertaken from the ensuing academic year. Besides, applications for NBA accreditation for the departments which have recently become eligible will also be submitted. The additional funds as mentioned in the chart above will be of great help to fulfill these requirements.

**Academic Support for Weak Students:** It is proposed to organize large number of programs for enhancing employability/placement of such students. Such programs will include diagnostic tests, soft-skill and aptitude development, etc. The additional funds as mentioned in the chart above will be of great help to fulfill these requirements.

The requirement of additional funds for achieving the revised targets is given in the following chart.

**Proposal for Revised Fund Requirement till the end of the project (till 31<sup>st</sup> Oct. 2016)**

<b>Rs. in lakhs</b>				
<b>Sr. No</b>	<b>Activities</b>	<b>Funds allocated initially</b>	<b>Additional funds required to achieve the revised targets</b>	<b>Total funds required for the entire project</b>
1	Infrastructure improvements for teaching, training and learning through procurement of goods, equipment, furniture, books and LRs, software, minor items	562.5	225	787.5
2	Providing Teaching and Research Assistantships <ul style="list-style-type: none"> <li>• Fellowship to 30 full-time PhD students</li> <li>• Scholarship to 60 non-GATE M.Tech. students</li> </ul>	250	100	350
3	Enhancement of R&D and institutional consultancy activities	62.5	25	87.5
4	Faculty and Staff Development	125	50	175
5	Enhanced interaction with industry Industrial visits, industry meets, aptitude/soft skill/diagnostic training for enhancing employability/GATE coaching, etc.	62.5	25	87.5
6	Institutional Management Capacity Enhancements: MDPs for senior faculty, Study tours, etc.	25	10	35
7	Implementation of institutional Reforms	12.5	5.0	17.5
8	Academic support for weak students: Finishing schools, Soft skill training, Diagnostic tests, etc.	25	10	35
9	Incremental Operating Cost: Consumables, Stationary, Vehicle hiring charges, TA/DA, etc.	125	50	175
<b>Total Rs. in lakhs</b>		<b>1250</b>	<b>500</b>	<b>1750</b>

**To Conclude:**

This university is fully committed to realize its dreams and more particularly, the specific project objectives. With additional funding support, the university will be able to achieve more than what it had initially planned. This will further boost the growth of this fledgling university.

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