

# **TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME [TEQIP]**

## **PHASE – II**

### **PROJECT IMPLEMENTATION PLAN**

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**GOVERNMENT OF INDIA  
DEPARTMENT OF HIGHER EDUCATION  
MINISTRY OF HUMAN RESOURCE DEVELOPMENT  
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The contents of this document are subject to change.

## ABBREVIATIONS AND ACRONYMS

<b>AICTE</b>	All India Council for Technical Education
<b>BoG</b>	Board of Governors
<b>CAAA</b>	Controller of Aid, Accounts & Audit
<b>CABE</b>	Central Advisory Board of Education
<b>CAG</b>	Comptroller & Auditor General
<b>CAGR</b>	Compound Annual Growth Rate
<b>CD</b>	Compact Disk
<b>CDC</b>	Curriculum Development Cell
<b>CE</b>	Continuing Education
<b>CEP</b>	Continuing Education Programme
<b>CFI</b>	Centrally Funded Institution
<b>CII</b>	Confederation of Indian Industry
<b>CoE</b>	Centre of Excellence
<b>CPA</b>	Central Project Advisor
<b>CSS</b>	Centrally Sponsored Scheme
<b>DEA</b>	Department of Economic Affairs of GoI
<b>DHE</b>	Department of Higher Education in MHRD of GoI
<b>DMF</b>	Disclosure Management Framework
<b>DTE</b>	Director of Technical Education / Directorate of Technical Education
<b>e-FMR</b>	Electronic Financial Monitoring Report
<b>EAP</b>	Equity Action Plan
<b>EMF</b>	Environment Management Framework
<b>EoI</b>	Expression of Interest
<b>FICCI</b>	Federation of Indian Chambers of Commerce and Industry
<b>FMM</b>	Financial Management Manual
<b>FMR</b>	Financial Monitoring Report
<b>GATE</b>	Graduate Aptitude Test in Engineering
<b>GoI</b>	Government of India
<b>HoD</b>	Head of the Department
<b>IBRD</b>	International Bank for Reconstruction and Development
<b>ICB</b>	International Competitive Bidding
<b>ICT</b>	Information and Communication Technology
<b>IDA</b>	International Development Association
<b>IDP</b>	Institutional Development Proposal
<b>I-I-I</b>	Industry Institute Interaction
<b>IIIC</b>	Industry Institute Interaction Cell
<b>IIPPC</b>	Industry Institute Partnership Promotion Cell
<b>IIT</b>	Indian Institute of Technology
<b>INDEST</b>	Indian National Digital Library in Engineering Sciences & Technology
<b>IRG</b>	Internal Revenue Generation
<b>IT</b>	Information Technology
<b>KPI</b>	Key Performance Indicator
<b>LCD</b>	Liquid Crystal Display
<b>LRs</b>	Learning Resources
<b>MHRD</b>	Ministry of Human Resource Development
<b>MIS</b>	Management Information System

## ABBREVIATIONS AND ACRONYMS

<b>MoA</b>	Memorandum of Association
<b>MoU</b>	Memorandum of Understanding
<b>NAAC</b>	National Assessment and Accreditation Council of the UGC
<b>NASSCOM</b>	National Association of Software & Service Companies
<b>NBA</b>	National Board for Accreditation of the AICTE
<b>NCB</b>	National Competitive Bidding
<b>NDMA</b>	National Disaster Management Authority
<b>NEC</b>	National Evaluation Committee
<b>NIT</b>	National Institute of Technology
<b>NPD</b>	National Project Director / National Project Directorate in DHE of MHRD
<b>NPE</b>	National Policy on Education of GoI
<b>NPIU</b>	National Project Implementation Unit
<b>NPSAG</b>	National Private Sector Advisory Group
<b>NSC</b>	National Steering Committee
<b>OBC</b>	Other Backward Class
<b>PG</b>	Postgraduate covers both Masters and Doctoral programmes
<b>PIs</b>	Project Institutions
<b>PIP</b>	Project Implementation Plan
<b>PMSS</b>	Procurement Management Support System
<b>QA</b>	Quality Assurance
<b>QAP</b>	Quality Assurance Practice
<b>QCBS</b>	Quality & Cost Based Selection
<b>QIP</b>	Quality Improvement Programme
<b>R&amp;D</b>	Research and Development
<b>R&amp;D&amp;I</b>	Research & Development and Innovation
<b>RFP</b>	Request for Proposal
<b>SC</b>	Scheduled Castes
<b>ST</b>	Scheduled Tribes
<b>SPA</b>	State Project Advisor in the SPFU
<b>SPFU</b>	State Project Facilitation Unit
<b>SPSAG</b>	State Private Sector Advisory Group
<b>SSC</b>	State Steering Committee
<b>SWOT</b>	Strengths, Weaknesses, Opportunities and Threats
<b>TEQIP</b>	Technical Education Quality Improvement Programme
<b>TEQIP-I</b>	Technical Education Quality Improvement Programme, Phase-I (2003-2009)
<b>TEQIP-II</b>	Technical Education Quality Improvement Programme, Phase-II (2010-2014)
<b>ToR</b>	Terms of Reference
<b>TNA</b>	Training Needs Analysis
<b>UG</b>	Undergraduate
<b>UGC</b>	University Grants Commission
<b>UT</b>	Union Territory
<b>VSAT</b>	Very Small Aperture Terminal

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## **Section-1**

### **BACKGROUND**

#### **1.1 Present System of Engineering Education in India:**

Engineering education became a main attraction after 1990 when India became a major contributor to the global IT industry revolution. In the last two decades, many State Governments have encouraged the idea of self-financed Engineering Institutions where State Government does not provide financial support but facilitates the setting up of such institutions. As a result, the Indian system of Engineering Education has become vast and so far a total number of 2388 Engineering Degree institutions have been established.

The exponential growth in Technical Education has, however, not translated into any significant growth in the number of quality Graduates due to restricted availability of qualified faculty. There is currently a wide gap between quality and quantity in Technical Education.

The quality of education and training being imparted in the Engineering Education institutions varies from excellent to poor, with some institutions comparing favourably with the best in the world and others suffering from different degrees of handicaps. There is a gap between the educational standards of the Indian Institutes of Technology (IITs) and other Engineering institutions. The few IITs can neither change the fate of the whole country nor improve the entire Educational System.

Concerted efforts are required to bridge the gap in the quality of education between IITs and other institutions. The IITs have to act as a catalyst in the growth of quality Technical Education in the country, and play a major role in training faculty from the other institutions of the country in both teaching and research.

Some of the concerns in Engineering Education System are listed below:

- a) Faculty shortage/upgradation: The massive expansion of institutions has resulted in an estimated faculty shortage exceeding 30,000 PhD and 24,000 Masters Degree level faculty in 2388 institutions with an enrolment capacity of about 8,41,018 as of 31<sup>st</sup> August 2008. In some of the important disciplines such as IT and related areas, availability of faculty is dismal. The reasons could be:
  - The institutions are not able to attract and retain good quality faculty due to archaic recruitment and promotion procedures, absence of incentives for quality performance, and non-existent faculty development policies in most institutions.
  - Shortage of training opportunities and attention to overall growth of faculty is adversely affecting impartation of quality knowledge and skills to students thereby lowering their employability (only 25% at present). The faculty also lack communication and pedagogical skills.
- b) Industry-Academia collaboration: At present, this collaboration is at a nascent stage. Industry-Academia collaboration involves two key aspects—inputs to curriculum development and internships for students. Increasing Industry-Academia collaboration requires: (i) overcoming the distrust between the two partners; (ii) identification of win-win partnerships in terms of sharing technical knowledge; and (iii) incentives to institutions and faculty for collaboration.

- c) **Obsolete learning infrastructure:** This prevents the development of hands-on skills in Industry-relevant technologies. Many institutions have not upgraded their equipment, laboratories, and learning resources for even more than a decade. There is also the absence of curriculum revisions that focus on practical training and quality instructions, research and development.
- d) **Stagnating research:** Increasing research that caters to the emergent Industry and societal demand for technological solutions results in directly and indirectly improving knowledge and quality of faculty, which in turn would benefit students. A growing number of Indian firms are keen to collaborate with academia to enhance their competitiveness. Active research programmes in engineering institutions would also make meaningful contribution for sustainable technological development in India.
- e) **Attracting students to become faculty:** The attraction of students for a faculty position depends on salary package, perks/facilities and professional career. Industrial sector salaries have increased significantly in the last few years but the increase in faculty salary with comparable experience is marginal. Furthermore, in many institutions, there is a problem in provision and maintenance of standard amenities of accommodation, medical attention, good quality schooling in residential campus, etc. Additionally, other facilities like holiday homes, availability of low interest loans, etc. that is provided by public sector, is lacking in educational institutions. The non-availability of research funds and quality research students is also the cause of concern in the professional growth of a faculty.
- f) **Imbalance in outputs at Bachelors, Masters and Doctoral levels in engineering disciplines:** The number of Bachelor's degree graduates in engineering (BE/BTech) every year has increased exponentially from about 270 in 1947 to 2,37,000 in 2006 which is 12% as per compound annual growth rate (CAGR) stated in study report submitted by Energy Systems Engineering, IIT Bombay in the year 2007. However, as compared to Bachelor's degree, the Masters output has only increased from about 14,000 in 2001 to 20,000 in 2006, which is 7.5%, and the Doctoral output has increased by a mere 2.9% from 1985 to 2005 as per CAGR. The data presented clearly reflects that the output of Engineering Graduates at Bachelor level is disproportionately high in comparison to Masters level and further reduced at the Doctoral level. The under production of Masters and Doctoral degree holders is now seen to be seriously undermining quality of education (due to high proportion of under qualified faculty).

## **1.2 Government of India Initiatives:**

Government of India has adopted the National Policy on Education (NPE-1986 as revised in 1992). The NPE has suggested some major steps to promote efficiency and effectiveness of Engineering Education as quoted below:

- (i) High priority will be given to modernization and removal of obsolescence. However, modernization will be undertaken to enhance functional efficiency and not for its own sake or as status symbol.
- (ii) More effective procedures will be adopted in the recruitment of staff. Career opportunities, service conditions, consultancy norms and other perquisites will be improved.

- (iii) Teachers will have multiple roles to perform such as teaching, research, development of learning resource material, extension and managing the institution. Initial and in-service training will be made mandatory for faculty and adequate training reserves will be provided. Staff Development Programme will be integrated at the State, and coordinated at regional and National levels.
- (iv) Institutions will be encouraged to generate resources using their capacities to provide services to the Community and Industry. They will be equipped with up-to-date learning resources, library and computer facilities.
- (v) Facilities for sports, creative work and cultural activities will be expanded.
- (vi) The Government of India shall assist the State Governments for the development of programmes of National importance.

During 1980s, the Government of India (GoI) and the State Governments had felt the need for revamping the Technician Education System in the country to make it demand-driven with relevant courses in new and emerging technologies, with adequate infrastructure resources, competent faculty and effective teaching-learning processes. The Government of India supported 25 State Governments and Union Territories of Andaman & Nicobar Islands and Puducherry through three Technician Education Projects during 1991-2007, financed by the World Bank, which helped to strengthen and upgrade the system and benefited 552 polytechnics.

The success of these projects encouraged the Government of India and the State Governments to seek more funding from the World Bank for systemic transformation of the Technical Education System with focus on Degree level Engineering Education. In 2002-03, the Government of India with the financial assistance from the World Bank launched a Technical Education Quality Improvement Programme (TEQIP) as a long-term Programme of 10-12 years, to be implemented in three phases for systemic transformation of the Technical Education System. The first phase of TEQIP commenced in March 2003 and ended in March 2009, covering 127 institutions in 13 States. As this project, covering less than 10% of the institutions, was a beginning, the challenge for systemic transformation remains big. To meet the challenge, serious, organized and converging efforts are needed.

Realizing the potential of socio-political and economic benefits from Higher Education in transforming India into a knowledge society, the Government of India has placed a much higher priority on Higher Education in the Eleventh Five Year Plan (2007 to 2012). This change in priority is supported by a proposed Rs.2,70,000 crore allocation to the Education Sector, which represents a four-fold increase over the Tenth Five Year Plan allocations. The Government of India has initiated schemes to ensure universal access to quality Primary and Secondary Education while significantly expanding the capacity of Higher Education to provide educated and skilled workforce for the 21<sup>st</sup> century economy. The Government of India has made a bold move by allocating 30% of the total education outlay to the Higher Education sector and thereby committing to an eight-fold increase over the spending on the Higher Education sector during the Eleventh Five Year Plan period.

The main target for the Eleventh Five-year Plan for Higher Education (Technical and General) is to increase gross enrolment ratio in Higher Education from 11% to 15%. The goal for Technical Education is an annual growth rate of enrolment of 15%. An equitable expansion is aimed at through the establishment of 80 new centrally-funded institutions, over 1000 new Polytechnics, and 370 new institutions in under-served regions.

The proposed Project, second phase of Technical Education Quality Improvement Programme (referred to as TEQIP-II) is fully integrated with the Eleventh Five-year Plan objectives for Technical Education as a key component for improving the quality of Education in existing institutions.

## **Section-2**

### **THE PROJECT**

#### **2.1 Introduction:**

Technical Education Quality Improvement Programme (TEQIP) was envisaged in 2003 as a long-term Programme of about 10-12 years duration to be implemented in 3 phases for transformation of the Technical Education System. As per TEQIP concept and design, each phase is required to be designed on the basis of lessons learnt from implementation of an earlier phase. TEQIP-I<sup>1</sup> started a reform process in 127 institutions. The reform process needs to be sustained and scaled-up for embedding gains in the system and taking the transformation to a higher level. To continue the development activities initiated through TEQIP-I, a sequel project is planned as TEQIP-II<sup>2</sup>. **The Project duration shall be for four years (2010-2014).**

#### **2.2 TEQIP Goal:**

To scale-up and support ongoing efforts of the Government of India to improve quality of Technical Education and enhance existing capacities of the institutions to become dynamic, demand-driven, quality conscious, efficient and forward looking, responsive to rapid economic and technological developments occurring at the local, State, National and International levels. It has a clear focus on the objectives to improve the overall quality of existing Engineering Education.

#### **2.3 Project Objectives:**

The Project will focus on the following objectives:

- Strengthening institutions to produce high quality Engineers for better employability,
- Scaling-up Postgraduate Education and demand-driven Research & Development and Innovation,
- Establishing Centres of Excellence for focused applicable research,
- Training of faculty for effective Teaching, and
- Enhancing Institutional and System Management effectiveness.

#### **2.4 Project Scope:**

Project will be open for competition and participation by all the AICTE (All India Council for Technical Education) approved Engineering institutions from all States and Union Territories (UTs) across the country. An estimated 200 Engineering institutions including the Centrally Funded Institutions (CFIs) will be competitively selected to improve the learning outcomes and employability of the Graduates and scaling-up research, development and innovations. Eligible private unaided institutions willing to contribute to the vision of India to produce high quality technical manpower are also welcome to participate in the Project.

The Project will also support Universities affiliating project institutions to improve their policy, academic and management practices.

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<sup>1</sup> First Phase of the Technical Education Quality Improvement Programme that closed on March 31, 2009 is referred to as the Project - TEQIP-I throughout this Project Implementation Plan (PIP) document.

<sup>2</sup> Second Phase of the Technical Education Quality Improvement Programme is referred to as the Project or TEQIP-II throughout the PIP.

## 2.5 Project Strategy:

The Project will be implemented in pursuance of the National Policy on Education (NPE-1986 revised in 1992) through the Ministry of Human Resource Development (MHRD) of the Government of India as a **“Centrally Sponsored Scheme”** with matching contribution from the State Governments and Union Territories (UTs). The Project cost will be shared by MHRD and States and private unaided institutions. The funding pattern and cost-sharing details are given in Table-13. Project cost in the funded and aided institutions for all sub-components will be shared between the Central Government and State governments in the ratio of 75:25 by all States except the Special Category States for which the ratio will be 90:10. For Centrally Funded Institutions, the entire Project cost will be borne by MHRD.

Funding for private unaided institutions in all States selected under Sub-component 1.1 will be in the ratio of 20:20:60 i.e. 20% funding from institutions, 20% funding as Grant from State and 60% funding as Grant from MHRD. Funding for private unaided institutions selected under Sub-component 1.2 will be in the ratio of 75:25 between MHRD and States for all States except in the Special Category States for which the ratio will be 90:10.

A set of Eligibility Criteria for States will be enforced to achieve a high and sustained impact of the Project. The criteria will seek to give the project institutions adequate decision making powers that will enable and encourage them to deliver quality education and undertake research in an efficient manner. A primary focus is to transform the Governments’ traditional role of input-control towards a role of focusing on outcomes, and incentivizing improvements in Engineering Education.

The Project will require the project institutions to implement academic and non-academic reforms for their self-conceived development programmes that focus on quality and relevance, excellence, resource mobilization, greater institutional autonomy with accountability, research and equity.

The Project intends to impart Pedagogical Training to faculty for making teaching effective and will cover maximum faculty members from the project institutions. The benefit of this aspect of the Project will also be extended to faculty from non-project institutions.

Professional development programmes for engineering-education policy planners, administrators and implementers at the Central, State and Institutional levels will be organized. The Project will also support development of an effective systemic governance model.

The Project will lay major emphasis on monitoring and evaluation. The prime responsibility of monitoring will lie with the institutions themselves. The management structure at the Institutional level i.e. the Board of Governors (BoG) will monitor the progress of Institutional projects on a regular basis and provide guidance for improving the performance of institutions in project implementation. The information from project institutions will be collected through a scalable web-based Management Information System (MIS). State Governments will also regularly monitor and evaluate the progress of institutions. The Government of India and the World Bank will conduct bi-annual Joint Reviews of the Project with assistance from the National Project Implementation Unit (NPIU). The monitoring will be based on action plans prepared by each project institution and achievements made on a set of Key Performance Indicators (KPIs) which will be defined in the Institutional Development Proposals. The monitoring will focus on implementation of reforms by institutions, achievements in project activities under different Sub-components, procurement of resources and services, utilization of financial allocations and achievements in faculty and staff development and management development activities.

The Project intends to maximize collaboration between local Industries and project institutions by providing the National Steering Committee and State Steering Committees (through National and State level Private Sector Advisory Groups) with timely, precise and concrete advice and summarized feedback on Industry-Institution partnerships to meet the national demand for Graduates and Postgraduates equipped with skills and knowledge relevant to the changing market requirements.

Establishing Centres of Excellence with potential of world-class research in emerging areas is one of the important aspects of the Project.

Funding will be available to institution for participation in either Sub-component 1.1 or Sub-component 1.2 of the Project but not for both at the same time. However, all project institutions and the interested non-project institutions will receive support Sub-component 1.3.

## 2.6 Project Design:

The Project is composed of following Components and Sub-components:

### Component - 1 : Improving Quality of Education in Selected Institutions

- *Sub-Component 1.1* : Strengthening institutions to improve learning outcomes and employability of graduates
- *Sub-Component 1.2* : Scaling-up Postgraduate Education and Demand-Driven Research & Development and Innovation
  - *Sub-Sub-Component 1.2.1* : Establishing Centres of Excellence
- *Sub-Component 1.3* : Faculty Development for Effective Teaching (Pedagogical Training)

### Component - 2 : Improving System Management

- *Sub-Component 2.1* : Capacity Building to Strengthen Management
- *Sub-Component 2.2* : Project Management, Monitoring and Evaluation

The key features of the Project are presented in Table-1 and the detailed descriptions are given in Section-3.



**Table-1**  
**Project Component and Sub-Components**

<b>Component – 1 : Improving Quality of Education in Selected Institutions</b>	
<b>1.1 Strengthening Institutions to Improve Learning Outcomes and Employability of Graduates</b>	
<b>Objectives</b>	<b>Suggested activities</b>
<p>To strengthen selected Engineering institutions to improve the competencies of undergraduates.</p> <p>(An estimated 140 new Engineering institutions meeting the Eligibility Criteria will be competitively selected under this Sub-component.)</p> <p>Private unaided institutions could also be part of this Sub-component but will be funded on cost sharing basis for carrying out the following activities only:</p> <ul style="list-style-type: none"> <li>• Improvement in teaching, training and learning facilities through: <ul style="list-style-type: none"> <li>○ Establishment of laboratories for new PG programmes</li> <li>○ Updation of learning resources</li> <li>○ Procurement of furniture</li> <li>○ Modernization and strengthening of libraries and increasing access to knowledge resources</li> </ul> </li> <li>• Providing Teaching and Research Assistantships to increase enrolment in existing and new PG programmes in Engineering disciplines</li> <li>• Faculty and Staff development for improved competence based on Training Needs Analysis (TNA)</li> <li>• Enhanced interaction with Industry</li> <li>• Institutional management capacity enhancement</li> <li>• Implementation of Institutional reforms</li> <li>• Academic support for weak students</li> </ul>	<ul style="list-style-type: none"> <li>• Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis</li> <li>• Improvements in teaching, training and learning facilities through: <ul style="list-style-type: none"> <li>○ Modernization and strengthening of laboratories and establishment of new laboratories for existing UG and PG<sup>3</sup> programmes and for new PG programmes</li> <li>○ Modernization of classrooms</li> <li>○ Updation of learning resources</li> <li>○ Procurement of furniture</li> <li>○ Establishment/upgradation of Central and Departmental Computer Centres</li> <li>○ Modernization/improvements of supporting departments</li> <li>○ Modernization and strengthening of libraries and increasing access to knowledge resources</li> <li>○ Refurbishment (Minor Civil Works)</li> </ul> </li> <li>• Providing Teaching and Research Assistantships<sup>4</sup> to increase enrolment in existing and new PG programmes in Engineering disciplines</li> <li>• Enhancement of R&amp;D and institutional consultancy activities</li> <li>• Faculty and Staff development for improved competence based on Training Needs Analysis (TNA)</li> <li>• Enhanced interaction with Industry</li> <li>• Institutional management capacity enhancement</li> <li>• Implementation of institutional reforms</li> <li>• Academic support for weak students</li> </ul>

<sup>3</sup> The term PG covers both Masters and Doctoral programmes.

<sup>4</sup> Teaching Assistantships are to be awarded to full-time non-GATE Masters degree students and Research Assistantships are to be awarded to full-time Doctoral degree students who are not able to secure a scholarship or fellowship.

<b>1.2 Scaling-up Postgraduate Education and Demand-Driven Research &amp; Development and Innovation</b>	
<b>Objectives</b>	<b>Suggested activities</b>
<p>To significantly increase enrolment in PG programmes in engineering disciplines and enhance engineering research and development and innovation.</p> <p>(An estimated 60 institutions will be selected under this Sub-component. The private unaided institutions could also be part of this Sub-component and will be funded for activities as all the other institutions.)</p> <p>Sub-objectives:</p> <ul style="list-style-type: none"> <li>• Improve quality and relevance of PG programmes</li> <li>• Attract more and better qualified students for PG programmes</li> <li>• Improve faculty qualifications</li> <li>• Enhance management of the institutions for more effective governance</li> </ul>	<ul style="list-style-type: none"> <li>• Strengths, Weaknesses, Opportunities and Threats (SWOT) Analysis</li> <li>• Improvement in teaching, training and learning facilities through               <ul style="list-style-type: none"> <li>○ Establishment of new laboratories for new and existing PG programmes in engineering disciplines</li> <li>○ Updation of learning resources</li> <li>○ Procurement of furniture</li> <li>○ Modernization and strengthening of libraries and increasing access to knowledge resources</li> <li>○ Refurbishment (Minor Civil Works)</li> </ul> </li> <li>• Providing Teaching and Research Assistantships for significantly increasing enrolment in existing and new Masters and Doctoral programmes in engineering disciplines</li> <li>• Enhancement of R&amp;D and Institutional consultancy activities               <ul style="list-style-type: none"> <li>○ Development of research interest among UG students</li> <li>○ Resource sharing with Industry through collaborative arrangements</li> </ul> </li> <li>• Faculty and Staff development for improved competence based on Training Needs Analysis (TNA)</li> <li>• Enhanced interaction with Industry</li> <li>• Institutional Management Capacity enhancement</li> <li>• Implementation of institutional reforms</li> <li>• Academic support for weak students</li> </ul>

<b>1.2.1 Establishing Centres of Excellence</b>	
<b>Objectives</b>	<b>Suggested activities</b>
<p>To support establishment of Centres of Excellence for multi-disciplinary applicable research in specific thematic areas.</p> <p>The institutions selected under Sub-component 1.2 having potential for carrying out applicable research will be eligible for setting up Centres of Excellence with an additional grant. About 30 Centres of Excellence will be established.</p> <p>Sub-objectives:</p> <ul style="list-style-type: none"> <li>• Create knowledge in thematic, multi-disciplinary areas in collaboration with industry and other knowledge users</li> <li>• Produce advanced human capital (MTechs and PhDs) in thematic areas in collaboration with Industry and other knowledge users</li> <li>• Increase societal use of engineering R&amp;D through technology transfer and commercialization</li> <li>• Increase research output</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure improvement for applicable thematic research and development through:                             <ul style="list-style-type: none"> <li>○ Establishment of new laboratories for thematic research</li> <li>○ Establishment of a knowledge resource centre (library) in the thematic area</li> <li>○ Procurement of furniture</li> <li>○ Refurbishment (Minor Civil Works)</li> </ul> </li> <li>• Providing additional Teaching and Research Assistantships for enrolment in Masters and Doctoral programmes in topics linked to economic or societal needs in the thematic areas</li> <li>• National / International collaboration for Research and Development activities with academic institutions and R&amp;D organizations</li> <li>• Faculty training for enhancing research competence in thematic areas, both within India and abroad</li> <li>• Collaboration with Industry for applicable research and product development (<i>Note : Industry collaboration through an MoU is a necessary condition for award of CoE to an institution</i>)</li> </ul>

<b>1.3 Faculty Development for Effective Teaching (Pedagogical Training)</b>	
<b>Objective</b>	<b>Suggested activities</b>
To improve learning outcomes of engineering students by improving competence of faculty from project and non-project institutions through Pedagogical Training.	<ul style="list-style-type: none"><li>• To provide Pedagogical Training to maximum faculty from project and non-project institutions.</li></ul>

<b>Component – 2 : Improving System Management</b>	
<b>2.1 Capacity Building to Strengthen Management</b>	
<b>Objectives</b>	<b>Suggested activities</b>
<ul style="list-style-type: none"> <li>• To build capacity of Engineering Education policy planners, administrators and implementers at the Central, State, and Institutional levels for effective implementation of academic and non-academic reforms.</li> <li>• To introduce and sustain innovative systemic quality improvement practices.</li> </ul>	<ul style="list-style-type: none"> <li>• Establishment of Quality Assurance Practices in States/ Union Territories and Centrally Funded Institutions</li> <li>• Establishing a Task Force for strategic planning of Engineering Education by State Governments</li> <li>• Establishment of Curriculum Development Cells (CDCs) in Universities that affiliate project institutions</li> <li>• Spreading best practices to non-project institutions.</li> <li>• Establishing Industry-Institute Partnership Promotion Cells</li> <li>• Sharing of best academic, administrative and governance practices through workshops and specific groups</li> <li>• Conducting Professional Development Programme for Project and Engineering Education administrators at the National and State levels and from Affiliating Universities<sup>5</sup></li> <li>• Establishment of a Task Force by MHRD for effective system governance</li> </ul>

<sup>5</sup> The term 'Affiliating Universities' is used for Universities that are affiliating project institutions.

<b>2.2 Project Management, Monitoring and Evaluation</b>	
<b>Objectives</b>	<b>Suggested activities</b>
<p>To plan, organize and manage resources to bring about successful achievement of Project goals and objectives.</p> <p>To support innovations for improving State and Institutional level management and education practices.</p> <p>To monitor and evaluate the performance of project institutions and to identify variance, if any, from the Institutional plan and suggest remedial measures, as required.</p> <p>To mentor the project institutions towards quality improvement and audit the Institutional performance in achieving the Institutional goals.</p>	<ul style="list-style-type: none"> <li>• Ensuring successful and timely implementation of the Project at the Central, State and Institutional levels through coordination of resources and integration of activities of the Project in accordance with the Project Implementation Plan (PIP)</li> <li>• Ensuring deliverables as outputs from the Project, as planned</li> <li>• Monitoring and evaluation of performance through: <ul style="list-style-type: none"> <li>➤ Key Performance Indicators</li> <li>➤ Web based Management Information System (MIS) at the NPIU, State Project Facilitation Units (SPFUs) and project institutions</li> <li>➤ Conduct of Assessment Surveys : <ul style="list-style-type: none"> <li>○ Student Satisfaction Surveys</li> <li>○ Faculty Satisfaction Surveys</li> <li>○ Implementation Surveys</li> <li>○ Employer Satisfaction Surveys</li> </ul> </li> <li>➤ Conduct of Institutional Audits : <ul style="list-style-type: none"> <li>○ Performance and Data Audits</li> <li>○ Fiduciary Audits</li> </ul> </li> <li>➤ Conduct of Resource Utilization Study</li> <li>➤ Conduct of Bibliometric Study</li> <li>➤ Conduct of Impact Assessment Study</li> <li>➤ Reviews : <ul style="list-style-type: none"> <li>○ Mid-term Review Mission</li> <li>○ Six-monthly Joint Review Missions</li> </ul> </li> <li>➤ Mentoring</li> </ul> </li> </ul>

## 2.7 Risk Analysis and Mitigation Measures:

The Project is designed with an objective to improve quality of Technical Education and enhancement of existing capabilities of the institutions to become responsive to rapid economic and technological developments occurring both at the National and International levels. The Project Design has been deliberated adequately by all stakeholders (State and Central governments, experts, private sector, etc.) with an aim to minimize the risks associated with the Project.

Following are the risks perceived and the ways to mitigate these risks to ensure successful implementation of the Project:

**Table-2**  
**Operational Risks and Mitigation Measures**

Risk Factor	Description of Risk	Rating of Risk	Mitigation Measures
Governance & Policies	Due to the selectivity in Eligibility Criteria to achieve the project objectives, the institutions from the States lagging in Technical Education, may not participate in the Project causing regional imbalance.	Moderate	The Project has been designed to provide relaxation in Eligibility Criteria for the States lagging in Technical Education and give fair representation to such States to minimize the imbalance.
	There may be possible resistance to reforms envisioned for the Project by participating States/ institutions.	Low	The implementation of academic and non-academic reforms is an essential pre-condition for participation in the Project to be fulfilled by the States. Also, only those institutions that are willing to reform will be selected under the Project. The Project will incorporate support to governance issues and capacity building.
	The possibility of failing to adhere to Project targets and time limits by the participating States / institutions due to changes in leadership at State / Institutional levels.	Low	The Project has been designed as a bottom up approach. Project planning by the institutions/States has been encouraged to ensure project ownership.
Technical Design	Institutional inadequacy in preparedness for implementing reforms and achieving excellence.	Low	The Eligibility Criteria designed for the selection of institutions in the Project will screen out the weak institutions.
	Inadequacy in Financial & Administrative Autonomy to Boards of Governors/ Institutional leaders.	Low	The minimum desirable autonomy has been agreed and included in the Eligibility Criteria of States/Institutions.
	Less incentive to private sector to collaborate with institutions and promote R&D activities, and also less incentive to institutions to engage with Industries.	Moderate	The Project will help the institutions, the private sector, and business oriented institutions to create a platform where they can discuss on mutual benefits for collaboration.

Risk Factor	Description of Risk	Rating of Risk	Mitigation Measures
	Less effectiveness of the implementation plan for Faculty Development Programmes.	Low	The Institutional Development Proposals (IDPs) are required to provide details of Training Needs Analysis carried out and a Faculty Development Plan for the first 18-months months of the Project. The funding to non-performing institutions may either be stopped or curtailed. Also, selected institutions will be funded to establish facilities for training for all faculty in modern pedagogy and for updating subject knowledge.
Implementation Capacity & Sustainability	Lack of ownership at State level causing delay in implementation of all the agreed reforms and in compliance with all the fiduciary requirements of the Project.	Low	The States that agree to implement all the reforms and to comply with all the fiduciary requirements will only be selected under the Project.
	Lack of ownership at Institutional level causing delay in implementation of all the agreed reforms.	Moderate	The project institutions will be reviewed and mentored on regular basis to help them meet the requirements of the Project.
Financial Management	Variation in staff capacities.	Substantial	The Project has allocated budget for regular and ongoing training for staff at all levels. The Financial Management Training will be provided to staff to improve their capacity to handle various financial issues.
	Delay in funds distribution and inadequate amount of funds to institutions, especially to the private unaided institutions.	Substantial	The States will make 100% budget provisions for the institutional projects. A common MoU between State and institutions for funding private institutions has been agreed to ensure funding to the private unaided institutions [Annex-III (c) & (d)].
	Potential delays in fund release due to Centrally Sponsored Scheme (CSS) with implementation responsibility vested in participating States, partly due to lack of delegation of power, slow recruitment of staff, and slow audits.	Substantial	The Central and State governments have made adequate provisions in their budgets. SPFUs with adequate staff will be in place by commencement of the Project. NPIU will pro-actively follow-up with the States to expedite audits.



Risk Factor	Description of Risk	Rating of Risk	Mitigation Measures
Procurement	Fiduciary risks of economy, efficiency, transparency and fairness in procurement of Goods, Works and Consultant Services at Institution level in a large number of institutions of the country. Moreover, potential procurement risks involved with new institutions and States in the proposed Project.	Substantial	The Project has been designed to build the capacity of each institution by identifying a Coordinator to coordinate and manage the procurement process. The Coordinator will be trained on the agreed procurement procedures. Procurement Manual has been developed for the Project as per the World Bank Guidelines on Procurement to streamline the Procurement activities of all project institutions. An appropriate Internal Quality Assurance Mechanism will be established to carry out prior review and post review of procurement undertaken by participating institutions.
	Too many entities handling procurement which could lead to issues on consistency & standards and lead to fiduciary risks.	Substantial	A web based Procurement Management Support System is being developed under the Project for monitoring the procurement process of all procurement activities undertaken in the Project to ensure smooth flow of information/data which could assist and identify priority areas for effective supervision. The system will identify commonly procured items and develop data bank including standard specifications, addresses of original manufacturers in the country with anticipated price ranges.
Social & Environmental Safeguards	Inadequate attention, at both State and Institutional levels, to address the disadvantages faced by students with SC/ST, poor, resulting in reduced internal and external efficiencies.	Low	The Project agrees to develop and oversee implementation of a set of actions designed specifically to overcome such disadvantages and improve equity in education.
	Possible agitation by local people due to construction in the Project.	Low	The Project agrees that no construction will be allowed on such sites/ or that appropriate procedures are fully followed to address the situations encountered.

**Section-3**  
**PROJECT DESCRIPTION**

**3.1 COMPONENT-1 : IMPROVING QUALITY OF EDUCATION IN  
SELECTED INSTITUTIONS**

This Component will support around 200 competitively selected Engineering Education Institutions to improve Learning Outcomes and Employability and Scale-up Research, Development and Innovation through two Sub-components 1.1 and 1.2. The faculty of these institutions will also be offered Pedagogical Training through Sub-component 1.3.

### 3.1.1 Sub-Component 1.1 : Strengthening Institutions to Improve Learning Outcomes and Employability of Graduates

#### 1. Objective:

To strengthen engineering institutions to improve the competencies of undergraduates.

#### 2. Scope:

This is a competitive fund that will finance the best Institutional Proposals that have the potential to meet the above objective. An estimated 140 new Engineering institutions meeting the Eligibility Criteria as described in Section-4 (4.3.1) will be competitively selected from both new<sup>6</sup> and old<sup>7</sup> eligible States to participate in this Sub-component.

Following types of educational institutions will be eligible for submission of Proposals and if selected, for funding under this Sub-component:

- New<sup>8</sup> institutions from the old States
- New Centrally Funded Institutions
- Institutions from new States
- Engineering Faculty/Engineering Education Departments/Constituent Institutions of Universities
- Engineering Faculty/Engineering Education Departments of Deemed Technical Universities, and
- Private unaided institutions on cost sharing basis<sup>9</sup>

Following types of educational institutions will not be eligible for funding under this Sub-component:

- State institutions and CFIs, which have participated in TEQIP-I,
- Polytechnic institutions,
- Architecture, Management and Pharmacy institutions or departments, and
- Master of Computer Application Departments/institutions.

#### 3. Strategy:

The objective of this Sub-component will be achieved through implementation of comprehensive and coherent Institutional Development Proposals (IDPs) containing a set of reforms, improvements in faculty competence and quality of teaching, research and consultancy, and improvement in the associated infrastructure. Institutions participating in this Sub-component will need to compulsorily arrange-pedagogical training for their faculty (Sub-component 1.3).

Institutions participating in this Sub-component can not apply in Sub-component 1.2.

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<sup>6</sup> New : First time entry to the TEQIP

<sup>7</sup> Old : States / Institutions that have participated in TEQIP Phase I (Refer Annex– VIII)

<sup>8</sup> Institutions : Government funded, Government aided, Private unaided

<sup>9</sup> Funding for private unaided institutions under this Sub-component will be in the ratio of 20:20:60 for permissible activities (see Table-1) i.e. 20% by institutions, 20% by State as grant and 60% by the MHRD as grant.

**4. Deliverables:**

a) The institutions under this Sub-component will be responsible for the following outcomes and measured deliverables (outputs):

- A strengthened institution in terms of academic and management capacities as measured by :
  - Obtaining Autonomous Institution status within 2 years of joining the Project
  - At least 60% of its eligible UG and PG programmes accredited or applied for within 2 years of joining the Project
  - Having at least four Board of Governors (BoG)<sup>10</sup> meetings per year as documented by publication of the proceedings of the BoG meetings on the institution's website
- Improved faculty qualifications as indicated by:
  - The share of regular faculty teaching Engineering subjects with at least a Masters degree or a Doctoral degree over the baseline (see Table-30) should be increased by 20% and 10% respectively by the end of the second year of the Project.
  - Within two-years of Project inception, at least 50% of its faculty members with only a Bachelor's degree as their highest degree should be enrolled in a Masters degree programme if the institution offers a Masters degree programme. In the case the institution offers no Masters degree programme, at least 25% of the faculty with Bachelor's degree should be enrolled in Masters degree programmes at other institutions (see Table-30).

**These will be the primary outcomes and deliverables that the institutions are responsible for. Continued funding beyond the Second year of the Project will be subject to meeting the above deliverables.**

b) In addition, the supported institutions are expected to improve performance on the following aspects:

- Increased employability of students as measured by:
  - Improvements in the placement rate and the average salary of placement package
- Improved learning among students as indicated by:
  - The share of the first year students that complete the full first year and transitions successfully to second year (disaggregated by social group)
- Overall Institutional progress as measured through :
  - Increase in the overall student and faculty satisfaction,
  - Number of registrants for Masters and Doctoral degrees (and number of Masters and Doctoral graduates),

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<sup>10</sup> The term Board of Governors is synonymous with such term as Board of Management or Managing Committee of Faculty / Department / constituent institution / college of Universities and Technical Deemed Universities.

- Percentage of external revenue from R&D projects and consultancies in the total revenue of the institution,
- Increase in the number of publications in refereed Journals, and
- Increased collaboration with institutions and Industry.

**5. Evaluation and Selection:**

Selection will be based on evaluation of Eligibility and Institutional Development Proposals (IDPs) prepared using the prescribed formats. The selection process is detailed in Section-4. Information given in the formats should be **verifiable**, be to the point and be supported by documents.

**6. Funding pattern:**

The financial allocation to each Government funded and Government aided institution is expected to be in the range of Rs.10.00 crore and for private unaided institutions, the allocation will be restricted to Rs. 4.00 crore on cost sharing basis for selected activities (see Table-1). For planning of fund requirements under various groups of activities, refer Section-6 [Table-16 & Table-16 (a)].

**7. The following activities are envisaged under this Sub-component:**

**(i) SWOT Analysis:**

The institutions are required to carry out analysis using SWOT framework to identify Strengths, Weaknesses and to examine the Opportunities and Threats faced, thereby focusing activities into areas where they are strong, and where the greatest opportunities lie (for Guidelines please refer Annex-V). Based upon the SWOT analysis, the institutions are to prepare an Institutional Development Proposal (IDP) in the prescribed format that seeks to strengthen the institution and increase employability of graduates. When designing their proposal, the institutions can propose a combination of the following activities:

- Infrastructure Improvement for teaching, training, and learning facilities,
- Providing Teaching and Research Assistantships to increase enrolment in existing and new PG programmes in Engineering disciplines
- Enhancement of research, development and consultancy activities,
- Faculty and Staff Development for improved competence based on Training Needs Analysis (TNA),
- Enhanced interaction with Industry,
- Institutional management capacity enhancement,
- Implementation of Institutional reforms, and
- Academic support to weak students.

**(ii) Infrastructure Improvement for Teaching, Training and Learning facilities:**

This will be achieved through:

(a) *Modernization and strengthening of laboratories and establishment of new laboratories for existing UG and PG programmes and for new PG programmes:*

- Modernization and strengthening of laboratories may be required for:
  - Meeting additional/new requirements from revised UG and PG curricula
  - Starting of new PG programmes
  - Removal of obsolescence
  - Promotion of research activities for students and faculty
- Establishment of new laboratories may be required for:
  - Introduction of new PG programmes
  - Existing UG and PG programmes

(b) *Modernization of Classrooms:* Classrooms could be modernized to have Smart Boards and Computers linked to LCD Projectors with Screen, which can hold greater attention of the students than mere lecturing. Guest lectures or class lectures organized through V-SAT, Video Conferencing and Audio Conferencing can also be considered depending upon need and feasibility. The classrooms need to be equipped accordingly.

(c) *Updation of Learning Resources:* Continuous updating of Learning Resources (books, e-books, e-journals, CDs and professional software) and procuring the same is part of the improvement to be brought about in the teaching learning process. Course specific software to improve teaching learning process may be procured, as required. The faculty needs to be encouraged and trained to use modern equipment and course-specific software.

(d) *Procurement of Furniture:* Furniture may be required for modernization of the laboratories, establishment of new laboratories, libraries, Computer Centres and classrooms. Provision would need to be made for such procurement in the Institutional Development Proposal.

(e) *Establishment/Upgradation of Central and Departmental Computer Centres:* Institutions may need to focus on modernization/upgradation of Computer Centres to meet curricular and research requirements. It is desirable that Computer Centres be kept open for extended periods beyond working hours and on non-working days. Proper connectivity with Campus-wide Networking needs to be ensured. Purchase of the required Computers at one go may be avoided; it may be phased to ensure that the latest systems are procured. The IDP should include the number of computer systems required with purpose, cost estimates and time frame.

Institutions would need to enter into Annual Maintenance Contracts after the expiry of warranty period for the computers procured under the Project. Wherever possible, replacement of computers/components by the suppliers/manufacturers to ensure upgradation of the computers procured may be considered.

(f) *Modernization/Improvements of supporting Departments: Upgradation of teaching and training facilities in the supporting Departments may be considered and included in the Proposal so that their contribution is enhanced. The faculty belonging to these supporting Departments may also be extended benefits under Faculty Development limited to Pedagogical Training and subject area training within India.*

In **Physical Education**, funding will be for supporting the training of trainers for enhancing their proficiency and knowledge and also for the training of students participating in games and sports at the University and above levels.

(g) *Modernization and strengthening of libraries and increasing access to knowledge resources:* Libraries, which are part of every institution, promote self-learning and also support the teaching learning processes. There is a widespread need to keep the libraries open to the maximum extent. There are institutions where libraries are kept open for 24 hours a day throughout the week.

Modernization of libraries could include conversion to Digital Libraries, which would occupy lesser space and make space available for other activities. The institutions can also become member of Indian National Digital Library in Engineering Sciences and Technology Consortium (INDEST-AICTE Consortium). Purchase of books should be through CDs to the extent possible. Even old books, which are available in CDs, should be located and purchased. There needs to be a CD Bank with proper identification and accessibility. The library could be reorganized with adequate computers and connectivity to hostels, Departments through Campus-wide Networking. Subscription to the latest e-Journals could be made. The IDP should clearly indicate the actions that are proposed to be taken for Modernization of Libraries including the cost involved. The project institutions are required to avail essentially the benefit of the existing Information and Communication Technology (ICT) scheme of MHRD under National Mission on Education.

(h) *Refurbishment (Minor Civil Works):* The Civil Works to be undertaken by the institutions will be prioritized as suggested below:

- Repair works:

The works under this category could be repair of old structures and/or non-functional components of the existing building. These works may include replacement of leaking pipes or broken toilet fittings, repair of damaged flooring or plaster, etc.

- Refurbishment works:

Under this category, the works that can be undertaken will be related to changing the existing functions of a room/space to a new proposed function. For example: provision of electrical, water supply and/or waste disposal arrangements in an existing room which is proposed to be used as a laboratory.

- Extension to Existing Buildings:

The institutions can construct an additional area in continuation to an existing building within the campus. However, the institutions will need to provide justification on the utilization of existing space.

The expenditure on refurbishment (minor Civil Works) should not exceed 5% of the Institutional project cost.

**(iii) Providing Teaching and Research Assistantships to increase enrolment in existing and new PG programmes in Engineering disciplines:**

Increased output of Postgraduates and Doctorates is of crucial importance for meeting the large requirements of faculty and for meeting the needs of the Industry. It is also essential to encourage the passing out Graduates to join PG programmes and also pursue Research programmes for being employed as faculty. Starting of new PG programmes could also be a part of the IDP. The Project will fund only those new (started latest during the calendar year 2011) and existing PG programmes that are AICTE approved and for which the availability of required faculty is assured. Institutions receiving funds under the Project are encouraged to seek enhancement of Masters degree seats from AICTE so as to increase the enrolment in PG programmes.

Students sponsored from Industry will be allowed to be enrolled in all PG programmes. GATE qualified students will receive scholarships as per AICTE norms from the Government sources. The non-GATE qualified students selected by the institutions will receive teaching / research assistantships, for which they will devote 8-10 hours per week in classroom and laboratory assignments. Institutions should plan to utilize 10-12% of the total Institutional project outlay on giving assistantship to Masters and Doctoral students. The institutions may also seek permission to convert the unfilled GATE and Industry sponsored seats to non-GATE and non-Industry sponsored seats (open/general) respectively so that seats do not remain vacant.

**(iv) Enhancement of Research & Development and Institutional Consultancy Activities:**

The selected institutions would promote increased participation of faculty in research, projects and consultancy, for e.g. through merit recognition and fiscal and career incentives. Institutions that already have Doctoral programmes should encourage Masters students to join Doctoral programmes, as explained in paragraph above.

Institutions need to market their services to the Industry. The Industry should be encouraged to give live problems to the institution for solutions. The faculty who have expertise should be encouraged to take up consultancy assignments, which would directly and indirectly benefit the institution, faculty and students. Internal Revenue Generation (IRG) would receive a boost, and some of the income should be shared with faculty, staff and students as per the norms approved by the BoG. Regular interactions through consultancy are likely to promote a healthy and useful relationship between the Industry and institution. Care should be taken that consultancy services offered to Industry do not affect the teaching schedules and processes. Institutions need to develop a strategy for enabling faculty to secure consultancy assignments and to complete them timely and successfully. The strategy in this regard is to be detailed in the IDP.

**(v) Faculty and Staff Development for Improved Competence based on Training Needs Analysis (TNA) (for Guidelines refer Annex – VI):**

Enhancing faculty and staff competence would receive focused attention under the Project. Faculty development should be closely linked to the overall goals of the institution as also fulfil individuals justifiable professional aspirations. Institutions should plan to spend at least 10% institutional project outlay on faculty and staff development.



## (a) Enhancing Development of Faculty:

Faculty Development needs to be carried out through the following main activities.

The following areas may be given importance while formulating an action plan in this regard:

- Upgradation of qualifications
- Improving competence in teaching-training
- Development of modern learning resources and teaching aids
- New techniques in research
- Improving competence in research and consultancy
- Deputation to seminars, conferences and presentation of research papers
- Interaction with peer groups within India and abroad
- Establishing linkages with academic and research institutions and Industry.
- Management of Industry interactions
- Student counselling
- Student performance evaluation

Institutions should submit a detailed action plan on Faculty Development in their respective Institutional Development Proposals.

*Qualification Upgradation:* Institutions are expected to encourage faculty to upgrade their qualification from Bachelors to Masters and from Masters to Doctoral degree. If the facilities are available within the institution, the same need to be maximally utilized. Alternatively, the faculty could be deputed to other institutions for enhancement of qualification. Part-time or sandwich programmes can also be considered where feasible and necessary.

*Subject knowledge and research competence upgradation:* Subject knowledge upgradation is to make the faculty aware of the advances in knowledge, technologies and research methodologies for improving his/her own performance and for the benefit of students. Short-term and long-term courses are available within India including summer schools arranged by Government organizations, institutions and professional Societies. Faculty should be on the lookout for appropriate opportunities. The Project plans to develop and periodically update a web-based training calendar on the NPIU's website for the benefit of all Engineering faculty.

*Participation in Seminars, Conferences, Workshops, etc.:* Faculty is to be encouraged to participate in seminars, conferences and workshops, both National and International. Participation in such fora would give a good exposure on the developments taking place in different areas. The faculty participating in such fora need to be also encourage to visit close-by institutions and laboratories of his/her interest. Besides, accrual of benefits to students and in their own researches, such participation is expected to bring about collaborations with academic institutions and R&D organizations within and outside the country. The institutions are required to establish collaboration through MoUs.

(b) Enhancing Staff Development:

The staff in an Engineering Education institution fall under two categories:

*Technical Staff:* The Technical Staff in laboratories and workshops needs to be trained in their functional areas including operation and routine maintenance of both the existing and new equipment. They also need training on workshop instructions, upkeep of institutional services, etc. The training can be organized within the institution or at the supplier/manufacturer premises or at reputed technical training institutions. The technical staff also needs to be motivated and encouraged to go for training and to use the newly acquired expertise for the benefit of students and the institution.

*Administrative Staff:* The Administrative Staff also needs training in respective functional areas, particularly in the use of modern office equipment, software, office automation, maintenance of records, procedures, etc. The training should also cover motivation for time and material efficiency, and friendliness towards faculty and students. The training may preferably be organized within the institution with the help of suitable organizations.

(c) Procedure to be followed:

Based on the Training Needs Analysis, Faculty Development and Staff Development plans need to be developed for each faculty and staff linking to the institution's objective and requirements. This should also cover career progression of the faculty and staff.

Based on the above, comprehensive Faculty and Staff Development Plans (separate for each group) need to be made on a yearly basis with the approval of the BoG. The Faculty and Staff Development plans should contain details of the venue, dates, duration and organization where the training is to be conducted. Once the Plans are approved, deputation of faculty and staff should be done on a regular basis.

Any changes in the Faculty Development Plan due to changes in either institutional priorities or changes in dates/ venue, etc. may be made only with the approval of the BoG under intimation to the NPIU.

(d) Accountability:

The faculty and staff after undergoing training are expected to:

- Prepare a report on the training undertaken and the experience gained. The report should also include the aspects that can be used to improve the teaching-learning process, enhance / improve research, improve equipment utilization and, make administrative and financial functions more efficient.
- Share their experience with students and other faculty/staff of the institution through seminars.
- The report from the faculty and staff should be hosted on the institution's web site and linked to NPIU's web site.

**(vi) Enhanced Interaction with Industry:**

The Central Advisory Board of Education (CABE) has suggested a strong need for developing effective synergies between research in the Universities and their application in and utilization by the Industry to the mutual advantage of both the systems. Likewise, Industry should be persuaded to establish organic linkages with the Universities to seek solutions of problems faced by the Industry.

Industry-Institute-Interaction Cell (IIIC) should be formed in each institution to promote links to benefit students and faculty, and to promote collaborative interdisciplinary research for offering real life solutions. Specific steps proposed should be part of the IDP as an action plan (for Guidance on IIIC, refer Annex-IX).

(a) The key activity areas in which Industry can participate for the benefit of the institution are:

- Participating in curriculum design, curriculum implementation, student assessment, training of students, exposing students to new technologies, and providing experts for certain instructional sessions;
- Providing opportunities for student groups to undertake problem-solving projects;
- Participating in such bodies as the Board of Governors, Academic Council, Boards of Studies, faculty recruitment, etc;
- Assisting institutions in establishing new laboratories, providing literature on new technologies, and offering their shop floors as substitutes for laboratories;
- Training students, faculty and technical staff in new technologies and processes;
- Collaborating in sandwich programme offerings;
- Participating in joint R&D activities;
- Delivering expert lectures;
- Industry senior personnel serving as adjunct faculty;
- Utilizing institutional resources (manpower and physical) for industrial manpower training;
- Developing Postgraduate Education in areas of current and potential high demand; and
- Providing assistance for improving employability including entrepreneurial training, specialized skill training, and training in softer skills required by Industry.

(b) The key areas in which academic institutions can benefit Industries:

- The existing expertise available with project institutions can be utilized by the Industries for technology assessment, up-gradation and absorption.
- Laboratories in the institutions must create a niche for themselves by targeting in the select areas of excellence.
- Institutions need to encourage and enhance the activities to boost the country's economy through developing new knowledge innovations and technologies which can be adopted by Industries.
- The professionals from Industries can act as adjunct faculty in the institutions and faculty can be deputed to Industry to gain industrial experience.

**(vii) Institutional Management Capacity Enhancement:**

- (a) Improving Managerial and Administrative abilities of Heads of Institutions, Deans, Heads of Departments, senior faculty and officials through specifically designed training programmes is an important Project activity to support effective implementation of reforms, to improve development, planning and implementation, and monitoring. The expected outcomes are enhanced management capacity, helping the institution to gain increased autonomy, and improved internal and external efficiencies of institutions. The NPIU will develop appropriate training curricula in this regard, identify training institutions and organizations, and develop an annual training schedule. Institution's leaders are also encouraged to participate in other relevant orientation and training programmes. All institutions are expected to participate in these programmes.
- (b) All SPFUs, in conjunction with the institutions, are required to conduct Orientation Programmes for BoG Members to keep them well informed of the Project design and implementation requirements, and their role in respect of both project implementation and overall institutional development.
- (c) Accountability:

All officials and faculty who have undergone this training are expected to:

- Prepare a report on the training undertaken and the experience gained. The report should also include the aspects that can be used for efficiency improvement in Managerial and Administrative functions.
- Share their experience with other faculty and staff within the institution through seminars.
- The reports from all beneficiaries should be hosted on the institution's web site and linked to NPIU's web site.

**(viii) Implementation of Institutional Reforms:**

The eligibility conditions for selection of institutions under this Sub-component envisage willingness for implementation of following academic and non-academic reforms within 2 years of joining the Project. The institutions that fail to implement the reforms may be debarred from further funding.

**(a) Academic Reforms :**

*Curricular Reforms:* The Central Advisory Board of Education (CABE) has suggested that each institution should exercise innovative approaches in undertaking periodic revision of curriculum every two to three years and an intensive revision every four to five years depending on the developments in the subject area. The main purpose of revision of curricula and syllabi for Engineering Education disciplines at UG and PG levels is to effectively prepare students to meet the labour market requirements. Involvement of employers including core Industry is an essential requirement.

The Yash Pal Committee Report 2009 to advise on Renovation and Rejuvenation of Higher Education has also stressed that all syllabi should require the faculty and students to apply what they have learnt in their course on a local situation, issue or problem. There should be sufficient room for the use of local data and resources to make the knowledge covered in the syllabus come alive as experience.

Project institutions, which are affiliated to Universities, will need to get the revisions in the curricula approved by the Competent Authorities. The Project will finance, on a voluntary basis, these affiliating Universities for establishing modern Curriculum Development Centres for undertaking effective curricula development/revisions for the benefit of both the project and non-project institutions (for details please see Innovation Fund under Sub-component 2.1).

Institutions, which are autonomous, can carry out the curricula development and revision themselves by establishing mechanism that would ensure that the curricula meet labour market requirements.

All new and revised curricula, among others, need to imbibe the following:

- Innovations in teaching and student evaluation methodologies;
- Design skills, communication skills, entrepreneurial skills, information processing, creative and innovative thinking, leadership skills;
- Problem solving projects from Industry;
- Elective courses;
- Extensive use of media;
- Invited expert lectures from Industry and field;
- Visits to and training in Industry; and
- Multi-level and multi-background entry credit exemptions.

*Improved Student Performance Evaluation:* Evaluation of students has to be done on a continuous basis, in order to provide opportunities for improvement. Publication of results in the shortest period, allowing the students to see the evaluated papers are some of the innovative measures that can be adopted. Students and faculty will benefit largely from this reformation of student evaluation process. The faculty may identify the academic weaknesses and then counsel the students as to how they may improve their performance. A brainstorming by faculty with students can help to identify various options for performance improvement. Transparency, fairness, consistency and accountability in grading must be ensured. The aggrieved student may be allowed to see the evaluation. Weak students should be given every opportunity to improve. This will develop a greater respect for the institution by the students. The details are given in Annex-I.

*Performance appraisal of faculty by students:* Evaluation of faculty performance on a periodic basis should be implemented. The results of this should be used for taking remedial actions for improvement of teaching learning process. The main purpose is to help a faculty to improve his/her teaching/training skills. The assessment by students and the counselling which may follow such assessment needs to be aimed at helping faculty recognize weaknesses and remedy them to improve the learning of students. An exit assessment taken at the end of the course gives an insight into the total effectiveness of the course and the learning achievement and deficiencies and may be useful for future delivery of the course by the faculty. Faculty must be taken into confidence during each assessment and the benefits to the faculty/student and the improvement in quality of education should be well explained. Faculty should be continuously motivated for greater quality and to do better. This will ensure a proper mix of proficiency and efficiency in the quality of instruction offered to students. The details are given in Annex-I.

*Faculty incentive for Continuing Education (CE), Consultancy and R&D:* The initiatives taken by faculty should be encouraged through proper incentives and clear guidelines. All faculty are to be encouraged to participate in organizing and/or attending CE programmes, to offer consultancy to Industry and to take part in R&D activities in the institution. The institution should prepare at the beginning of every semester, a faculty engagement chart which should indicate not only the faculty teaching commitments, but also his/her expected involvement in administration, Continuing Education, collaborative activities, research and development activities including curriculum and laboratory development, consultancy, etc. Faculty efforts for good achievements in this direction should be suitably recognized by the management. Institutional efforts for consulting to Industry and involvement in R&D should also be adequately encouraged. The details are given in Annex-I.

*Accreditation of eligible UG & PG programmes:* Accreditation of programmes is one of the quality assurance mechanisms. The bench-marks for eligibility of institutions have been given in Section-4. The accreditation target to be achieved by the end of the Second Project-Year is 60% of the eligible UG and PG programmes (obtained and applied for) and 100% accreditation (obtained and applied) for the eligible UG and PG programmes by the end of the Project. Institutions need to take appropriate actions to obtain accreditation of eligible PG and UG programmes within the specified time-frame and also for renewal of accreditation during the Project period. Institutions are required to give their Plan of Action for getting the eligible programmes accredited in the Institutional Development Proposals (IDPs).

(b) Non-Academic Reforms :

*Exercise of autonomies: Academic, Administrative, Managerial and Financial:* For institutions selected under this Sub-component, obtaining Autonomous Institution status within 2 years of joining the Project is mandatory (refer Annex-I & II). Institutions are also expected to obtain and exercise reasonable levels of Administrative, Financial and Managerial autonomies. The details of the Financial, Managerial and Administrative autonomy to be exercised by Institutions are given in Annex-I.

*Establishment of Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund:* Establishment of the four Funds is essential to ensure that the developmental activities continue beyond the Project period. It is, therefore, essential that all institutions establish the Four Funds and put substantial amount in each Fund at least as per the prescribed mechanism (refer Annex-I).

*Generation, retention and utilization of revenue generated through variety of activities:* As the eligibility condition for States and Union Territories, all project institutions are to be permitted to generate, retain and utilize the entire revenue generated by them including income from tuition fee and other fees and charges from students. All project institutions are expected to increase revenue generation from such activities as self-financing teaching and training programmes, testing services, consultancy and research, innovations, patents, commercialization of R&D outputs, sharing of high-tech equipment with Industries, public usage of infrastructure for academic activities, etc. (see Annex-I for details).

Institutions are to utilize the revenue for building up the four funds, development activities, offering incentives to faculty and staff, instituting awards and rewards for students, faculty and staff, etc. with approval from the BoG in accordance with rules developed in consonance with Government Guidelines, if any. These rules need to be in place in each institution within 2 years of joining the Project. Institutions are to periodically report increases in the IRG generated.

*Filling-up all existing teaching and staff vacancies:* As an eligibility condition for States and Union Territories, Government funded and aided project institutions will be authorized by States/UTs to fill-up all faculty vacancies on a regular basis (over and above the benchmark value). Till such time that these vacancies are filled-up on a regular basis, the appointments on 11 month or longer contract needs to permit by the States/UTs. All institutions are accordingly expected to reduce vacancies for faculty and staff to 10% or less of the sanctioned positions within 2 years of joining the Project. Where needed, the Board of Governors may recruit the desired faculty with incentives.

*Delegation of decision-making powers to senior institutional functionaries with accountability:* Delegation of adequate powers to senior functionaries like Deans and HoDs with accountability is expected to help better implementation of Project. The powers and responsibilities of the Director/Principal, Deans, HoDs, Professors and other senior faculty in the department, laboratory in-charges and other functionaries should be clearly spelt out in a decentralized administrative environment. Even junior faculty and staff should know their authority and responsibility for which they would be held accountable.

As a measure of financial reforms, adequate financial powers to the Director/Principal of the institution and other functionaries are to be delegated by the Board of Governors. The suggested minimum financial power to be delegated is as under:

- (i) Director/Principal/Dean--Rs.50.00 lakh for single purchase order
- (ii) Head of the Department or equivalent--Rs.1.00 lakh for single purchase order
- (iii) All expenditure above Rs. 50.00 lakh would have to be approved by the Board of Governors. Similarly, all expenditure above Rs.1.00 lakh by the Head of the Department will need to be approved by the Director/Principal/Dean.

All actions of the Director in connection with Continuing Education, consultancy, faculty development, seminars and conferences should be reported to Board of Governors.

The details of Managerial, Administrative and Financial reforms are given in Annex-I.

**(ix) Academic support for weak students:**

As a part of criteria for selection of States and their institutions, commitment is being taken from the States and institutions that under the Project, the reservation of seats for students as per the policy framework will be continued.

Under this reform, it is considered important that focused efforts be made by institutions to improve the academic performance of SC/ST/OBC academically weak students through innovative methods such as remedial teaching in professional subjects and soft skills development for increasing transition rate, pass rate and employability (refer Section-9 for details).

For increasing institutional focus on providing academic and guidance support to the SC/ST/OBC/ academically weak students, all project institutions are required to constitute a Finishing School with a senior faculty as coordinator. All institutions are expected to spend at least 4% of their project allocation on this activity in accordance with the pattern of 'permissible and non-permissible expenditures' given in Table-18 and Table-18 (a).

The key activities under the aegis of the Finishing School will be:

- a) Conducting remedial teaching throughout academic sessions for improving transition rate and pass rate of students,
- b) Conducting specialized soft skills and professional skills development training during semester-breaks and vacations (preferably starting from 5th Semester onwards) for increasing employability,
- c) Conducting high intensity training (of at least 4-weeks duration) for development of soft and professional skills in the students that graduate but fail to secure any employment, and
- d) Organizing campus interviews and making other efforts to secure employment for graduate engineers that complete the training under activity (c) above.

The Finishing School activities are to be conducted using the existing infrastructure, laboratories, workshops, computer centres, library and the existing faculty. Expertise from outside the institution and from employer organizations can also be used. There will be no course fee for students for either activity at (a) or (b) or (c). The benefit of activity at (c) of the Finishing School can be extended to graduate-engineers from other institutions in the vicinity who fail to secure employment. All students attending training under activity (c) will be responsible for their boarding and lodging arrangements and expenditure.

The activities of the Finishing School will be regularly supervised and monitored by the respective SPFUs and the NPIU, especially in respect of the number of graduates participating in the 4-week training and the percentage of these participants securing employment within 3-months of completion of training.

#### **8. Important Notes:**

**Note 1** : *The activities like establishment of a new institution, large scale Civil Works, introducing new UG programmes will not be eligible for funding.*

**Note 2** : *Private unaided institutions are expected to carry out all the above listed activities. However, these institutions will receive limited fund only for the activities listed in Section-2 (Table-1).*



### 3.1.2 Sub-Component 1.2 : Scaling-up Postgraduate Education and Demand-Driven Research & Development and Innovation

#### 1. Objective:

To significantly increase enrolment in postgraduate<sup>11</sup> education and enhance engineering research and development and innovation.

#### 2. Scope:

This competitive fund will finance the best Institutional Development Proposals (IDPs) that can meet the above objective. About 60 institutions that already have Autonomous status (as defined by UGC) meeting the Eligibility Criteria described in Section-4 (4.3.2.1) will be selected under this Sub-component. The following types of institutions are eligible to submit an IDP:

- (i) State Government funded, Government aided and private unaided institutions that had participated in TEQIP-I,
- (ii) State Government funded, Government aided and private unaided institutions that had not participated in TEQIP-I,
- (iii) Centrally-Funded Institutions (CFIs) that had participated in TEQIP-I,
- (iv) CFIs that had not participated in TEQIP-I,
- (v) Engineering Faculty/Engineering Education Departments/Constituent Institutions of Universities (both old<sup>12</sup> and new), and
- (vi) Engineering Faculty/Engineering Education Departments of Deemed Universities (both old and new).

Following types of engineering/technical education institutions will not be eligible for funding under this Sub-component:

- (i) Non-autonomous institutions,
- (ii) Polytechnic institutions,
- (iii) Architecture, Management and Pharmacy institutions or departments, and
- (iv) Master of Computer Application Departments/institutions.

#### 3. Strategy:

Some of the institutions that were supported under TEQIP-I, have already upgraded infrastructure for quality of UG education and gained experience in introducing innovations in academic and administrative practices and also in implementation of institutional reforms. The Government of India expects that these institutions are quite ready for further improvement in imparting quality education at UG and PG levels and scaling-up PG education and research activities. The Project would thus select those institutions that can meet this challenge.

It is expected that a few new<sup>13</sup> institutions would also qualify to participate in this Sub-component. The private unaided institutions can also participate under this Sub-component and will receive the same funding as other institutions.

Institutions would submit comprehensive and coherent Institutional Development Proposals that aim to achieve the above stated objective.

<sup>11</sup> The term Post-Graduate covers both Masters and Doctoral degree programmes in engineering.

<sup>12</sup> The term 'old' refers to stand-alone institutions and Faculty / Department / constituent institutions of Universities and Technical Deemed Universities that had participated in TEQIP-I.

<sup>13</sup> The term 'new institutions' refers to institutions that had not participated in TEQIP-I, likewise 'old institution' refers to institutions that had participated in TEQIP-I.

**4. Deliverables:**

The institutions under this Sub-component will be responsible for concrete deliverables in terms of:

- Scaling-up of PG education as measured by:
  - Increased enrolment of Masters and Doctoral students (and number of MTech/PhD Graduates)
- Increase in the Industry-Institute collaboration and scaling-up of R&D in areas linked to societal/industrial demand:
  - Percentage of revenue from externally funded R&D projects and consultancies in total annual revenue from all sources
- Scaling-up quality research, development and innovation as indicated by:
  - Increase in the number of publications in refereed journals, citations and patents obtained/filed
- Increased collaboration with other institutions as measured through:
  - The number of joint publications in refereed journals

The above will be the primary deliverables for the institutions selected under this Sub-component. Continuation of funding beyond the second year of the Project will be subject to satisfactory achievements on the above deliverables.

In addition to the above stated deliverables, the supported institutions will be expected to improve performance on the following aspects:

- Increased employability of students as measured by:
  - Improvement in the placement rate and the average salary of placement package
- Overall institutional performance as measured through:
  - Increase in the overall student and faculty satisfaction

**5. Evaluation and Selection:**

Selection will be based on the merit of proposals submitted in the prescribed formats [Annex-IV (B)(b)]. Information given in the IDPs should be **verifiable**, to the point and be supported by **documents**.

**6. Funding Pattern:**

The financial allocation for an institution (funded, aided or private unaided) selected under this Sub-component is expected to be about Rs.12.50 crore. For planning fund requirements under various groups of activities, refer Section-6 (Table-17).

**7. The following activities are envisaged under this Sub-component:****(i) SWOT Analysis:**

The institutions are required to carry out SWOT analysis (for guidelines refer Annex-V) to identify Strengths, Weaknesses and to examine the Opportunities and Threats faced thereby focusing activities into areas where they are strong, and where the greatest opportunities lie. Based upon the SWOT analysis, institutions are to prepare an action plan in the prescribed format that seeks to remove its weakness in respect of postgraduate education and R&D, increase enrolment into Masters Programmes and scale-up research, development and innovation using its strengths. Based on the action plan, institutions need to formulate an Institutional Development Proposal (IDP). When developing the IDP, institutions can propose a combination of the following activities:

- a. Improvement in teaching, training and learning facilities through:
  - Establishment of new laboratories for new and existing programmes in engineering disciplines
  - Updation of learning resources
  - Procurement of furniture

- Modernization and strengthening of libraries and increasing access to knowledge resources
  - Refurbishment (Minor Civil Works)
- b. Providing Teaching and Research Assistantships for significantly increasing enrolment in existing and new Masters and Doctoral programmes in Engineering disciplines
  - c. Enhancement of research and development and institutional consultancy activities
- The institutions are also expected to undertake the following:
- Developing research interest among undergraduate students
  - Resource sharing with Industry through collaborative arrangements
- d. Faculty and staff development for improved competence based on Training Needs Analysis (TNA)
  - e. Enhanced Interaction with Industry
  - f. Institutional Management Capacity enhancement
  - g. Implementation of institutional reforms
  - h. Academic support for weak students

Each of these activities eligible for financing under the institution Project is described in further details below. Each Proposal must contain a plan for Faculty and Staff development that accounts for 10 % of the proposed project fund requirement. Further, Civil Works is to be limited to maximum 3 % of the institutional project outlay.

**(ii) Improvement in teaching, training and learning facilities:**

These will be achieved through:

- a) *Establishment of new laboratories for new and existing PG programmes in engineering disciplines* required for:
  - Meeting additional/new requirements from PG curricula
  - Starting of new PG programmes
  - Existing PG programmes
  - Promotion of research activities for students and faculty
- b) *Updation of Learning Resources:* Continuous updating of Learning Resources (Books, CDs and Software) and procuring the same is part of the improvement to be brought about in the teaching learning process. Course specific software to improve teaching learning process may be procured, as required. The faculty needs to be encouraged and trained to use modern equipment and course-specific software.
- c) *Procurement of Furniture:* Furniture may be required for establishment of new laboratories. Provision would need to be made for such procurement in the Institutional Development Proposal.
- d) *Modernization and strengthening of Libraries and increasing access to knowledge resources:*

For details, please refer to Sub-component 1.1

*Refurbishment (Minor Civil Works):* The Civil Works to be undertaken by the Institution under this category is to be confined to laboratories only. The Works can be the changing of the existing functions of an old structure/space to a new proposed function. For example: provision of electrical, water supply and/ or waste disposal arrangements in an existing non-functional component of a structure which is proposed to be used as a laboratory.

The expenditure on refurbishment should not exceed 3% of the Institutional project outlay.

**(iii) Providing Teaching and Research Assistantships for significantly increasing enrolment in existing and new Masters and Doctoral programmes in Engineering disciplines:**

The aim is to attract students to Masters and Doctoral programmes by providing Assistantships. Scaling-up of programmes will be done either by strengthening the existing programmes or by introducing new programmes. For the scaling-up, institutions need to ensure availability of qualified faculty and essential technical staff.

It is expected that each institution participating in this Sub-component, will on an average use at least 50 Masters Teaching Assistantships to non-GATE qualified students and 30 PhD Research Assistantships during the Project duration (in addition to the scholarships already available to the GATE qualified Masters students and under QIP scheme). Candidates sponsored by Industry will be allowed to be enrolled in all PG programmes. Institutions should plan to utilize 20% of the total Institutional project outlay for giving assistantships to Masters and Doctoral students. The students receiving assistantships will be required to devote 8-10 hours per week for teaching or research, as the case may be. Outstanding candidates enrolled for PhD, in select cases, could be sent abroad for paper reading in conferences, and exposure / interaction with eminent research laboratories for three months.

Starting of new AICTE approved PG programmes in emerging areas of Engineering and Technology will be supported under the Project provided these are started with AICTE latest during calendar year 2011.

**(iv) Enhancement of R&D and Institutional Consultancy Activities:**

National Knowledge Commission has stated, "Research and Development are prerequisites for teachers in top-flight research institutions that supply man-power for research and for development of cutting edge Industry." All Technical Education institutions are required to undertake research as a means of renovation and renewal of educational processes with the primary aim of producing quality manpower capable of taking up R&D functions. Research for development should focus on improving present technologies, developing indigenous ones and enhancing production and productivity.

Institutions are required to develop their plans for quantitatively increasing and qualitatively improving research by their faculty individually, jointly and collaboratively. Institutions need to secure Industry sponsored research projects also. The IDP needs to indicate the research areas, likely number of research projects, faculty to be associated with each research project, expected outputs in terms of applicable products, patents, publications, etc.

Institutions need to market their services to Industry. The Industry should be encouraged to give live problems to the institution for solutions. The faculty who have expertise should be encouraged to take up consultancy assignments, which would directly and indirectly benefit the institution, faculty and students. Internal Revenue Generation (IRG) would receive a boost, and some of the income should be shared with faculty, staff and students as per the norms approved by the BoG. Regular interactions through consultancy are likely to promote a healthy and useful relationship between the Industry and institution. Care should be taken that consultancy services offered to Industry do not affect the teaching schedules and processes. Institutions need to develop a strategy for enabling faculty to secure consultancy assignments and to complete them timely and successfully. The strategy in this regard is to be detailed in the IDP.

In addition to above, the institutions are also expected to undertake the following:

- **Development of research interest among undergraduate students:**

Institutions need to encourage UG students to get associated with Industry oriented/sponsored research programmes under the guidance of senior faculty. This is expected to increase their interest in higher education and research.

- **Resource sharing through collaborative arrangements:**

The Project encourages institutions to establish MoUs with neighbouring institutions and Industries on viable collaborative/consultancy projects with specific time-frames and well-defined outputs. The projects may be coordinated jointly by faculty member(s) from institutions as well as personnel from the Industries. A well-defined and transparent revenue sharing mechanism needs to be evolved and implemented to motivate faculty members to increasingly participate in such activities. The Project encourages participating institutions to share their resources like faculty and staff, computer centres, major lab/workshop equipment and libraries, and engaging experts from the Industries for short-term and/or on part-time basis.

**(v) Faculty and Staff Development for improved competence based on Training Needs Analysis (TNA):**

For details, please refer to Sub-component 1.1

**(vi) Enhanced interaction with Industry:**

For details, please refer to Sub-component 1.1

**(vii) Institutional management capacity enhancement:**

For details, please refer to Sub-component 1.1

**(viii) Implementation of Institutional Reforms:**

All institutions participating in this Sub-component are required to implement all the academic and non-academic reforms as described in Annex-I.

a) *Curricular reforms:*

For details, please refer to Sub-component 1.1

b) *Exercise of autonomies – Academic, Administrative, Managerial and Financial:*

For institutions selected under Sub-component 1.2 (Scaling-up Postgraduate Education and Demand Driven Research & Development and Innovation) possession of Autonomous Institution status is a mandatory requirement for receiving project funds. Institutions are also expected to exercise reasonable levels of Administrative, Financial and Managerial autonomies. The details of the desired Financial, Managerial and Administrative autonomies to be exercised by institutions are given in Annex-I.

c) *Establishment of Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund:*

For details, please refer to Sub-component 1.1

d) *Generation, retention and utilization of revenue generated through variety of activities:*

For details, please refer to Sub-component 1.1

e) *Institutions to fill-up all existing teaching and staff vacancies:*

The institutions selected under this Sub-component are required to reduce vacancies for faculty and staff to 5% or less of the sanctioned positions within 2 years of joining the Project and strive for zero vacancy during Project life.

f) *Delegation of decision making powers to senior functionaries with accountability:*

For details, please refer to Sub-component 1.1

- g) *Improved Student Performance Evaluation:*  
For details, please refer to Sub-component 1.1
- h) *Performance appraisal of faculty by students:*  
For details, please refer to Sub-component 1.1
- i) *Faculty incentive for Continuing Education (CE), Consultancy and R & D:*  
For details, please refer to Sub-component 1.1
- j) *Accreditation of UG and PG Programmes:*  
The institutions selected under this Sub-component are required to achieve accreditation of at least 75% of eligible UG programmes and 60% of eligible PG programmes within 2 years of joining the Project and strive for 100% accreditation at both levels during Project life.

**(ix) Academic Support for weak students:**

As a part of criteria for selection of States and their institutions, commitment is being taken from the States and institutions that under the Project, the reservation of seats for students as per the policy framework will be continued.

Under this reform, it is considered important that focused efforts be made by institutions to improve the academic performance of SC/ST/OBC/ academically weak students through innovative methods such as remedial teaching in professional subjects and soft skills development for increasing transition rate, pass rate and employability (refer Section-9 for details).

For increasing institutional focus on providing academic and guidance support to the SC/ST/OBC/ academically weak students, all project institutions are required to constitute a Finishing School with a senior faculty as coordinator. All institutions are expected to spend at least 2% of their project allocation on this activity in accordance with the pattern of 'permissible and non-permissible expenditures' given in Table-19.

The key activities under the aegis of the Finishing School will be:

- a) Conducting remedial teaching throughout academic sessions for improving transition rate and pass rate of students,
- b) Conducting specialized soft skills and professional skills development training during semester-breaks and vacations (preferably starting from 5th Semester onwards) for increasing employability,
- c) Conducting high intensity training (of at least 4-weeks duration) for development of soft and professional skills in the students that graduate but fail to secure any employment, and
- d) Organizing campus interviews and making other efforts to secure employment for graduate engineers that complete the training under activity (c) above.

The Finishing School activities are to be conducted using the existing infrastructure, laboratories, workshops, computer centres, library and the existing faculty. Expertise from outside the institution and from employer organizations can also be used. There will be no course fee for students for either activity at (a) or (b) or (c). The benefit of activity at (c) of the Finishing School can be extended to graduate-engineers from other institutions in the vicinity who fail to secure employment. All students attending training under activity (c) will be responsible for their boarding and lodging arrangements and expenditure.

The activities of the Finishing School will be regularly supervised and monitored by the respective SPFUs and the NPIU, especially in respect of the number of graduates participating in the 4-week training and the percentage of these participants securing employment within 3-months of completion of training.

### Sub-Sub-Component 1.2.1 : Establishing Centres of Excellence

#### 1. Objective:

To support establishment of Centres of Excellence for multi-disciplinary applicable research in specific thematic areas.

#### 2. Scope:

Establishment of about 30 Centres of Excellence (CoE) will be supported in eligible institutions out of those selected under Sub-component 1.2 and having potential for undertaking cutting-edge applicable research. An additional fund will be given for the same. Some of the potential generic areas suggested for establishing CoEs are: Renewable energy (Solar, Wind, Wave energy etc), Hydrology and Water Resource Management, Highway Safety, Intelligent Transportation System (ITS), Advanced Materials, Disaster Management, Nanotechnology, Security Technology, Semi Conductors, Advance Manufacturing, Bio-medical Instrumentation, Waste Management, Bio-Technology, Image Processing, Information and Communication Technology, etc.

#### 3. Strategy:

- A Centre of Excellence (CoE) is expected to be a collaborative activity between faculty members from several departments around a common research programme.
- All the collaborating departments are expected to share their physical and intellectual resources with each other.
- CoE is expected to address emerging Industry and societal needs in close collaboration with industries and users, within India and abroad.
- CoE is expected to trigger an R&D culture in the institutions as evidenced by significant increases in research outputs, collaborative and sponsored research, publications, patents, innovations, commercialized products and PhD enrolments.
- CoE is expected to further scale-up Postgraduate Education through increased enrolments for Masters and Doctoral programmes in topics closely linked to economic and societal needs.
- CoE is expected to increase collaboration with National and International academic and research institutions/organizations to improve quality of research and development, further tap into global pools of knowledge and create a critical mass with potential for global research and development.

#### 4. Deliverables:

The CoEs are expected to ensure the following deliverables:

- Increased enrolment of Masters and Doctoral students (and number of MTech/PhD Graduates)
- International exchange of credits,
- Joint publications in refereed Journals with International authors,
- Significant exchange of research students and faculty with foreign collaborating institutions,
- Conferences/seminars/symposia and workshops organized at National and International levels in thematic areas,
- Significant increase in patents obtained and filed,
- Progressive increase in external R&D funding,
- Industry sponsored R&D projects,
- Number of Industry Chairs secured,
- MoU with Industry and academia, both within India and abroad, and
- Products commercialized.

**5. Selection:**

Institutions for hosting a CoE will be selected through a competitive process based on the merit of its proposal. One of the important attachments with the proposal is the MoUs signed with industries and research institutions/organisations within India and abroad [see Annex-IV (B).c]. An independent expert Evaluation Committee will evaluate the proposals and recommend meritorious proposals for selection to the National Steering Committee. Some institutions may be required to undertake improvements in their proposal before commencement of funding. A maximum of two Centres of Excellence can be supported in an institution under this Sub-sub-component.

**6. Funding Pattern:**

The additional funding to the institution for carrying out the activities of a Centre of Excellence is expected to be around Rs. 5.00 crore over and above their allocation under Sub-component 1.2. This augmentation is for additional costs towards research equipment, books and learning resources, consultant services, research studies, training, 10 to 15 additional teaching/research assistantships, study tours; workshops, seminars, etc. in thematic areas and patenting.

**7. The following activities are envisaged under this Sub-Sub-component:**

(Note: The following activities are specific to the Centre of Excellence. Institutions having CoE will necessarily carry out all the activities given under Sub-component 1.2)

**i) Infrastructure improvement for applicable thematic research and development:** This will be achieved through:a) *Establishment of new laboratories for :*

- Starting new Masters and Doctoral programmes relevant to thematic areas,
- Establishment of incubation centres,
- Establishment of Technology transfer cell, and
- Increased research ambience by providing state-of-art research facilities in thematic areas.

b) *Establishment of a knowledge resource centre (library) in the thematic area:* A knowledge resource centre (library) may be setup for each CoE provided with a comprehensive collection of books, journals and reference materials (in print and electronic form), proceedings of conferences and seminars, published and unpublished reports, research studies, thesis, links to databases and other resource centres, links to experts in thematic areas, etc. The centre may also be provided with relevant equipment.c) *Procurement of Furniture:* Furniture may be required for establishment of new laboratories and knowledge resource centre. Provision would need to be made for such procurement in the Institutional Development Proposal for CoE.d) *Refurbishment (Minor Civil Works):* The Civil Works to be undertaken by the institution under this category is to be confined to laboratories only. The Works can be the changing of the existing functions of an old structure/space to a new proposed function.

The expenditure on refurbishment should not exceed 3% of the total allocation for the CoE.

**(ii) Providing additional Teaching and Research Assistantships for enrolment in Masters and Doctoral programmes in topics linked to economic or societal needs in the thematic areas:**

The aim is to attract students to Masters and Doctoral programmes started under CoE and provide Assistantships. It is envisaged that the programmes under CoE will necessarily be linked to economic and social needs in the thematic areas. Institutions may give emphasis to start Masters (by research) programmes. Institutions also need to ensure availability of qualified faculty and essential technical staff.



It is expected that each institution participating in this Sub-Sub-component will provide at least 10 to 15 additional Teaching/Research Assistantships per CoE to non-GATE qualified students (scholarships are already available to the GATE qualified students and those doing PhD under QIP) as per the prevalent UGC/AICTE norms. Candidates sponsored by Industry will be allowed to be enrolled in all PG programmes. Those receiving assistantships will be required to devote 8-10 hours per week for research. Outstanding candidates enrolled for PhD, in select cases, could be sent abroad for paper reading in conferences, and exposure/interaction with eminent research laboratories for three months.

Starting of new AICTE approved PG/Doctoral programmes in thematic area of a CoE will be supported under the project provided that these are started latest by August 2011.

**(iii) National/International collaboration for Research and Development activities with Academic Institutions and R&D organizations :**

The institutions with CoE need to collaborate with laboratories, professional bodies and Societies, R&D organizations within India and abroad, desirably through Memorandum of Understanding for acquisition of the latest knowledge and technical know-how (Guidelines for International travel are given in Annex-VII).

The CoEs through collaboration are expected to contribute to the development and elevation in the position of Engineering Education and Engineering professionals in society, and act as a link between its members, societies and International bodies. CoEs are further expected to foster excellence and innovation in Engineering by excelling in research, public service and practice; and providing quality products in their regions and around the world through International linkages and cooperative partnerships.

**(iv) Faculty training for enhancing research competence in thematic areas, both within India and abroad:**

The faculty training should be closely linked to the objectives of CoE and coordinated with the proposed investment in equipment, learning resources and facilities. Institutions should plan to spend at least 10% of the outlay for CoE on faculty training.

The faculty training can be carried out through the following activities.

- a) *Subject knowledge and research competence upgradation:* Subject knowledge upgradation is to make the faculty aware of the advances in knowledge, technologies and research methodologies for improving the self performance and for achieving the objectives of CoE. Faculty should be on the lookout for appropriate opportunities.
- b) *Participation in seminars, conferences, workshops etc.:* Faculty is to be encouraged to participate in seminars, conferences and workshops, both National and International. Participation in such fora would give a good exposure on the developments taking place in different areas. The faculty participating in such fora need to be encouraged and supported to visit close-by institutions and laboratories of his/her interest. Besides, accrual of benefits to students and in their own researches, such participation is expected to bring about collaborations with academic institutions and R&D organizations within and outside the country. The institutions are required to establish collaboration through MoUs.
- c) *Accountability:* The faculty after undergoing training are expected to :
  - Prepare a report on the training undertaken and the experience gained.
  - Share their experience with students and other faculty/staff through seminars.
  - The report from the faculty should be hosted on the institution's web site and linked to NPIU's web site.

**(v) Collaboration with Industry for applicable research and product development:**

This can be achieved through:

- a) *Industry collaborations for applicable thematic research:* The CoEs are expected to have potential for interaction with Industry to create research ambience in the institutions and to provide state-of-art research facilities in specific areas of Engineering and Technology. Industry-academia linkages are to be encouraged by associating students with Industry-sponsored projects under the guidance of senior faculty members. CoEs are to motivate Industry to sponsor more R&D projects for indigenous developments and for continuous updation of technology to keep pace with the latest developments globally and to have cost effective, Industry relevant research and development that can make institutions with CoEs as Centres of Innovation.

CoEs are to be proactive in increasing Industry involvement in all the relevant areas in the institution and create a pool of "Industry Patrons". It will help to create an environment of innovation in the institutions and enable absorption of the advanced technologies in niche areas and to develop future-ready indigenous technologies.

CoEs need to promote and strengthen institutional capacity in specific thematic areas with a multi-disciplinary research effort by expanding and developing capabilities in research by undertaking cross-pollination of best practices, establishment of core facilities and enhancing infrastructure needed to carry out objectives of the Project. Collaborative, interactive efforts would be promoted amongst researchers with complementary background skills and expertise. The CoEs are expected to be goal-oriented, to use a blend of product relevant discovery sciences and aim at product and process development, with the aim of creating interventions between institutions and Industrial sectors.

CoEs are also encouraged to collaborate in the education and training of Postgraduate students. In particular, the Industry partners in the CoEs could provide research guidance to students on real-life problems for Masters and Doctoral theses. Ideally, PG students would conduct research within the partner companies. The collaboration could also extend to inputs into coursework of UG and PG programmes, for example through new electives and Industry lectures.

- b) *Converting innovative ideas into projects/products in close collaboration with both private and public sector Industries:* CoEs need to address emerging technologies to realize their full potential for creating stronger links between Academia and Industry, which stimulate development of innovative ideas and solutions. The evaluation of innovative ideas and products with regard to their successful potential in terms of market penetration and the degree of innovation is a special challenge for research and development. Independent research activity can lead to growth of knowledge/processes in a novel area and can subsequently grow into a major project. Students should be encouraged to participate in Industry oriented research programmes based on their own innovative ideas and to develop these ideas and knowledge into a means of fostering Industrial innovations. There is a dire need for effective overlap of Academia and Industry, so as to inculcate the sense of new technologies and relevant expertise amongst the new entrants in the fast paced technologically driven environment. It will boost dissemination and exchange of information across Industry and Academia that would develop best means of delivering ideas into products and processes.

### 3.1.3 Sub-Component 1.3: Faculty Development for Effective Teaching (Pedagogical Training)

#### 1. Objective:

To improve learning outcomes of Engineering students by improving competence of faculty from project and non-project institutions through Pedagogical Training.

#### 2. Scope:

All project institutions need to organize Pedagogical Training on their campus to cover maximum faculty members from their institution. The State can extend the benefit to the interested non-project institutions also on cost sharing basis.

#### 3. Strategy:

- a) Pedagogical Training will be offered in 2 modules (i) Basic Module and (ii) Advanced Module, each of one week duration. The modules would include both theory and hands-on learning. The Basic training would be given during the First and Second years of the Project while the Advanced training would be provided from the Second Year onwards only to those who have completed the basic training.
- b) The NPIU will organize development of curricula for the 2 modules. It will, thereafter, invite Capability Statements for identifying competent training providers through invitation and open advertisement. The panel will thereafter be made available to SPFUs for use in selecting one or more training providers.
- c) The SPFUs will be responsible for facilitating Pedagogical Training in the State sponsored institutions and also in non-project institutions. The SPFUs may follow the following steps.
  - Compile a list of institutions desirous of training on their campus in the First Year of the Project along with their location, number of participating faculty and the time slots convenient to them.
  - SPFUs will inform all the non-project institutions (including private unaided institutions) in the State of the opportunity made available for Pedagogical Training on subsidized basis.
  - SPFU would select training providers for its institutions from NPIU's panel by following the World Bank Consultant procurement procedure. It will appoint a senior faculty member as the Training Coordinator who will facilitate and coordinate the training and carry out the follow-up activities.
- d) NPIU, following the World Bank procedure for hiring the consultant services, will invite RFP and select most technically and commercially responsive training providers for CFIs. The NPIU will be responsible for facilitating the Pedagogical Training for CFIs.
- e) The training providers will be required to evaluate the effectiveness of the training given, and the results will be shared with the institution, SPFU and the NPIU.
- f) SPFU will monitor progress and effectiveness of training, review faculty feed back and end-of-course assessment reports for each prepare cluster and matrix and packages of their institution and NPIU will do the same for CFIs.
- g) On receipt of feedback from SPFUs and CFIs, NPIU with the help of experts will decide the necessity of any modifications required in the elements and cause modifications to be made by the training provider(s) as may become necessary.

**4. Deliverables:**

The deliverables for this Sub-component are:

- Number of faculty trained
- Improvement in teaching performance based on student feedback during performance audit

**5. Funding Pattern and Fund Release Mechanism:**

The funding pattern for various categories of institutions under Pedagogical Training is as follows:

- a) For Centrally Funded Institutions entire funding will be from MHRD/NPIU.
- b) For the State Government funded and Government aided project institutions, the funding will be in the ratio of 75:25 or 90:10 as the case may be.
- c) For the private unaided project institutions under Sub-component 1.1, the funding will be in the ratio of 75:25 or 90:10 as the case may be, only for the **“training fee”**.  
However, all other expenses including cost of venue, training provider’s travel cost, their lodging, boarding and costs for replication and distribution of training materials would be borne by the institutions.
- d) For the Government funded, Government aided and private unaided **non-project institutions**, the funding will be only for the **“training fee”** by the Project in the ratio of 75:25 or 90:10 as the case may be.  
However, all other expenses including cost of venue, training provider’s travel costs, their lodging, boarding and costs for replication and distribution of training materials would be borne by the institutions.
- e) SPFU/NPIU will promptly pay the training provider all permissible expenditure on receipt of the following documents from the training providers.
  - Attendance record of faculty in each training session,
  - List of participants with full names, titles and personal e-mails,
  - Summary of faculty feed back to be later compiled by the training coordinator institutions, and
  - Training assessment results and report by the training provider with recommendations for improvements.
- f) NPIU/MHRD will consolidate the fund requirements of the project States/UTs and CFIs every two months and release the required Central Share.

### **3.2 COMPONENT–2: IMPROVING SYSTEM MANAGEMENT**

This Component aims to build capacity of Technical Education Policy Planners, Administrators and Implementers at the Central, State, and Institutional levels to effectively implement the institutional reforms and to introduce and sustain innovative systemic quality improvement practices.

It also aims to provide timely, sufficient, precise, and reliable information to improve and assess the performance of the selected institutions through effective Project Management.

### 3.2.1 : Sub-Component 2.1 : Capacity Building to Strengthen Management

#### 1. Objective:

- To build capacity of Technical Education Policy Planners, Administrators and Implementers at Central, State, and Institutional levels for effective implementation of academic and non-academic reforms.
- To introduce and sustain innovative systemic quality improvement practices.

#### 2. Scope:

The initiatives to improve policies and management practices that contribute to promotion of quality in Engineering Education at Central and State levels will be funded through an **Innovation Fund**<sup>14</sup>. The Fund will support initiatives by Central Government, State Governments, Affiliating Universities<sup>15</sup>, the State Technical Universities participating in the Project and group of Centrally Funded Institutions.

#### 3. Strategy:

a) The Project will support:

- the innovative management initiatives by individual States and affiliating Universities,
- the knowledge sharing workshops between project States and institutions,
- professional development of Technical Education and TEQIP administrators in the project States,
- the initiatives for Effective System Governance of institutions at the level of Board of Governors.

b) The Capacity Building Programmes envisaged under this Sub-component are in addition to the initiatives financed under the institutional Grants. However, participation in this Sub-component of the Project is voluntary.

#### 4. Deliverables:

Improved governance at the State and Institutional levels through a combination of the following deliverables are expected under this Sub-component:

S. No	Activity	Deliverables
i	Establishment of Quality Assurance Practices	Well established quality assurance mechanism in States Number of institutions with quality benchmarking
ii	Establishing a Task Force for strategic planning for Technical Education	Purposeful development of Engineering Education in States

<sup>14</sup> The Project provides grants through an Innovation Fund to States and affiliating Universities to promote initiatives that will enhance achievements of the Project objectives and qualitatively improve Engineering Education.

<sup>15</sup> The term 'Affiliating Universities' is used for Universities that are affiliating project institutions.

iii	Establishment of Curriculum Development Cells (CDC)	Modern curricula available to institutions
iv	Spreading best practices to non-project institutions	Increased number of quality faculty Improved academic achievements of students
v	Establishing Industry-Institute Partnership Promotion Cells	Better placement of students in Industries Better placement of faculty in Industries Increased employment Increased number of Industry sponsored projects and consultancy assignments
vi	Best Academic and Governance Practices Workshops	Implementation of Best practices by an increased number of institutions
vii	Conducting Professional Development Programme for the Project and Technical Education administrators	Effective project implementation and implementation of academic and non-academic reforms
viii	Establishing Task Force for Effective System Governance	Guidelines for effective functioning of Board of Governors

#### 5. Selection:

This Fund will be made available against proposals from the eligible entities starting in the second year of the Project, once selection of institutions and project implementation is well under way. Proposals will be received up to the end of third year of the Project for completion by Project closure.

Each proposal would typically include the objective, the proposed initiative, the innovation of the proposed initiative, the expected impact on quality of Engineering Education, related performance indicators with targets, fund requirements and a sustainability plan.

Proposals will be evaluated by an Evaluation Committee (constituted by the NPD). Improvements suggested by the Committee will need to be carried out by the applicants within 30 days of transmission of Committee's recommendations to the SPFUs. All proposals from States need to be submitted to the NPIU only through SPFUs. Groups of Centrally Funded Institutions need to submit the Proposals to the NPIU directly. Affiliating Universities would collaborate with SPFUs to submit and administer the innovation grant through mutual understanding.

#### 6. Funding Pattern:

Funding will be available on a merit basis. Expenditures will be audited through the SPFU audits. The grants are expected to primarily finance consulting services and operational costs, such as travel and workshops. Costs would be financed according to the overall costing share percentage with each State (75: 25 or 90: 10 as the case may be). The overall administrative guidelines for these grants could be modified during Project implementation.

**7. The following activities are envisaged under the Sub-component:**

S. No	Activity	Performed by	Funding through
i	Establishment of Quality Assurance Practices	State Government	SPFU
ii	Establishing a task force for strategic planning for Technical Education	State Government	SPFU
iii	Establishment of Curriculum Development Cells (CDC)	Affiliating Universities	SPFU
iv	Spreading best practices to non-project institutions	<ul style="list-style-type: none"> <li>• State Government</li> <li>• Affiliating Universities</li> <li>• Group of at least 3 project institutions</li> </ul>	SPFU SPFU NPIU
v	Establishing Industry-Institute Partnership Promotion Cells	State Government	SPFU
vi	Best Academic and Governance Practices Workshops	State Government	SPFU
vii	Conducting Professional Development Programme for Project and Technical Education administrators	NPIU and MHRD	NPIU
		SPFU and affiliating Universities	SPFU
viii	Establishing Task Force for Effective System Governance	MHRD	NPIU

**(i) Establishment of Quality Assurance Practices in States/Union Territories and Centrally Funded Institutions:**

Quality Assurance (QA) practices are expected to be on lines of the practices and norms of NBA/NAAC but are not to be in conflict with them. The purpose of QA would not only be a State-level quality-benchmarking but a purposeful effort towards ensuring continual improvement in the standard of Engineering Education, both in the institutions and through the affiliating Universities.

**(ii) Establishing a Task Force for strategic planning of Technical Education by State Governments:**

The Task Force would typically include senior State officials (e.g. State Secretary), Industry leaders and prominent academicians. The tasks could for example include:

- Mapping demographic and economic conditions across the State,
- Mapping of the need for professional/technical competencies,
- Analyzing the match or mismatch between technical manpower needs and current capacity, considering quality, urban/rural, gender and other disparities, affordability and other variables,
- Gaining consensus on long-term goals and strategies accompanied by benchmarks to increase the quality of Engineering/Technical Education (UG, PG and R&D) in the State.

The strategic plan is expected to serve as a framework to prompt policy and administrative changes necessary to address quality/capacity issues across the State's Engineering/Technical Education System. The strategic planning process could be the foundation for development of a Qualifications Framework for all education levels in selected States with emphasis on qualifications in Engineering/Technical Education fields.



**(iii) Establishment of Curriculum Development Cells (CDCs) in Universities that affiliate Project Institutions:**

The purpose is to establish modern curriculum development practices in the affiliating Universities in order that curricula and syllabi for Engineering disciplines at UG and PG levels get timely and effectively modernized and continue to be periodically revised to meet the labour market requirements. Involvement of employers including core Industry is considered an essential requirement. It is expected that the benefit of improved curricula and syllabi will be extended by the participating Universities to non-project institutions also.

**(iv) Spreading Best Practices to Non-project Institutions:**

The purpose is to finance the State Governments and Affiliating Universities to prepare non-project institutions for Academic Autonomy. Other possible initiatives could be to increase faculty development programmes within pedagogy or knowledge up-gradation, promote adoption of academic innovations, spreading good practices for joint Industry-academia collaboration and specific programmes to enhance learning outcomes of weak students.

**(v) Establishing Industry-Institute Partnership Promotion Cells:**

It is felt that many institutions are not able to enter into partnerships with Industries for securing Consultancies, R&D Projects, placements of faculty and students for industrial training, job placement for students, Continuing Education Programmes, joint theses guidance, etc. Locational disadvantage, among others, is an important reason for this situation, some institutions may not be located in industrial clusters and are, therefore, not able to frequently interact with industries. In order to improve this situation in a definite manner, States may consider establishing such Cells, which will facilitate Industry-Institute Interaction Cells (IIIC) formed at the institutions in collaboration with State Private Sector Advisory Group (S-PSAG). States will be funded based on the merit of their Proposals.

**(vi) Sharing of Best Academic, Administrative and Governance Practices through Workshops and Specific Groups:**

Through support under Sub-component-1.1 and the Innovation Fund for State-level management, a number of States and institutions are expected to develop best practices and effective policies that other Governments and institutions could benefit from. For this purpose, the Project will put forward Grants to States interested in showcasing and discussing best practice within specific areas of TEQIP. Importantly, the aim of these workshops would be knowledge sharing and discussions whereby best practices will emerge/be recognized through exchange of experience. The aim is not self-promotion. Development of sustained peer-to-peer networks would also be a benefit from these workshops. In addition to sharing of best practice from TEQIP institutions, outside experts could also be invited to share their experiences and ideas. The aim of this initiative would be to increase the exchange of best practices among institutional leaders and State officials.

Potential topics for these workshops could be:

- Assessment of student learning,
- Promoting equity, such as remedial education, soft skills and communication training,
- Faculty development,
- Successful models for joint R&D with Industry,
- Institutional Strategic Planning, and
- Monitoring and Evaluation of TEQIP Institutions.

Both, States and institutions are welcome to organize these workshops on a voluntary basis. Funding will be available on a competitive basis. Proposals will be evaluated by an Evaluation Committee. SPFUs are encouraged to organize these workshops at their level, ensuring participation of all of their project institutions and participation of key officials from at least two neighbouring SPFUs. A group of 3 to 5 CFIs is also encouraged to organize such workshops, while ensuring participation from the SPFUs and project institutions from the States of their location.

The workshop dates and topics will need to be announced on the NPIU's website at least one month in advance in order to allow interested States and institutions to express their interest in participation. However, the organizers will be allowed to limit the maximum number of participants. Material and presentations from the workshop would be posted on a freely available website, for which Internet address will be provided to NPIU.

**(vii) Conducting Professional Development Programme for Project and Technical Education Administrators at the National and State levels and from Affiliating Universities:**

Professional development for groups of TEQIP, Technical Education administrators and leaders would be financed. Two of the potential professional development activities are:

- Study tours in India as well as to foreign countries with strong policy leadership/planning entities for Higher/Technical Education; and
- Short-term professional training programmes.  
(Guidelines for International travel are given in Annex-VII)

The focus of the programmes will be on practices and policies to improve management of Technical Education, but could in a few relevant cases equally include professional development within Project Management and management in general.

The Professional Development Programme would be available to key officials and Project implementers from MHRD, NPIU, State Technical Education Departments, SPFUs and Universities that are affiliating project institutions.

The minimum group size for these activities would be 7-10 participants. NPIU would initiate and organize such Professional Development Programmes. Detailed motivation and learning objectives of these Programmes would be described along with a justification of the chosen provider/destination and institutions to be visited. All foreign study tours financed under this activity will be reviewed by the National Project Director in accordance with the Guidelines (refer Annex-VII).

**(viii) Establishment of a Task Force by MHRD for Effective System Governance:**

The purpose is to establish a Task Force at the National level with approval of the NPD composed only of existing Chairs and Members of Board of Governors that will be charged with developing and recommending Guidelines for effective functioning of Board of Governors. The functioning of this Task Force will be supported administratively and financially by the NPIU. The guidelines could be developed into a publication for existing and newly appointed BoG members. The guidelines may include:

- General principles of governance,
- The role of the governing body, and
- Legal and ethical aspects of corporate governance.

The support could be extended to include Discussion and Dissemination Conferences for BoGs. Intermediate outcomes of this aspect of the Capacity Building will be a set of Guidelines for Board of Governors, and awareness among the Board of Governors regarding their role and responsibilities and the available tools at their disposal.

States could also propose to organize well planned orientation programmes for BoG members in order to familiarize the BoG with important topics for understanding the affairs of a Higher Education institutions, such as academic management, higher education financing and auditing, performance measurement and effective exercise of the powers of the BoG.

### 3.2.2 Sub-Component 2.2 : Project Management, Monitoring & Evaluation

#### 1. Objective:

The broadly defined objectives of Project management, monitoring and evaluation are:

- To plan, organize and manage resources to bring about successful achievement of Project objectives.
- To support innovations for improving State and Institutional level management and education practices.
- To monitor and evaluate the performance of project institutions and to identify variance, if any, from the IDP and suggest remedial measures, as required.
- To mentor the project institutions towards quality improvement and to audit the institutional performance in achieving their respective targets.

#### 2. Project Management:

##### i) Objective:

To ensure effective implementation of the Project at all levels and achievement of the Project objectives and deliverables under each component.

##### ii) Scope:

MHRD, NPIU, SPFUs and project institutions will be covered under this Sub-component. The non-project institutions participating in the Sub-component on Pedagogical Training will also be covered.

##### iii) Strategy:

Ensuring successful and timely implementation of the Project at Centre/State/Institutional levels and achieving targets for the deliverables, coordinating resources and integrating all the activities of the components of the Project in accordance with the Project Implementation Plan.

The Project will be managed in a participatory manner at the National, State and Institutional levels as follows:

- a) At the National level, the Project will be guided by a National Steering Committee (NSC). The NSC will validate recommendations of National Evaluation Committees (NECs) for selection of States and institutions under the Project, and approve corresponding funding for their activities. The NSC will also provide overall policy directions for Project activities and for implementation of systemic policy reforms.
- b) The Project at the National level will be managed by a National Project Directorate, located in the MHRD and headed by a National Project Director (NPD) at the level of Additional Secretary/Joint Secretary to the Government of India. The NPD will be assisted by a National Project Directorate in MHRD and the National Project Implementation Unit (NPIU).
- c) At the State level, the Project will be guided by State Steering Committees (SSCs) assisted by respective State Project Facilitation Units (SPFUs) located within the Department of the State Government responsible for Technical Education.
- d) At the Institutional level, the Project will be implemented by the Institutional TEQIP Units under the overall guidance of respective Boards of Governors (BoG).

- e) A National Private Sector Advisory Group (N-PSAG) will advise the NSC on enhancing Industry-Institution linkages.
- f) A State Private Sector Advisory Group (S-PSAG) will advise the respective SSCs on enhancing Industry-Institute linkages.

iv) Funding Pattern:

The activities of National Steering Committee (NSC), National Evaluation Committees (NECs), National Project Directorate (NPD), National Private Sector Advisory Group (N-PSAG) and National Project Implementation Unit (NPIU) will be funded through the NPIU. The activities of State Steering Committee, State Private Sector Advisory Group (S-PSAG) and State Project Facilitation Unit (SPFU) will be funded through the respective SPFUs. The expenses on BoG activities will be met through Institutional project funds.

**3. Project Monitoring:**

i) Objective:

To provide reasonably complete, correct and reliable data through a web-based Management Information System (MIS) to stakeholders that will lead to improvements in Project implementation, decision making and learning from shortcomings.

ii) Scope:

The Project monitoring and reporting activities are mandatory for the NPIU, SPFUs and all project institutions and also non-project institutions.

iii) Strategy:

All the stakeholders (all institutions under the Project as well as the non-project institutions participating in Pedagogical Training, SPFUs, NPIU and NPD) will be linked through a Management Information System (MIS) being developed for the Project.

iv) Funding Pattern:

All activities under Project monitoring will be funded by the NPIU.

v) Project Monitoring:

- (i) Monitoring through Key Performance Indicators : Following are the Key Performance Indicators (KPIs) to monitor periodic progress of the Project:

**Table-3**  
**Key Performance Indicators**

<b>Component 1: Improving Quality of Education in Selected Institutions</b>		
<b>Project Sub-components</b>	<b>Monitoring Parameters</b>	<b>Project Outcome/Output Indicators</b>
<b>Sub-Component 1.1:</b> Strengthening Institutions to Improve Learning Outcomes and Employability of Graduates	<ul style="list-style-type: none"> <li>Effectiveness of funds utilized for the teaching, training, learning and research equipment, library, computers, etc. by Institutions</li> <li>Obtaining Academic Autonomy status</li> <li>Effort made by Institutions for upgrading qualifications of faculty members</li> <li>Generation, retention and utilization of IRG</li> <li>Existing teaching and staff vacancies and effort made by Institutions for filling the vacancies</li> <li>Effectiveness of equity at Institutional level</li> </ul>	Increase in the satisfaction index of student and faculty  Percentage of curricula revised  Percentage of faculty enrolled in MTech and PhD  Government order and BoG approved rules in position  Percentage of faculty and staff positions vacant  Transition rate of students from the First to the Second year in UG programmes
<b>Sub-Component 1.2:</b> Scaling-up Postgraduate education and demand-driven Research & Development and Innovation	<ul style="list-style-type: none"> <li>Effectiveness of funds utilized for the teaching, training, learning and research equipment, library, computers, etc. by the Institutions</li> <li>Effectiveness of scaling-up Postgraduate Technical Education</li> <li>Effectiveness of collaborations made with other Institutions in India and abroad</li> </ul>	Increase in the satisfaction index of student and faculty  Increased enrolment for MTech and PhD  Increase in number of co-authored publications in refereed journals
<b>Sub-Component 1.3:</b> Faculty Development for Effective Teaching (Pedagogical Training)	<ul style="list-style-type: none"> <li>Effort made by Institutions providing Pedagogy Training to faculty</li> <li>Effectiveness of Pedagogy Training</li> </ul>	Percentage of faculty who have undergone Pedagogy Training  Percentage of students satisfied with the quality of teachers
<b>Component 2 : Improving System Management</b>		
<b>Sub-Component 2.1:</b> Capacity Building to Strengthen Management	<ul style="list-style-type: none"> <li>Implementation of academic and non-academic reforms in large number of institutions within State/UT</li> </ul>	Improved understanding of the need and ways for increased autonomy, improved governance, and new instruments for accountability
<b>Sub-Component 2.2:</b> Project Management, Monitoring and Evaluation	<ul style="list-style-type: none"> <li>Effectiveness of mentoring, reviews, surveys &amp; audits conducted</li> <li>Effective use of MIS</li> </ul>	Increase in the achievement of the targets by project institutions  Precise and reliable information/ data through web based MIS available to stakeholders at all time

**Table-4**  
**Key Performance Indicators with Target Values**

S. No	Indicators	Target values	
		Sub-Component 1.1	Sub-Component 1.2
1	Share of Supported programmes that are accredited/applied for	60% (UG+PG) (*) 100% (**)	75% UG & 60% PG (*) 100% (**)
2	Percentage of institutions with academic autonomy	100% (*)	Already autonomous
3	a) Increase in percentage of regular faculty with Masters degree in engineering disciplines above baseline  b) Increase in Percentage of regular faculty with Doctoral degree in engineering disciplines above baseline	20% (*) & 40% (**)  10% (*) & 20% (**)	-----  20% (*) & 25% (**)
4	Vacancy position for faculty and staff	Vacancy reduced to 10% (*) Zero vacancy (**)	Vacancy reduced to 5% (*) Zero vacancy (**)
5	Increase in the number of publications in the field of Engineering in refereed journals	500 (***)	1000 (+ 500 for 1.2.1) (***)
6	Transition rate for students from the First year to the Second year of undergraduate programmes	45% (1 year) The transition rate needs to be improved by each institution during each Project-year.	
7	No. of additional Masters and Doctoral students enrolled with TEQIP funds in the project institutions during the project period.	3350 (Masters) and 2000 (PhD) (***)	
8	IRG as % of total annual recurring expenditure	As per Institutional Development Proposal (IDP)	

\* within 2 years of Project start

\*\* to be achieved by Project closure

\*\*\* National target

## iv) Funding Pattern:

All activities under Project evaluation, except mentoring will be funded by the NPIU/SPFU. The expenses incurred for mentoring of the Institutions will be met through respective Institutional project funds.

## v) The following activities are envisaged for Project Evaluation:

## a) Assessment Surveys:

The Assessment Surveys, conducted by the NPIU, will measure changes in the quality of education in the project institutions through formative and summative assessments of performance. Assessment Surveys to be undertaken are:

▪ *Student Satisfaction Surveys:*

To measure the quality of education being provided by project institutions, annual Student Satisfaction Surveys will be conducted. The Surveys will measure students' satisfaction with methods and quality of teaching and learning, quality of faculty, adequacy and quality of infrastructure and facilities available for academic and other co-curricular activities, etc.

▪ *Faculty Satisfaction Surveys:*

Annual Faculty Satisfaction Survey will also be conducted. The Surveys will measure faculty's satisfaction with the quality of students, opportunities available for career advancement, up-gradation of skills viz. educational qualification, modern pedagogical training, etc.

▪ *Implementation Surveys:*

The Implementation Survey will be conducted annually to get feedback from officials of nodal implementing agencies [MHRD, NPIU, and SPFU] and personnel from Institutions involved in Project implementation about Project design, implementation, impact and performance. The feedback will be assessed by the NPIU and the World Bank and shared with all respondents so that the outcomes of the feedback can be utilized for corrective action at the National, State and Institutional levels. The Surveys will be web based.

▪ *Employer Satisfaction Surveys:*

The Employer Satisfaction Surveys will assess the acceptability level of graduates from project institutions. The change in Employer Satisfaction will be a measure of the quality of education provided by project institutions. These Surveys will be undertaken at the end of second, third and fourth years of the Project.

## b) Institutional Audits:

Audits will be conducted to ascertain the validity and reliability of information and to also provide an assessment of Project's internal control. Auditors will assess progress made under the Project and processes related to technical and fiduciary aspects of the Project. These audits will verify implementation in accordance with the agreed NPIU/MHRD-World Bank procedure and guidelines and will combine factual assessment with qualitative assessment.



- *Performance and Data Audits:*

Performance and Data audits will be carried out annually to assess progress made by all project institutions to achieve set goals as per their plans given in IDPs like implementation of agreed reforms, accuracy, and validity of data, progress in faculty development, utilization of resources and achievement of targets set by the Institution to achieve academic excellence. The Performance Auditors will be senior academicians, appointed out of a pool of mentors created from persons suggested by SPFUs and those identified by the NPIU. They will be appointed for all project institutions by the NPIU. The Performance Auditors will be assisted by skilled professionals for conducting the Data Audits. The Data Auditors will likewise be appointed by the NPIU. All expenses for Performance and Data audits will be met by the NPIU as per norms approved by the NPD from time to time.

- *Fiduciary Audits:*

The Fiduciary Audits, conducted by the World Bank, will cover Post-Procurement Reviews and Financial Management Reviews. The emphasis will be to verify the reliability and correctness of the data provided by the project institutions.

c) Resources Utilization Study:

The objective of the Resources Utilization Study, to be conducted by the NPIU, is to assess the extent of availability and utilization with respect to equipment, books and learning resources and suggest strategies for their optimum utilization and sustenance. It will be conducted twice, firstly before the Mid-Term Review (after two years from the implementation of the Project) and secondly at the end of the Project.

d) Bibliometric Study:

It will quantitatively assess research output and publication performance in Engineering Institutions. It will be got conducted twice by the NPIU, firstly before the commencement of the Project (for 102 TEQIP-I Institutions having PG courses) and the secondly at the end of the Project for all project institutions.

e) Impact Assessment Study:

The objective of the Impact Assessment Study will be to assess the impact that can be attributed to the Project in up-grading the quality of Engineering Education offered by project institutions and in producing higher skilled and more employable graduates. The study, conducted by the NPIU will measure the extent to which Project objectives have been achieved. The Study will be undertaken towards the end of the Project and will be outsourced.

f) Reviews:

Two types of reviews will be organized by the NPIU to assess the qualitative improvements achieved by the individual Institutions and States.

- **Mid-Term Review Mission:**

A Mid-Term Review under Project will be conducted jointly by the MHRD and the World Bank to assess the achievements of project institutions and States against the set targets. Mid Term Review is basically designed to acknowledge the good performing Institutions and States and identify corrective measures for maximizing gains from the Project. The financial allocation of the Institutions for the remaining period of the Project will also be adjusted based on their needs and performance.

- **Joint Review Missions (JRM):**

Joint Review Missions will be conducted six-monthly by the MHRD and the World Bank to review the overall progress achieved under the Project.

**5. Mentoring:**

Mentors will be assigned to all project institutions to provide continuous guidance for Project implementation. The Mentors will also act as the Performance Auditors at different Institutions<sup>16</sup> and annually assess the progress made by individual Institutions.

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<sup>16</sup> Other than the Mentoring Institutions.

## Section-4 ELIGIBILITY AND SELECTION PROCESS

### 4.1 Participation:

The Project will support around 200 eligible Government funded, Government aided and private unaided Engineering Institutions from the selected States including Centrally Funded Institutions.

Institutions need to apply only for one of the 2 Sub-components—(either for 1.1 or 1.2.)

### 4.2 Selection of States:

#### 4.2.1 Eligibility Criteria for Selection of States and Union Territories:

The States<sup>17</sup> will be selected based on merit of their proposals and on meeting the following Eligibility Criteria:

1. **Autonomous Status:** The Institutions selected to participate in Sub-component 1.1 have to obtain autonomous Institution status as per UGC norms to enable them to improve quality and relevance of the knowledge and skills of their graduates through betterment in curricula and assessment methods. The States need to issue orders to such project institutions to seek and obtain autonomous status as per UGC norms and procedures (refer Annex-II) before signing of an MoU with MHRD [refer Annex-III (a)]

**Continuation of funding to any project institution beyond the second year of the Project will be subject to its obtaining autonomous Institution status.**

2. **Decentralization of Financing Framework:** The States need to create an Enabling Financing Framework that decentralizes a reasonable share of financial discretion to the Institution's leadership to incentivize the Institution to increase its internally generated revenue, and to establish funds to allow for mid-term financial planning. The States need to:

- a) **Adopt a Block Grant pattern:** (as described in Annex-I) for fund release of at least the **non-salary non-Plan component** of grants to the funded (and aided as the case may be) project institutions. The funds' utilization is to be left to the decision of the project institution as it deems fit during each financial year to achieve its mission, respecting regular Government purchasing and accounting guidelines.
- b) **Retention of IRG:** Permit project institutions to retain and utilize the revenue generated, including 100% of tuition and other fee and charges from students without adjusting the revenue retained in their non-Plan grants.
- c) **Establishment of four funds:** Permit the funded and aided project institutions to establish four funds (as recommended in Annex-I), each in a separate Bank Account, namely the Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund (for maintenance of buildings and equipment). The States in this regard need to:
  - Direct project institutions to build these funds with annual contribution into each Fund equal to at least 0.5% of annual recurring expenditure of the Institution, and direct each project institution to also additionally contribute from savings into the Corpus Fund;
  - Issue guidelines for proper management of the four Funds after closure of this Project.

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<sup>17</sup> Throughout the PIP, the word "State" implies both the State Governments and the Union Territory Governments.

3. **Filling-up the faculty vacancies:** The benchmark value for the faculty positions on regular full time basis for Institutions under Sub-components 1.1 and 1.2 are mentioned in Table-6 & 9 respectively. The States need to authorize each project institution to fill-up all faculty vacancies through 11-month or longer contracts till such time that these vacancies are filled-up on a regular basis.
4. **Establishment of SPFU:** Establish an SPFU, located in the Department of the State Government responsible for Technical Education. The head of SPFU shall be the Director or the equivalent officer responsible for Technical Education in that Department and will be designated as the State Project Advisor (SPA). The SPA will be assisted by a Project Coordinator who will be an academician. Each State should be willing to take a decision not to transfer / change the SPFU officials for the duration of the Project.
5. **Constitution of Board of Governors in each project institution:** Establish a governance model that will hold each Government funded and Government aided Institution accountable towards Government, civil society and Industry. In particular, the States need to constitute/ensure formation of a BoG in each project institution as suggested in Section-5 and Annex-II and ensure that the BoG meets at least 4 times in a year.
6. **Reforms implementation:** Each State is to implement the Project according to the Project Implementation Plan. This includes support and facilitation to project institutions to implement both academic and non-academic reforms prescribed for implementation. (refer Annex-I)
7. **Conduct of Pedagogical Training:** Each State has to ensure that each project institution gets imparted Pedagogical Training to faculty members. The benefit of the Pedagogical Training is also to be extended to faculty of non-project institutions on cost sharing basis.

**Note:** Release of the first instalment of Central Project funds to a State for its Institutions will be subject to receipt by the NPIU of the necessary documentation in respect of compliance with the Eligibility Criteria 1-4 and subsequent signing of MoU with MHRD.

#### 4.2.2 State Selection Process:

The steps for the selection of States are as follow:

- (a) State Governments would be invited by MHRD to submit the State-Proposals in the prescribed format [(refer Annex-IV (A))] by a specified date. The State Proposal should contain:
  - Evidence that the State's participation in the Project is linked to its policy objectives for Technical Education.
  - Evidence that the State has identified, understood and discussed with key stakeholders (State Finance Department and affiliating Universities) the main steps and challenges for implementation of the required reforms.
  - Evidence that the State has a plan to sustain the gains of the Project after it has been closed.
- (b) Receipt of State Proposals by the NPIU.

- (c) Evaluation of State Proposals by a National Evaluation Committee (NEC) appointed by the NPD in respect of Eligibility Criteria, actions proposed and information as required in the prescribed format. Evaluation parameters are given in Table-5.
- (d) Feedback of NEC observations to the States for improvements in the Proposal (suggested by NEC).
- (e) Consideration of new and improved State Proposals.
- (f) Review and validation of NEC's Reports on State Proposals and its recommendations for State selection by the National Steering Committee (NSC).
- (g) Announcement of selection of States by NSC through the NPIU.

**Table-5**  
**Parameters for Evaluation of State Proposals**

S. No.	Evaluation Parameters
(i)	Clarity and importance of the key policy objectives and challenges to enhance quality of Technical Education as whole in the State with participation in the Project
(ii)	Plan to implement increased academic autonomy to Institutions (for Sub-component 1.1) and establishing a Board of Governors
(iii)	Capacity and plan to implement the Enabling Financing Framework in consultation with the State Finance Department
(iv)	Plan and feasibility for sustaining the gains from the Project after Project closure

Note: The scheme for proposal evaluation is given in Annex-X [Table-43].

#### **4.3 Selection of Institutions under Sub-Component 1.1 (Strengthening Institutions to Improve Learning Outcomes and Employability of Graduates):**

The selection of Institutions will take place in two steps:

- a) *Short listing institutions based on Eligibility Proposals:* Institutions that had participated in TEQIP-I are not eligible for participation in this Sub-component. Solely for equity purposes, the NEC may recommend inclusion of Institutions from the new States lagging in Technical Education that do not adequately meet Eligibility Criteria, subject to the conditions that the Institutions: (i) are at least four years old, and (ii) show commitment to meet all the Eligibility Criteria for regular States during the Project period and to achieve all institutional targets (Table-30). New States lagging in Technical Education are objectively defined as those that either have only one Engineering Institution or less than one Engineering Institution per million population as per AICTE's approved list of Engineering Degree Institutions in 2004 and have not participated in TEQIP-I. These States namely are: Andaman & Nicobar Islands, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Jammu & Kashmir, Meghalaya, Manipur, Mizoram, Rajasthan, Sikkim and Tripura.
- b) *Selection of institutions based on merit of their Institutional Development Proposals (IDPs)*

#### 4.3.1 Eligibility Criteria for Sub-Component 1.1:

Institutions to be eligible under the Sub-component 1.1 should fulfil the following benchmarks:

**Table-6**  
**Eligibility Criteria for Sub-Component 1.1**

S. No.	Attainment Parameters	Benchmark values
1.	Agreement to implement all academic and non-academic reforms listed below: <ul style="list-style-type: none"> <li>• Curricular Reforms</li> <li>• Exercise of autonomies</li> <li>• Establishment of Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund</li> <li>• Generation, retention and utilization of revenue generated through a variety of activities</li> <li>• Filling up all existing teaching and staff vacancies</li> <li>• Delegation of decision making powers to senior Institutional functionaries with accountability</li> <li>• Improved student performance evaluation</li> <li>• Performance appraisal of faculty by students</li> <li>• Faculty incentives for Continuing Education (CE), consultancy and R&amp;D</li> <li>• Accreditation of eligible UG and PG programmes</li> </ul>	Yes
2.	Age of the Institution from the start of its first academic session (in years) <ul style="list-style-type: none"> <li>a) Regular States</li> <li>b) New States lagging in Technical Education</li> </ul>	6 4
3.	Total number of UG and PG programmes currently conducted	4
4.	Faculty positions filled on regular full-time basis as percentage of the total faculty positions sanctioned in accordance with the AICTE prescribed student-to-faculty ratio	50%
5.	Presence of Board of Governors (as per recommended structure given in Section-5) with an eminent Academician or Industrialist as the Chairperson	Yes

#### 4.3.2 Evaluation of Eligibility Proposals:

The Institutions are required to prepare the Eligibility Proposals in the prescribed formats [Annex-IV-(B)(a)(i)]. The evaluation will be based on meeting the Eligibility Criteria (refer Table-6) and Institutional capability to undertake key reforms (refer Table-7).

The steps leading to evaluation of Eligibility Proposals and call for submission of Institutional Development Proposals (IDPs) are as follow:

- (a) Advertisement will be issued in newspapers by the NPIU followed by State advertisement inviting Eligibility Proposals from Institutions in the prescribed format.
- (b) Only those Institutions that meet the minimum benchmarks for Eligibility Criteria should prepare and submit Eligibility Proposals to the State Department responsible for Technical Education (in most cases States Directorate for Technical Education, DTE).

- (c) Eligibility Proposals will be evaluated and ranked by the concerned Directorate and approved by the State Steering Committee (SSC). Only objective factors related to Education Policy are to be taken into account in this evaluation.
- (d) States forward the endorsed Eligibility Proposals to the NPIU.
- (e) New CFIs will submit the Eligibility Proposals directly to the NPIU.
- (f) Scrutiny of Eligibility Proposal as received from States, UTs and new CFIs by the NPIU for completeness.
- (g) Evaluation and ranking of Eligibility Proposals by the National Evaluation Committee (Evaluation Scheme is given in Table-7).
- (h) Ranking of all received Proposals will be done by the National Evaluation Committee (NEC) in two Groups (a) Proposals from new States, new CFIs and new lagging States in Technical Education (b) Proposals from old States.
- (i) Review by the NPD of the NEC's recommendations and short listing of Institutions from various States, UTs and new CFIs, for inviting to submit the IDPs.
- (j) NPIU will forward the list of the eligible Institutions to States and CFIs for invitation of IDPs. All the selected and non-selected institutions will receive feedback on their Proposals.

**Table-7**  
**Evaluation Scheme for Eligibility Proposals under Sub-Component 1.1**

Evaluation Parameters	Evaluation Scheme
• Institutional Information	10
• Quality of SWOT Analysis	20
• Clarity in identification of objectives and feasibility of the action plan to implement the institutional project	30
• Implementation of reforms	40
<b>Total</b>	<b>100 Marks</b>

**Note:** The full scheme for eligibility proposal evaluation is given in Annex-X [Table-44].

#### 4.3.3 Evaluation of Institutional Development Proposal under Sub-Component 1.1:

The Institutions found eligible will be invited for submission of Institutional Development Proposals (IDPs).

The IDPs will be invited and evaluated in the following manner:

- (a) States invite IDPs from the eligible Institutions
- (b) States screen IDPs for completeness and short list the Institutions
- (c) States forward short listed IDPs to the NPIU
- (d) Eligible CFIs submit their IDPs directly to the NPIU
- (e) NPIU screens the IDPs received by a cut-off date for completeness (only the proposals found complete will be placed before the NEC)
- (f) Evaluation and ranking of IDPs by the NEC (evaluation scheme is given in Table-8)

- (g) Review and validation of the NEC's report on IDPs and its recommendations for selection and fund allocation by the National Steering Committee (NSC)
- (h) Declaration of selected Institutions to States with feedback to selected and non-selected institutions regarding the evaluation of their proposals. The selection of certain Institutions may be subject to a few mandatory improvements being made in their IDP.
- (i) Declaration of selected CFIs after signing of Memorandum of Understanding [refer Annex–III (b)].

**Table-8**  
**Evaluation Scheme for Institutional Development Proposals under**  
**Sub-Component 1.1**

S. No.	Evaluation Parameters	Evaluation Scheme
<b>1</b>	<b>Institutional Preparedness and Implementation Feasibility</b>	
	• Clarity of Institutional basic information including baseline data	5
	• Quality of SWOT analysis	10
	• Overall implementation feasibility of Institutional project	15
	• Coherence of proposal with State's/Regional Development Plan	5
	• Reasonability of proposed Budget	5
	<b>Sub-Total (a)</b>	<b>40 Marks</b>
<b>2</b>	<b>Clarity and Quality of the Action Plans for :</b>	
	• implementation of reforms	15
	• improving learning outcomes of students in terms of higher pass rates and higher academic achievements	10
	• identification of weak students and for improvement in their learning outcomes through finishing school	5
	• improving employability of graduates	5
	• strengthening of existing PG programmes	5
	• starting new PG programmes	5
	• faculty development including pedagogical training	10
	• enhanced interaction with Industry	5
	<b>Sub-Total (b)</b>	<b>60 Marks</b>
	<b>Total (a+b)</b>	<b>100 Marks</b>

**Note :** The full scheme for IDP evaluation is given in Annex-X [Table-45].



#### 4.4 Selection of Institutions under Sub-Component 1.2 (Scaling-Up PG Education and Demand-Driven Research & Development and Innovation):

The Institutions will be selected from the selected States subject to their meeting the Eligibility Criteria and based upon the merit of their Institutional Development Proposals (IDPs).

##### 4.4.1 Eligibility Criteria for Sub-Component 1.2:

Institutions to be eligible for participation in the Project under the Sub-component 1.2 must meet the following benchmarks:

**Table-9**  
**Eligibility Criteria for Sub-Component 1.2**

S. No.	Attainment Parameters	Benchmark values
1.	Agreement to implement all academic and non-academic reforms given as below: <ul style="list-style-type: none"> <li>• Curricular Reforms</li> <li>• Exercise of autonomies</li> <li>• Establishment of Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund</li> <li>• Generation, retention and utilization of revenue generated through variety of activities</li> <li>• Institutions to fill-up all existing teaching and staff vacancies</li> <li>• Delegation of decision making powers to senior functionaries with accountability</li> <li>• Improved student performance evaluation</li> <li>• Performance appraisal of faculty by students</li> <li>• Faculty incentive for Continuing Education (CE), consultancy and R&amp;D</li> <li>• Accreditation of UG and PG programmes</li> </ul>	Yes
2.	<i>Availability of Academic Autonomy</i> *as recognized by UGC for both UG and PG programmes	Yes
3.	Presence of Board of Governors with an eminent Academician or Industrialist as the Chairperson	Yes
4.	Percentage of eligible UG programmes accredited or applied for	60%
5.	Percentage of eligible PG programmes accredited or applied for	40%
6.	Cumulative number of PhDs produced in the last three academic years (2007-08, 2008-09 and 2009-10) or Cumulative number of MTech produced in the last three academic years (2007-08, 2008-09 and 2009-10)	5  50
7.	Faculty positions filled on regular full time basis as percentage of total faculty positions sanctioned in accordance with the AICTE prescribed student-to-faculty ratio	65%
8.	Percentage of regular faculty with PhD in Engineering <sup>18</sup> as percentage of total faculty	15%

**Note :** In respect of accreditation benchmarks for Undergraduate and Postgraduate programmes in Universities, Deemed Universities, University Constituted Colleges/Faculties/Departments, NAAC accreditation is acceptable at the entry point. However, all such project entities will have essentially to achieve the Undergraduate and Postgraduate programmes targets of **NBA accreditation** as given in Table-30 for Sub-component 1.1 & Table-35 for Sub-component 1.2.

<sup>18</sup> PhD in Engineering and Science for Special Category States

\* Institutions that have already applied for Autonomous Institution status can also apply. However the selection of such institutions and consequent signing of MoU will be subject to the Institution having actually obtained Autonomous Institution status.

#### 4.4.2 Evaluation of Institutional Development Proposal under Sub-Component 1.2:

Institutions meeting the above Eligibility Criteria are invited to submit their Development Proposals.

Institutional Development Proposals (IDPs) will be evaluated as per the following:

- (a) States invite through advertisement in newspapers for submission of "IDPs" from eligible Institutions [only those Institutions that meet the Eligibility Criteria should prepare and submit such Proposals] [Format given in Annex-IV-(B)(b)]
- (b) States screen IDPs for completeness and short list the Institutions
- (c) States forward short listed IDPs to the NPIU
- (d) NPIU screens the received IDPs for completeness (only complete Proposals will be evaluated)
- (e) Evaluation and ranking of IDPs by the NEC (Evaluation Scheme is given in Table-10)
- (f) Review and validation of the NEC's report on IDPs and its recommendations for selection and Fund allocation by the National Steering Committee
- (g) Declaration of selected Institutions to States with feedback to selected and non-selected institutions regarding the evaluation of their Proposals. The selection of certain Institutions may be subject to a few mandatory improvements to be made in their IDPs.
- (h) Declaration of selected CFIs after signing of Memorandum of Understanding (refer Annex-III (b))

**Table-10**  
**Evaluation Parameters and Evaluation Scheme for Institutional Development Proposals under Sub-Component 1.2**

S. No	Evaluation Parameters	Evaluation Scheme
<b>1</b>	<b>Institutional Preparedness and Implementation Feasibility</b>	
	• Clarity of institutional basic information including baseline data	5
	• Overall proposal implementation feasibility	15
	• Quality of SWOT analysis	10
	• Coherence of proposal with State's/regional development plan	5
	• Reasonability of proposed budget	5
	<b>Sub-total (a)</b>	<b>40</b>
<b>2</b>	<b>Clarity and Quality of the Action Plans for :</b>	
	• scaling-up research and innovation	10
	• scaling-up PhD enrolment through existing and new programmes	10
	• scaling-up enrolment into Masters programmes in existing and new programmes	10
	• research collaborative activities with Institution at National and International level	10
	• potential impact and depth of proposed Industry collaboration	5
	• faculty development including pedagogical training	10
	• identification of weak students and for improvement in their learning outcomes through finishing school	5
	<b>Sub-total (b)</b>	<b>60</b>
	<b>Total marks</b>	<b>100</b>

**Note :** The scheme for proposal evaluation is given in Annex-X [Table-46].

#### 4.5 Selection of Institutions under Sub-Sub-Component 1.2.1 (Establishing Centres of Excellence):

Only the Institutions, which have already been selected under Sub-component 1.2, can on invitation submit proposals for establishing one or a maximum of two Centres of Excellence (CoEs) for receiving an additional grant of approximately Rs.5.00 Crore for each CoE. Expected period for invitation from NPIU/MHRD is three months from the date of commencement of the Project. The Institution desirous of having two Centres of Excellence needs to submit separate proposals for each CoE.

##### 4.5.1 Eligibility Criteria for Sub-Component 1.2.1:

Institutions to be eligible under the Sub-sub-component 1.2.1 must meet the following benchmarks:

**Table-11**  
**Eligibility Criteria for Sub-Sub-Component 1.2.1**

S. No.	Attainment Parameters	Benchmark values
1	Availability of Academic Autonomy	Yes
2	Percentage of eligible UG programmes accredited or applied for	75%
3	Percentage of eligible PG programmes accredited or applied for	60%
4	Cumulative number of PhDs produced in the last three academic years (2007-08, 2008-09, 2009-10) in the departments participating for establishing CoEs	12
5	Faculty positions filled on regular full time basis as percentage of total faculty positions sanctioned in accordance with the AICTE prescribed student-to-faculty ratio in the departments participating for establishing CoEs	70%
6	Percentage of regular faculty with PhD in Engineering as percentage of total faculty	20
7	Number of sponsored research projects completed in the last three academic years (2007-08, 2008-09, 2009-10)	07

Note 1 : The benchmarks prescribed for Sub-component 1.2 are deemed to have been met by the applicant Institutions.

Note 2 : In respect of accreditation benchmarks for Undergraduate and Postgraduate programmes in Universities, Deemed Universities, University Constituted Colleges/Faculties/Departments, NAAC accreditation is acceptable at the entry point. However, all such project entities will have essentially to achieve the Undergraduate and Postgraduate programmes targets of **NBA accreditation** as given in Table-30 for Sub-component 1.1 & Table-35 for Sub-component 1.2.

##### 4.5.2 Evaluation of Development Proposal under Sub-Sub-Component 1.2.1:

Institutions should submit proposals for establishment of Centres of Excellence (CoE) only if they meet all the above mentioned Eligibility parameters.

The steps for evaluation of these proposals are:

- (a) Invitations by e-mail to the Institutions selected under Sub-component 1.2 to submit proposals to NPIU for establishing Centres of Excellence in the prescribed format [Format given in Annex-IV-(B)(c)].
- (b) NPIU screens the received proposals for completeness.
- (c) Incomplete proposals will be returned to the Institutions.

- (d) Evaluation and ranking of proposals by a National Evaluation Committee (NEC) (evaluation scheme is given in Table-12), taking into account the suggestions from the domains experts (Indian & Foreign) and Indian Industry experts.
- (e) NPIU will send comments given by the National Evaluation Committee (NEC) to Institutions for improvements of their proposals.
- (f) The proposals ranked “Good” may be asked to make presentation before the National Evaluation Committee (NEC).
- (g) NPIU will send comments and recommendations from the National Evaluation Committee (NEC) to the National Steering Committee (NSC).
- (h) Selection of Institutions by the National Steering Committee (NSC) along with fund allocation.
- (i) Declaration of selected Institutions.
- (j) Improved proposals to be reconsidered through the same selection process.

**Table-12**  
**Evaluation Scheme for Institutional Development Proposals**  
**under Sub-Sub-Component 1.2.1**

S. No.	CATEGORIES	MARKS
<b>1</b>	<b>Implementation Feasibility</b>	
	• Overall proposal implementation feasibility	10
	• Institutional preparedness	35
	• Reasonability of proposed budget	5
	<b>Sub – total (a)</b>	<b>50</b>
<b>2</b>	<b>Clarity and Quality of Action Plans for :</b>	
	• establishment of CoE in terms of physical arrangements and working arrangements	10
	• conducting research and obtaining results in the identified thematic areas	10
	• communication of research findings to policy makers and potential users	5
	• commercialization of research results	5
	• scaling-up PhD and Masters enrolment in thematic areas	10
	• insuring sustenance of CoE after the end of the project	10
	<b>Sub – total (b)</b>	<b>50 Marks</b>
	<b>Total</b>	<b>100 Marks</b>

## **Section-5**

### **PROJECT IMPLEMENTATION**

#### **5.1 Implementation Arrangement at the National, State and Institutional Levels:**

The implementation arrangement at various levels are illustrated in Chart-I (Page No.87) and described subsequently.

##### **5.1.1 National Level Implementation Arrangements:**

The composition and functions of the three bodies, namely the National Steering Committee (NSC), the National Project Directorate (NPD) and the National Project Implementation Unit (NPIU) responsible at the Central level for overall guidance, policy decisions and project management, coordination and implementation are described below:

##### **5.1.1.1 National Steering Committee (NSC):**

(i) Composition:

The Ministry of Human Resource Development (MHRD) will constitute a 16 member National Steering Committee (NSC), composed as below:

- Secretary of the Department of Higher Education in the Union Ministry of Human Resource Development, as the Chairperson,
- Secretary, Planning Commission or nominee,
- Secretary, Department of Science & Technology or nominee,
- Financial Advisor to MHRD,
- Chairpersons of the AICTE and the NBA,
- Four Chairpersons of State Steering Committees (SSCs), nominated by the Chairperson in annual rotation,
- Three members nominated by MHRD, who must be persons with recognized expertise and interest in Higher Technical Education,
- One representative from the National Private Sector Advisory Group (N-PSAG),
- Two Industry representatives, nominated one each by the Confederation of Indian Industry (CII) and the Federation of Indian Chambers of Commerce & Industry (FICCI), and
- The National Project Director (NPD) in the MHRD, as the Member-Secretary.

(ii) Meetings:

The NSC will meet bi-annually or as often as required. It will be assisted in its functioning by the National Project Directorate. The Chairpersons of a few SSCs not represented in the NSC may also be invited to the NSC meetings. The operational costs of the NSC, including sitting fees for non-official members, will be financed by the Project through the NPIU's budget.

(iii) Functions:

The NSC, besides providing guidance and directions for maximizing gains from the Project, will:

- Review and validate recommendations of the National Evaluation Committees (NECs) for selection of States and UTs and their sponsored Engineering Education Institutions and of the Centrally Funded Institutions (CFIs) for participation in the Project and decide their respective fund allocations under the two components: (i) Improving Quality of Education in Selected Institutions, and (ii) Improving System Management. It will ensure fairness and transparency in the selection process for Institutions.

- Refer back to the Evaluation Committee those Institutional proposals for which it is not satisfied in respect of either the quality or the recommended allocation;
- Review and validate recommendations of the NEC for selection of CFIs for participation in the Project and decide their respective fund allocations;
- Recommend corrective actions with regard to the non-performing States, UTs and Institutions including CFIs;
- Allocate funds to NPIU and SPFUs;
- Allocate funds from the Innovation Fund for activities that would enhance achievement of the Project Development Objectives; and
- Review findings from policy reform, thematic and evaluation studies.

(iv) Disclosure:

The Minutes of all NSC meetings will, for ensuring transparency in selections and other decisions, be regularly published on the NPIU's website.

**5.1.1.2 National Evaluation Committees (NECs) :**

(i) Composition:

The National Project Directorate will constitute National Evaluation Committees (NECs) consisting of academicians from India for the selection of States and UTs, and selection of Institutions from the selected States and CFIs.

NPD will approve a panel of about 50-70 experts to serve on the National Evaluation Committees. Specific Evaluation Committees will also be formed by the NPD from the approved panel. There will be four different NECs for selection of States, selection of Institutions under Sub-component 1.1, Sub-component 1.2 & Sub-sub-component 1.2.1 and for selection of proposals for grants under the Innovation Fund. The NEC for selection of Institutions for establishing Centres of Excellence will be composed of subject experts only.

(ii) Meetings:

The National Evaluation Committees (NECs) will meet on need basis after receipt of Eligibility and Development Proposals of Institutions and proposals for grants under Innovation Fund. It will be assisted in its functioning by the National Project Implementation Unit (NPIU).

(iii) Functions:

The National Evaluation Committees will carry out the following functions:

- Evaluation of proposals for selection of States,
- Evaluation of Eligibility and Institutional Development Proposals based on State's recommendations under Sub-component 1.1 and evaluation of Institutional Development Proposals under Sub-component 1.2,
- Evaluation of proposals for establishing Centres of Excellence under Sub-sub-component 1.2.1 from the Institutions selected under Sub-component 1.2,
- Evaluation of proposals for selection of Centrally Funded Institutions (CFIs) under Sub-component 1.1 and Sub-component 1.2,
- Evaluation of proposals for Innovation Fund, and
- Forwarding recommendations to NSC.

**5.1.1.3 National Project Directorate:**

This will be located within the Department of Higher Education (DHE) in the MHRD and headed by the National Project Director (NPD). The National Project Director (NPD) will be nominated by the MHRD of the rank of an Additional Secretary/Joint Secretary to the Government of India. The NPD will be assisted by:

- (i) National Project Directorate within the MHRD, and
- (ii) National Project Implementation Unit (NPIU) headed by a Central Project Advisor (CPA).

The National Project Directorate under headship of the NPD will consist of the Director in Department of Higher Education dealing with the Project, and adequate key and support staff including a Finance Specialist and a Project Management Specialist. It will be responsible for:

- Constituting a National Steering Committee and organizing its meetings,
- Constituting separate National Evaluation Committees (with well defined Terms of Reference) for selection of States and Institutions in Sub-components 1.1, 1.2, 1.2.1 and also proposals for Innovation Fund,
- Overall Project fund management including Central fund releases, monitoring matching fund releases by the States/UTs, and monitoring overall utilization of Project funds,
- Ensuring timely release of funds to States/UTs/CFIs and other recipients as per approved annual allocations,
- Coordinating with project States/UTs, concerned Ministries/Departments of GoI and the World Bank,
- Overseeing Project implementation at the Central and State levels,
- Periodically reviewing Project progress,
- Facilitating holding of six-monthly Joint Review Missions (JRMs), Mid-Term Review Mission, Implementation Support Missions and such other reviews as may be called for, and
- Facilitating smooth and efficient working of the NPIU and ensuring adequate staffing of the NPIU with appropriate expertise at all times during the Project Life.

**5.1.1.4 National Project Implementation Unit (NPIU):**

The existing NPIU will be restructured to carry out its functions through 6 functional Units and headed by the Central Project Advisor (CPA):

- Institutional Development Unit,
- PG Education and R&D&I Unit,
- Faculty Development Unit,
- Financial Management Unit,
- Procurement Management Unit, and
- Monitoring and Evaluation Unit

These Units may be modified by the CPA from time to time. The Institutional Development, PG Education and R&D and Faculty Development Units will be headed by senior academicians (in the rank of Professor/Associate Professor), and experienced professionals will head the Procurement, Finance and M&E Units. Each Unit head will be assisted by

adequate number of suitable support staff. The Project will finance the salary cost of the full-time key and support staff in the NPIU, fee to Consultants, salaries of contractual support staff, expenditure on rent and refurbishment of hired offices, goods, minor works, assessment, surveys, institutional audits, studies, reviews, mentoring, study tours and various training workshops, travel and other operating costs of the NPIU.

**(i) Role of the Central Project Advisor:** The CPA will be suitably empowered, financially and administratively to perform the functions listed below:

- Disseminating to States and CFIs, through its website information, on the Project design, eligibility and selection criteria for States and Institutions and the associated processes,
- Preparing Annual Work Plans, including Annual Budgets and detailed semi-Annual Plans and Budget,
- Carrying out orientation of the NECs to their ToRs for their concerned selections,
- Organizing receipt of proposals for selection from States and UTs, checking completeness of proposals, submitting results of scrutiny to the National Project Directorate for consideration of the National Steering Committee (NSC) and communicating the decisions of the NSC to the States along with recommendations for improvement of proposals, as may be required,
- Organizing receipt of separate eligibility and Institutional Development Proposals (IDPs) from Institutions for Sub-components 1.1 and 1.2 and proposals of Sub-Component 1.2.1.
- Organizing receipt, processing and evaluation of Proposals for Innovation Fund, communicating recommendations for improvement of proposals if and as suggested by NEC and obtaining approval for funding from the NSC,
- Publishing on its website summaries of the Evaluation Reports of each Institution stating the reasons for selection or non-selection of the institution,
- Arranging training for NPIU staff,
- Developing proposals for local technical assistance for activities undertaken at the National level and with approval from the NPD and facilitating /operationalizing the same,
- Organizing meetings of Working Groups, NECs, Mentors, Performance Auditors, and such other Committees/Groups of Experts as are constituted from time to time,
- Building capacity of the States/UTs and Institutions for implementation of Equity Assurance Plan (EAP), Environment Management Framework (EMF) and Disclosure Management Framework (DMF) requirements,
- Liaising with SPFUs to discuss Project implementation progress to identify and solve emerging problems,
- Organizing Professional Development Programmes for Engineering Education administrators and policy implementers (MHRD, State Directorates, NPIU, SPFUs, etc.),
- Organizing Joint Review Missions, Mid-term and End-term Missions and other Supervision and Implementation Support Missions, as required, and
- Carrying out other related tasks as may be requested by the NPD and the National Project Directorate.



**(ii) Role of NPIU's Functional Units:**

(a) Institutional Development Unit in the NPIU: Under the guidance of the CPA, this Unit will:

- Organize training workshops and technical assistance for SPFUs of new States on preparation of eligibility and IDPs, based on SWOT analysis, for seeking funds under Sub-component-1.1,
- Scrutinize Eligibility and Institutional Development Proposals for Sub-component 1.1 of all applicant Institutions (including those short listed and rejected by States), prepare reports on the same for consideration of the NEC, submit recommendations of NEC to the NSC for selections and communicate decisions of the NSC to the States, UTs and CFIs along with recommendations for improvement of proposals, as may be required,
- Review funding requirements from Institutions and monitor fund utilization for Sub-component 1.1,
- Develop guidelines and modules for capacity building of BoGs. And develop appropriate orientation programme and identify resource persons in consultation with SPFUs,
- Identify a set of mentors for CFIs,
- Approve (based on their experience and capability) mentors for State sponsored institutions,
- Empanel performance and data auditors for all project institutions,
- Develop clear TORs, guidelines and methodologies for mentors and performance and data auditors,
- Promote organization of separate workshops by States and select Institutions for sharing the good academic and governance practices and innovations,
- Identify a separate set of mentors and performance auditors for the Sub-component with clear ToRs, guidelines and methodology.
- Develop and oversee procedures for effective mentoring, performance audits and data audits of all project institutions<sup>19</sup>, and
- Obtain reports from mentors and auditors; review these for satisfactory progress in implementation of the proposed activities and achievement of targets.

(b) PG Education and R&D&I Unit in the NPIU: Under the guidance of the CPA, this Unit will:

**In respect of Proposals for Scaling-up PG Education and Research & Development and Innovation:**

- Scrutinize proposals of the short listed and the rejected proposals for this Sub-component as received from States/UTs for completeness and validation of State/UT recommendations, and prepare reports on the same for consideration of the NEC,
- Organize meetings of the NEC for in-depth review of the IDPs for this Sub-component,
- Submit NEC recommendations for selection and fund allocation to the NSC, and communicate the decision of the NSC to the States/UTs and the Institutions, and
- Monitor fund utilization and implementation progress for this Sub-component.

<sup>19</sup> Project Institutions are those Institutions that have been selected to participate in this Project, and continue to participate.

**In respect of Proposals for Establishing Centres of Excellence:**

- Scrutinize Proposals for this Sub-sub-component as received from States/UTs for completeness and prepare reports on the same for consideration of the NEC,
- Based on the recommendations of the NEC, refer proposals for Centres of Excellence to Indian and Foreign Experts through post and email, follow-up on their observations/recommendations and put these up to the NEC for consideration,
- Under guidance of the NEC, develop procedure and criteria for assessing viability of proposals for Centres of Excellence, and facilitate carrying out of viability assessment by visiting Committees, as approved by the NPD, and submit the findings to the NEC, and
- Collate NEC recommendations and the Viability Assessment Reports for consideration of the NSC for final selection.

**In respect of both Scaling-up PG Education and CoEs:**

- Identify a separate set of mentors and performance auditors for COEs with clear ToRs, guidelines and methodology,
- Develop and oversee procedures for effective mentoring and performance audits of Institutions participating in this Sub-component,
- Obtain reports from mentors and auditors, review these for satisfactory progress in implementation of the proposed activities and achievement of targets, and
- Organize at least 2 regional workshops each year for the participating Institutions to share and peer review their achievements and innovations, and to seek expert guidance from seniors from Industry and academia, and invited Foreign Experts.

(c) Faculty Development Unit in the NPIU: This Unit will be responsible for promoting faculty qualification upgradation, subject area knowledge enhancement and training in pedagogy. In this context, the Unit, under the guidance of the CPA, will:

- Identify individual experts and agencies that can help to develop guidelines and also provide in-situ training to senior faculty to build their capacity for Training Needs Analysis (TNA), and publish the information on NPIU website,
- Promote conduct of TNA in all project institutions,
- Keeping in view the recommendations made by the Working Groups, identify major venues within India and abroad for qualification upgradation of faculty from project institutions through various modes; publish the information on the NPIU website and periodically update the information,
- Compile a training calendar for good quality opportunities in subject knowledge enhancement, publish the calendar on NPIU website and periodically update the calendar,
- In consultation with experts from leading Technical Education and training Institutions, develop pedagogy training curriculum in 2 modules—Basic Pedagogy and Advanced Pedagogy—each of one week duration. The modules should include both lectures and hands-on learning,

- Identify competent Pedagogy Training providers for imparting in-situ training in Institutions; develop clear measurable result-oriented ToRs for the Pedagogy Training, and also develop broadly the costing of training; publish the information on NPIU website,
  - Arrange training to the CFIs and to arrange release of payment to training providers on receipt of the required documentation,
  - Periodically follow-up with SPFUs to encourage non-project institutions (including unaided Institutions) to take advantage of the opportunity made available under the Project for subsidized Pedagogy Training,
  - Monitor achievements in all 3 types of training (subject knowledge, basic pedagogy and advanced pedagogy) in both project and non-project institutions and the expenditure made,
  - Developing norms for selection of candidates for foreign study tours and training/study visits including duration and permissible expenditure, and
  - Organize foreign study tours of Vice-Chancellors of affiliating Universities<sup>20</sup> for building capacity for academic and governance reforms with funding from concerned SPFUs.
- (d) Financial Management Unit in the NPIU: Under the guidance of the CPA, this Unit will:
- Ensure full knowledge and systematic application of the Project procedures and requirements for financial management.
  - Providing guidelines for financial, accounting, reporting and audit aspects through facilitating preparation of Financial Management Manual.
  - Guide/monitor and provide support on adherence to fiduciary guidelines and financial management arrangements by working in close coordination with the World Bank/MHRD/CAAA.
  - Provide support to the Financial Management/accounting staff for issues related to Financial Management aspects of the Project.
  - Prepare annual estimates and budget for the Project and play an important role in release of funds.
  - Facilitating implementation of the project and providing advisory services and support for financial management and other allied issues.
  - Monitoring / Consolidation & Review of Quarterly/Six-Monthly/Annual Reports of the participating States and CFIs.
  - Prepare consolidated Project Financial Monitoring Reports (FMRs) and ensure timely submission of FMRs to the World Bank / CAAA.
  - Coordinate receipt of annual audit reports from States/UTs/CFIs/other recipients and audit of NPIU.
  - Prepare and submit Consolidated Audit Report to the World Bank through National Project Directorate on a timely basis.
  - Ensure timely compliance of audit observations by all States/UTs/CFIs/other recipients; and coordinate timely response from all concerned on audit observations.
  - Prepare and implement a plan for capacity building in financial management of the FM staff in SPFUs and institutions and review the capacity building requirements of FM staff at all levels on a regular basis.

<sup>20</sup> The term 'affiliating Universities' implies only those Universities that are affiliating project institutions.

- Guide the Finance Officers in SPFUs through advice and operating as a clearing house for issues (problems and solutions) raised by States/UTs.
  - Act as a support and reference person for all project-related financial management tasks.
  - Imparting comprehensive and topic specific training to project staff at various levels on Financial Management and managing those training programmes through preparation of training plan, including schedule of trainings/workshops/seminars/orientation and monitoring and implementation of the same.
  - Participate in reviews and monitoring of States/CFIs.
  - Monitoring disclosure of FM information.
  - Revision of Financial Management Manual.
- (e) Procurement Management Unit in the NPIU: Under the guidance of the CPA, this Unit will:
- Ensure full knowledge and systematic application of the World Bank's Procurement Guidelines and provide guidance on queries from States/UTs and Institutions regarding the World Bank's Procurement Procedures,
  - Build capacity of procurement officers in SPFUs and Institutions to procure Goods and Works in accordance with the World Bank Procurement Guidelines by conducting the first round of training within three months of Project inception and thereafter repeating the workshops every six months.
  - Guide SPFUs and CFIs in the preparation of good bid documents, integrating environmental concerns in bid documents for works, and in quality assurance,
  - Review the procurement documents and certify technical specifications before forwarding the documents to the World Bank for prior review,
  - Make aware all the concerned of the post-review procedure, documentation required for post-review and facilitate post-review, which may be conducted by the World Bank from time to time,
  - Build capacity in SPFUs for carrying out procurement audits at the State level, and
  - Act as a support and reference person for all Project-related procurement tasks.
- (f) Monitoring and Evaluation (M&E) Unit in the NPIU: Under the guidance of the CPA, this Unit will:
- Develop, implement and maintain a Project Management Information System (MIS),
  - Monitor and evaluate the internal operations of the Project,
  - Guide the operations of M&E specialists in SPFUs and Institutions through providing advice and operating as a clearing house for issues (problems and solutions) raised by States, UTs and Institutions,
  - Monitor status of KPIs and achievements of Finishing Schools,
  - Incorporate data on the performance of Institutions into the MIS,
  - Develop procedures for regular monitoring of performance of project institutions,

- Conduct/commission surveys, audits and studies envisaged under Sub-component 2.2, and
- Publish on its website results of all National level selections and such other information as required under Disclosure Management Framework.

### 5.1.2 State Level Project Implementation Arrangements:

The project States/UTs<sup>21</sup> through the respective State Steering Committee (SSC) and the State Project Facilitation Unit (SPFU) will be directly responsible for management, coordination, implementation and monitoring of the Project at the State/UT levels.

#### 5.1.2.1 State Steering Committee:

##### (i) Composition:

The State/UT Department responsible for tertiary level Engineering Education will constitute a 9-10 member State Steering Committee (SSC), composed as below:

- Principal Secretary/Secretary responsible for tertiary level Engineering Education, as the Chairperson;
- Financial Controller of the State Department concerned with tertiary level Engineering Education in the State/UT or his/her nominee;
- Director, Department of Higher Education, MHRD or his/her nominee;
- Two Industry members, nominated by major Industry Associations;
- Three members having recognized expertise and interest in Engineering Education, nominated by the State Government;
- One nominee of the State Private Sector Advisory Group (S-PSAG)<sup>22</sup>;
- Director for tertiary level Engineering Education in the State (being the head of the SPFU), as the Member-Secretary.

##### (ii) Meetings:

The SSC will meet quarterly. Special meetings may also be convened by the Chairperson. It will be assisted in its functioning by the SPFU. The operational costs of the SSC, including sitting fees for non-official members, will be financed by the Project through the SPFU's budget.

##### (iii) Functions:

The SSC will be responsible for: (a) guiding the work of the SPFU and authorizing reports to the State Government and to the National Project Directorate/NPIU; (b) short listing Institutions eligible for participation in the Project; (c) assessing and recommending Institutional and SPFU proposals for financing under the Project; (d) overseeing operational activities within the State; (e) preparing State proposals, and forwarding these and also proposals from other entities for seeking grants under the Innovation Fund; (f) reviewing and approving foreign training and foreign study tours; and (g) taking stock of the Project and facilitate Project implementation under all Components and Sub-components as per the proposals approved for funding by the NSC.

<sup>21</sup> Project States / UTs are those States and UTs that have been selected to participate in the Project, and continue to participate.

<sup>22</sup> Formation of S-PSAG is optional for a State. If the S-PSAG is constituted for a State, then only the nomination from S-PSAG will be there in the SSC.

**5.1.2.2 State Project Facilitation Unit:**

The Department of the State Government responsible for managing Technical Education will establish a State Project Facilitation Unit (SPFU) with adequate staff before signing of the Memorandum of Understanding between the MHRD and the State Government [refer Annex-III (a)].

The SPFUs will be located within the Department of the State Government responsible for Technical Education. The head of SPFU, designated as the State Project Advisor (SPA), will be the Director of Technical Education or the equivalent officer responsible for Technical Education in that Department. The SPA will be assisted by a Project Coordinator who will be an academician.

(i) Role of State Project Advisor (SPA): The SPA will perform the following functions:

- Disseminating to institutions, through its website, information on the Project design, eligibility and selection criteria for Institutions and the associated processes,
- Preparing Annual Budgets and detailed semi-Annual Plans and Budget,
- Organizing receipt of separate eligibility and Institutional Development Proposals (IDPs) from Institutions for Sub-components 1.1 and 1.2 and proposals of Sub-Component 1.2.1.
- Organizing preparations of proposals for Innovation Fund,
- Developing proposals for local technical assistance to institutions,
- Organizing meetings of mentors and experts,
- Building capacity of Institutions for implementation of Equity Assurance Plan (EAP), Environment Management Framework (EMF) and Disclosure Management Framework (DMF) requirements,
- Liaising with NPIU to discuss project implementation progress to identify and solve emerging problems,
- Facilitating Joint Review Missions, Mid-term and End-term Missions and other Supervision and Implementation Support Missions, as required, and
- Carrying out other related tasks as may be requested by the NPIU.

(ii) Role of functional Units in SPFU:

The SPFU will have 4 Units, namely Academic Unit, Procurement Unit, Financial Management Unit, and Monitoring & Evaluation (M&E) Unit. States with less than 5 project institutions may reduce the number of Units to 2, namely: (a) Academic and M&E Unit, and (b) Procurement and Financial Management Unit, merging their respective functions. Functions of each of the 4 units are described below:

a) Academic Unit: Under the guidance of the SPA, this Unit will:

- Organize training workshops for Institutions as required from time to time, on preparation of Eligibility and Institutional Development Proposals (IDPs) for Sub-component 1.1 : “Strengthening Institutions to improve learning outcomes and employability of Graduates”, and IDPs for the Sub-component 1.2 : “Scaling-up PG Education and demand driven Research & Development and Innovation and for Establishment of Centres of Excellence

- Review Eligibility Proposals from Institutions, and preparing reports on the same for consideration of the SSC,
- Forward the recommendations of SSC on eligibility of Institutions to the NPIU along with all the original eligibility applications received by the SPFU,
- Forward all eligible proposals received to the NPIU with due recommendations from the SSC,
- Provide guidance and arrange technical assistance to Institutions for carrying out realistic and meaningful Training Needs Analysis (TNA) to achieve their Developmental Goals and to also provide avenues for professional development of individual faculty members,
- Provide assistance and guidance to both project and non-project institutions in organizing training in pedagogy in their Institutions,
- Provide assistance and guidance to project institutions in locating suitable training opportunities for subject knowledge upgradation of their faculty,
- Select training providers for pedagogy and organize training in Institutions and release permissible expenditure to training providers on receipt of the required documentation,
- Monitor progress in faculty and staff development for each Institution and take corrective actions, as required, to ensure that Institutions achieve their targets as given in their Faculty and Staff Development Plans,
- Initiate and promote preparation of proposals for funding under the Innovation Fund,
- Identify separate sets of Mentors and Performance Auditors for the 2 Sub-components and obtain clearance for them from the NPIU with clear ToRs and methodology,
- Carry out orientation of BoGs at the respective Institutions and disseminate good governance practices,
- Organize workshops for sharing good academic practices and innovations with other SPFUs and Institutions, and
- Oversee mentoring, performance and technical audits of project institutions, obtain and review the reports and share these reports with SSC and NPIU.

b) Procurement Unit: Under the direct guidance of the SPA, this Unit will:

- Ensure full knowledge and systematic application of the World Bank Guidelines for Procurement of Works, Goods and Services by all project institutions,
- Guide Institutions in preparation of their Procurement Plans, review these, and forward to the World Bank through the NPIU,
- Manage the procurement of works, goods and consultancies required for State level activities under the Project and manage the procurement of International Consultancies,
- Conduct post-procurement audits of Institutions for ensuring full compliance with the World Bank procedures,
- Ensure compliance with EMF requirements and quality guidelines (as given in the Civil Works Manual) for all civil works in Institutions,

- Liaise with the Procurement Officer in the NPIU, providing information on issues (problems and solutions) for the National Clearing House,
  - Act as a support and reference unit to Institutions for all Project-related procurement tasks, and
  - Submit quarterly procurement progress reports to the SSC.
- c) Financial Management Unit: Under the direct guidance of the SPA, this Unit will:
- Providing guidance on financial, accounting, reporting aspects to the participating institutions at the State level.
  - Ensure full knowledge and systematic application of the Project procedures and requirements for financial Management.
  - Preparation of budget for project at State level and arrange timely flow of funds to institutions.
  - Accepting Quarterly Financial Monitoring Reports (FMRs) from the participating institutions and Guide/monitor and provide support for adherence to the fiduciary guidelines, financial management issues.
  - Consolidation of FMRs for the project and submission to NPIU, so as to facilitate disbursement of funds within the required timeframe.
  - Hiring of Internal & External Auditor.
  - Monitoring quality of audit arrangements in all agencies in the State which will be funded under the project. Regular monitoring of compliance of audit observations by institutions.
  - Timely submission of consolidated Audit Report of Project Institutions & SPFU to NPIU.
  - Provide support to Financial Management/accounting staff of institutions for resolving various issues related with accounting/Financial Management aspects, reporting system etc. Facilitating implementation of the project and providing advisory services and support for financial management and other allied issues.
  - Imparting comprehensive and topic specific training to project staff at various levels on Financial Management and managing those training programmes through preparation of training plan, including schedule of trainings / workshops / seminars / orientation, and monitoring and implementation of the plan in close co-ordination with and as per guidelines of NPIU.
  - Any specific issues in resolution of financial matters.
- d) Monitoring and Evaluation Unit: Under the guidance of the SPA, this Unit will:
- Facilitate MIS training of personnel from all project and non-project institutions,
  - Ensure periodical updation of the MIS data at the Institutional and State levels,
  - Monitor progress in implementation of various Project elements on a day-to-day basis,
  - Assist the Monitoring and Evaluation Specialist in the NPIU,
  - Implement and oversee procedures for the regular monitoring of performance of project institutions.



- Undertake regular field visits to Institutions and develop a simple monitoring checklist, and consolidate quarterly monitoring reports based on the monitoring checklists, and
- Propose corrective actions (if any) that need to be taken. These will be acted upon by the SPA/ State Government. The NPIU Monitoring and Evaluation Unit will be responsible for collating these monitoring reports, and preparing semi-annual monitoring reports.

### 5.1.3 Institutional Level Implementation Arrangements:

The Project at the Institutional level will be managed by two bodies (i) the Board of Governors (BoG) and (ii) an Institutional TEQIP Unit.

#### 5.1.3.1 Board of Governors:

##### (i) Composition:

- Each Institution will necessarily (please see eligibility conditions) have its own BoG as per UGC Guidelines or as per the NIT Act 2007, as the case may be, either appointed by the sponsoring Government or by itself through due procedure (see Annex-II). The BoG as existing or constituted must be acceptable to the Authorities responsible for granting Autonomous Institution status.
- The BoG will, in all cases, be headed by an eminent Industrialist/Engineering Education expert with adequate representation from other stakeholders.

##### (ii) Meeting:

The BoG will meet at least quarterly or as often as required and the minutes of BoG meetings will be published on Institution's website as promptly as possible. It will perform the following functions in the context of this Project.

##### (iii) Functions:

- Take all policy decisions with regard to smooth, cost effective and timely implementation of the Institutional project,
- Form, supervise and guide various Committees required for project implementation and internal project monitoring,
- Ensure overall faculty development,
- Enable implementation of all academic and non-academic Institutional reforms,
- Ensure proper utilization of Project fund and timely submission of Financial Management Reports (FMRs) and Utilization Certificates,
- Ensure compliance with the agreed procedures for procurement of Goods, Works and Services and Financial Management,
- Ensure compliance with other fiduciary requirements under the Project such as Equity Assurance Plan (EAP), Environment Management Framework (EMF) and Disclosure Management Framework (DMF), and
- Monitor progress in the carrying out of all the proposed activities, resolve bottlenecks, and enable the Institution to achieve targets for all key indicators.

**5.1.3.2 Institutional TEQIP Unit:**

Each Institution will form an Institutional TEQIP Unit with appropriate representation from academic officials of the Institution, faculty, senior administrative officers, technical and non-technical support staff and students. The Unit, headed by the Head of the Institution, will be responsible for implementation of the Institutional project. He/she is to be assisted by a Senior Professor for coordinating the activities of the institutional project.

The Institutional TEQIP Unit will operate through committees for procurement of Goods, Works and Services; financial management; implementation of faculty and staff development activities and programmes; monitoring project implementation, achievement of targets for all indicators as proposed and keeping MIS updated; ensuring compliance with EAP, EMF and DMF requirements; ensuring implementation of Institutional reforms; organizing efficient conduct of monitoring and performance audits, etc.

**5.2 Role of Private Sector:**

The Project aims to maximize collaboration between local Industries and project institutions by providing the National Steering Committee and the State Steering Committees (through National and State level Advisory Groups) with timely, precise, and concrete advice and summarized feedback on Academia-Industry partnerships to meet the National demand for graduates and postgraduates equipped with skills and knowledge relevant to the changing market requirements.

The collaboration and coordination at the Central and State levels will enable establishment and effective functioning of Academia-Industry collaborations. The expected benefits, among others, will be:

- Improvement of the skills of future job candidates through inputs on curriculum—this could lower Industry training costs,
- Early access to highly educated talent,
- Relevant research and technology development demanded by the market,
- Access to new ideas and early research results through such means as offering problems for solution through consultancy,
- Technical assistance through interaction with researchers,
- Access to specialized R&D equipment and laboratories,
- Professional development of employed engineers and technicians, and
- Access to intellectual property.

**5.2.1 National Private Sector Advisory Group (N-PSAG):**

- a) The National Private Sector Advisory Group (N-PSAG) will consist of 10-15 members of Business Leaders, Human Resources Managers and Professional Engineers in high level positions from the private sector with one member each from CII, FICCI, and NASSCOM, and 7 - 12 members nominated from pan-Industry (sector-wise and possibly size-wise) by CII, FICCI, and NASSCOM across the project States.
- b) It will be accountable to the National Steering Committee(NSC), providing it annually with overview of and advice on project implementation in the area of the Academia-Industry partnership.

- c) It will be responsible for:
- Frequently communicating with S-PSAGs,
  - Identifying common issues and difficulties faced by the industries and Institutions that are participating in the Project.
  - Providing timely advice to the NSC and other stakeholders including industries, and
  - Preparing a concise Annual Report for use of the National Steering Committee that summarizes common issues raised by the advisory groups at the State level with indicative solutions.

### **5.2.2 State Private Sector Advisory Group (S-PSAG):**

- a) State Governments are expected to establish State-level Private Sector Advisory Groups. The Advisory Groups at the State level will consist of representative of the private sector conducting business activities in the respective States with relevance and knowledge of TEQIP. The number of participants (maximum of 10) in the State-level advisory group will depend on the size of the State and the range of industrial activities taking place in the State. States with less than 3 Institutions may form a cluster of States and establish S-PSAG at one State. As with the National Advisory Group, the State-level Advisory Groups will equally be represented in the State Steering Committee.
- b) The S-PSAG will oversee the Academia-Industry partnerships within its respective State and actively interact with both the Institutions and the private sector to ensure effective functioning of the partnership.
- c) Each S-PSAG will set up a structure to identify issues and difficulties at the early stage that potentially obstruct/restrict promotion of the partnerships and slow down implementation of the related project activities.
- d) Taking into account the identified issues and difficulties, the S-PSAG will provide timely and practical advice to the SSC, the Institutions and the private sector. If the issues are recognized as beyond the Advisory Groups' control, they will promptly report the issues to the N-PSAG for advice.

### **5.2.3 Funding for the Advisory Groups:**

In order to support the Private Sector Advisory Groups at the National and State levels, limited but reasonable funds will be made available by the MHRD through the NPIU to support activities of the N-PSAG and through the SPFUs to support activities of S-PSAG. The funds could be used for:

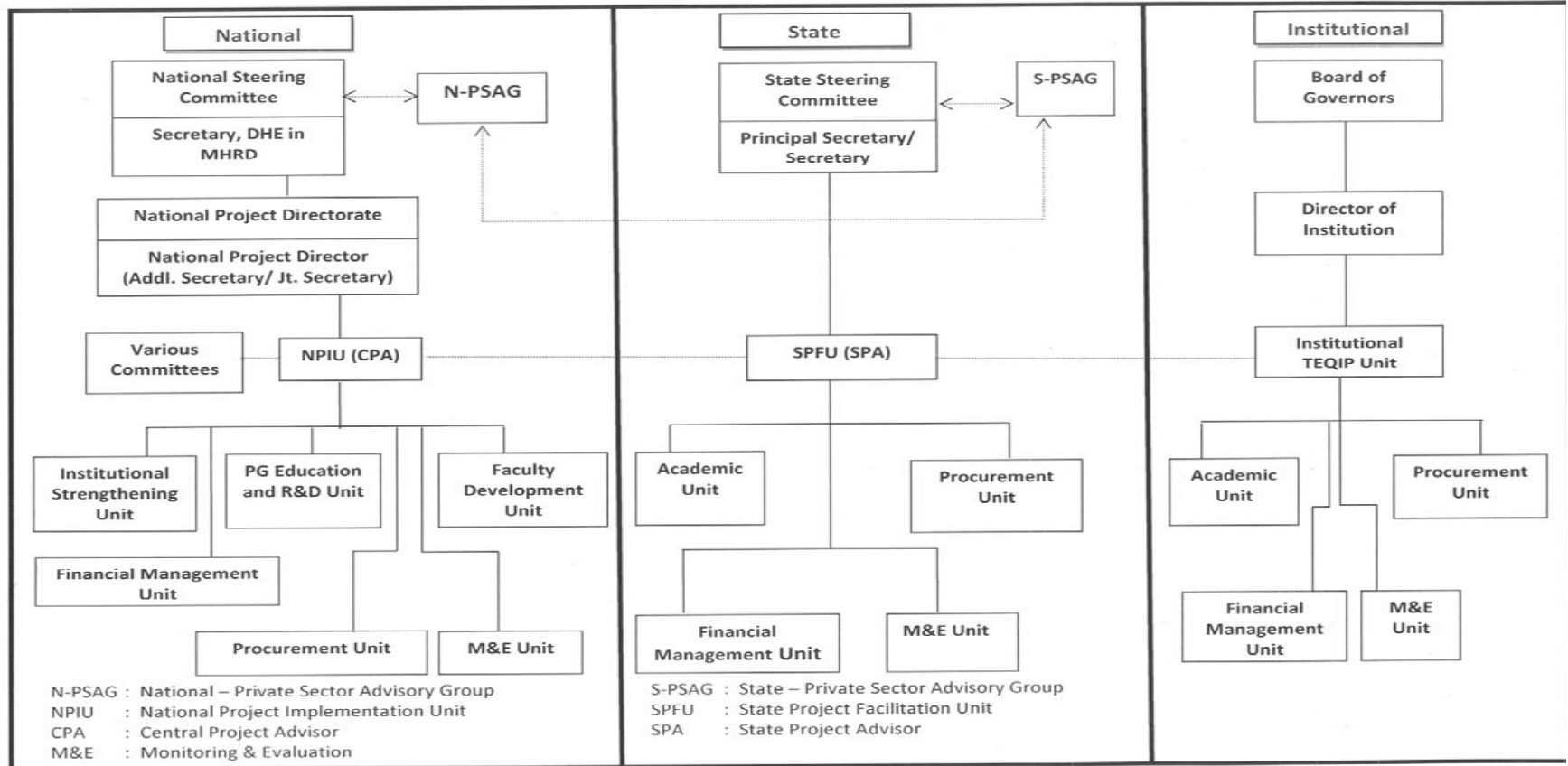
- a) Members' travel to attend the meetings held by the Advisory Groups, in accordance with the Government rules,
- b) Recurrent costs for meetings, and
- c) Other relevant costs as agreed to by the NSC, but members' time in Advisory Groups will not be paid for.

### **5.3 Role of the World Bank during Project Implementation:**

For effective Project implementation, the World Bank will have frequent interactions with Central and State Governments, and Institutions. The World Bank will participate in Review Missions and also visit various States and institutions to provide implementation support and guidance for their project activities.

Implementation arrangement at National, State and Institution Level

Chart – I



## **Section-6**

### **FINANCIAL MANAGEMENT**

#### **6.1 Financial Plan:**

The total Project cost is expected to be Rs. 2430.00 crore. The Project cost will be borne by Government of India and the States/UTs in the manner of matching shares, in the ratio of 90:10 for the Special Category States and 75:25 for the remaining States. The Central share will be Rs. 1895.50 crore, the States share will be Rs. 518.50 crore and the share of private unaided Institutions will be Rs. 16.00 crore. The reimbursement from the World Bank Credit on expenditure incurred for the Project will be limited to Rs.1395.50 crore.

- Funds will be made available to competitively selected around 200 Institutions from the selected States under two Sub-components 1.1 (Strengthening Institutions to Improve Learning Outcomes and Employability of Graduates) and 1.2 (Scaling-up Postgraduate Education and Demand Driven Research and Development and Innovation) and also to around 30 Centres of Excellence selected under Sub-sub-component 1.2.1 (Establishing Centres of Excellence).
- In addition to the above, under the Sub-component 1.3, funds are available for Pedagogical Training in all the project institutions and also to the desirous non-project institutions in the project States.
- Grants from an Innovation Fund will be made available for improving System Management at the National and State levels.

#### **6.2 Fund Allocation:**

Fund allocation to the Central and States Project Management entities and project institutions, component-wise with percentage share, and indicative funding by components and activities are indicated in Tables 13 to 17 (a).

**Table-13**  
**Component-wise Percentage Share with respect to Centre, State and Private Unaided Institutions**

S. No.	Share of Governments / Institution	Type of Institution							Innovation Fund	NPIU / MHRD	SPFU	Un-allocated amount
		CFI for all components	Govt. Funded & Aided for all components	Private unaided				Non-project Institutions (Govt. funded, Govt. aided & Private unaided)				
				Under Sub-component 1.1	Under Sub-component 1.2	Under Sub-sub-component 1.2.1	Under Sub-component 1.3 (cost share is only for the training cost)	Under Sub-component 1.3 (cost share is only for the training cost)				
1	Share of Central Government	100	75*	60	75*	75*	75*	75*	75*	100	75*	100
2	Share of State Government	---	25**	20	25**	25**	25**	25**	25**	---	25**	---
3	Share of Private unaided Institutions	---	---	20	---	---	---	---	---	---	---	---
	<b>TOTAL</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Notes :**

- For the project private unaided Institutions and the non-project institutions (Government funded, Government aided and private unaided) desirous of taking benefit of Pedagogy Training under Sub-component 1.3, the Central and State share is only for the “training cost” and the Institutions need to bear the expenditure on boarding, lodging and travel for the training provider’s team.
  - The Innovation Fund will be made available for improving System Management at the National and State level to those (the SPFUs, affiliating universities, group of CFIs) voluntarily desirous to participate in the activities.
- \* The share of Central Government will be 90% for the Special Category States and 75% for rest of the States and UTs.  
\*\* The share of State Government will be 10% for the Special Category States and 25% for rest of the States and UTs.

Table-14

**Approximate Component-wise Distribution of Cost with respect to Central and State Project Management entities and Private Unaided Institutions**

(Rs .in crore)

S. No.	Nature of Fund	Costing Parameters	Cost Share*			Total Cost
			Central Govt.	State Govt.	Private unaided Institution	
1	<b>a. Competitive Fund</b>	Government Funded / Government Aided 120 Institutions selected under Sub-component 1.1	900	300	---	1200
2		20 private unaided Institutions selected under Sub-component 1.1	48	16	16	80
3		60 institutions selected under Sub-component 1.2 • 20 CFIs • 40 States sponsored Institutions	250	---	---	250
			375	125	---	500
4	Establishment of 30 Centres of Excellence under Sub-sub-component 1.2.1	112.5**	37.5	---	150	
5	<b>b. Fund for Pedagogical Trainings ***</b>	Pedagogical Trainings under Sub-component 1.3	30	10	---	40
<b>Sub-total (a+b)</b>			<b>1715.5</b>	<b>488.5</b>	<b>16</b>	<b>2220</b>
6	<b>c. Innovation Fund</b>	Capacity Building to Strengthen Management	45	15	---	60
<b>Sub-total (c)</b>			<b>45</b>	<b>15</b>	<b>---</b>	<b>60</b>
7	<b>d. Systems Support Fund</b>	NPIU / MHRD (Project management through MIS, PMSS including Monitoring & Evaluation and Incremental Operating Cost)	40	---	---	40
8		SPFU	45	15	---	60
9		Un-allocated Amount	50	---	---	50
<b>Sub-total (d)</b>			<b>135</b>	<b>15</b>	<b>0</b>	<b>150</b>
<b>GRAND TOTAL (a+b+c+d)</b>			<b>1895.50</b>	<b>518.50</b>	<b>16</b>	<b>2430</b>

\* The cost share between Central Government and State Government is shown in the ratio of 75:25.

\*\* The cost share by Centre will increase (and State share will decrease) if any Centres of Excellence are established at CFIs.

\*\*\* This Fund will be allocated to SPFUs and NPIU for disbursement to training providers.

**Table-15**  
**Indicative Funding by Components**

(Rs. in crore)

S.No	Costing Parameters	No. of Institutions/ Entities	Cost per Institution/ Entity	Total Cost
<b>Component 1: Improving quality of Education in selected Institutions</b>				
1	For 140 selected Institutions under Sub-Component 1.1			
(i)	Government Funded / Government Aided Institutions	120	10	1200
(ii)	Private unaided Institutions	20	4	80
2	For 60 selected Institutions under Sub-component 1.2	60	12.5	750
3	Establishment of Centres of Excellence (under Sub-sub-component 1.2.1)	30	5	150
4	Pedagogical Training (under Sub-component 1.3)	200 and above	---	40
<b>Sub-total</b>				<b>2220</b>
<b>Component 2: Improving System Management</b>				
1	(Innovation Fund ) Capacity Building to Strengthen Management	---	---	<b>60</b>
2	NPIU / MHRD (Project Management through MIS, PMSS including Monitoring & Evaluation and Incremental Operating Cost)	---	---	<b>40</b>
3	SPFU	20	3	<b>60</b>
4	Un-allocated amount	---	---	<b>50</b>
<b>Sub-total</b>				<b>210</b>
<b>Grand Total</b>				<b>2430</b>



Table-16

**Indicative Category-wise Funding for Key Activities per Government Funded and Government Aided Institutions Selected under Sub-Component 1.1: (Strengthening Institutions to Improve Learning Outcomes and Employability of Graduates)**

S. No.	Activities	Category of Expenditure	Percentage (%)	Cost (Rs. in crore)	
1	Improvement in teaching, training and learning facilities	(I) Procurement of Goods :		48	4.80
		(a) Equipment	40%		
		(b) Furniture	2%		
		(c) Books & LR&s & Software	5%		
		(d) Minor Items	1%		
		(ii) Refurbishment (Minor Civil Works)		5	0.50
		(iii) Consultant Services		2	0.20
2	Providing Teaching and Research Assistantships to increase enrolment in existing and new PG programmes in Engineering disciplines	Teaching and Research Assistantships		10	1.00
3	Enhancement of R&D and institutional consultancy activities	Research and Development		2	0.20
4	Faculty and Staff development for improved competence based on Training Needs Analysis (TNA)	Faculty and Staff Development		10	1.00
5	Enhanced interaction with Industry	Industry Institute Interaction		4	0.40
6	Institutional Management Capacity enhancement	Institutional Management Capacity enhancement		3	0.30
7	Implementation of Institutional reforms	Institutional Reforms		2	0.20
8	Academic support for weak students	Academic Support for weak students		4	0.40
9	Incremental Operating Cost	Incremental Operating Cost <sup>23</sup>		10	1.00
<b>TOTAL</b>				<b>100</b>	<b>10.00</b>

**Notes :**

- The funding for key activities as suggested above are purely indicative. However, expenditure on Goods (equipment, furniture, books, learning resources, course-specific software, etc.) by an Institution will normally not exceed 48% of its approved project allocation.
- Expenditure on Minor Civil Works in a State shall not exceed 5% of the cumulative allocation for all the Institutions selected under Sub-component 1.1 in the State.
- Expenditure on Incremental Operating Cost in a State shall not exceed 10% of the cumulative allocation for all the Institutions selected under Sub-component 1.1 in the State.
- Salary expenditure of faculty and staff appointed on contract against the existing vacancies can not be charged to the Project. However, the salary expenditure of regular and contractual faculty and staff appointed against new posts created under the Project can be charged to the Project.

<sup>23</sup> The Incremental Operating Cost means the costs of operation and maintenance of equipment, office expenses, hiring of vehicles, salaries and allowances of additional staff and travel and supervision costs incurred for the purposes of carrying out the Project. The cost includes organizing workshops, seminars etc., all expenses for training programme including training / course fee, consumables, Consultants (experts) fee related to R&D.

Table-16 (a)

**Indicative Category-wise Funding for Key Activities per Private Unaided Project Institution Selected under Sub-Component 1.1: (Strengthening Institutions to Improve Learning Outcomes and Employability of Graduates)**

S. No.	Activities	Category of Expenditure	Percentage (%)	Cost (Rs. in crore)	
1	Improvement in teaching, training and learning facilities	(i) Procurement of Goods :			
		(a) Equipment for new PG programmes	40%	48	1.92
		(b) Furniture	2%		
(c) Books & LR&S & Software	5%				
(d) Minor Items	1%				
		(ii) Refurbishment (Minor Civil Works)	Nil	Nil	
		(iii) Consultant Services	2	0.08	
2	Providing Teaching and Research Assistantships to increase enrolment in existing and new PG programmes in Engineering disciplines	Teaching and Research Assistantships	12	0.48	
3	Faculty and Staff development for improved competence based on Training Needs Analysis (TNA)	Faculty and Staff Development	15	0.60	
4	Enhanced interaction with Industry	Industry Institute Interaction	4	0.16	
5	Institutional Management Capacity enhancement	Institutional Management Capacity enhancement	3	0.12	
6	Implementation of Institutional reforms	Institutional Reforms	2	0.08	
7	Academic support for weak students	Academic Support for weak students	4	0.16	
8	Incremental Operating Cost	Incremental Operating Cost <sup>24</sup>	10	0.40	
<b>TOTAL</b>			<b>100</b>	<b>4.00</b>	

**Notes :**

- The funding for key activities as suggested above are purely indicative. However, expenditure on Goods (equipment, furniture, learning resources, books, course-specific software, etc.) by an Institution will normally not exceed 48% of its approved project allocation.
- Expenditure on Incremental Operating Cost in a State shall not exceed 10% of the cumulative allocation for all the Institutions selected under Sub-component 1.1 in the State.
- Salary expenditure of faculty and staff appointed on contract against the existing vacancies can not be charged to the Project. However, the salary expenditure of regular and contractual faculty appointed against new posts created under the Project for new PG programme can be charged to the Project.

<sup>24</sup> The Incremental Operating Cost means the costs of operation and maintenance of equipment, salaries and allowances of faculty of new PG Programme and travel and supervision costs incurred for the purposes of carrying out the project. The cost includes organizing workshops, seminars etc., all expenses for training programme including training / course fee, consumables, Consultants (experts) fee related to R&D.

Table-17

Indicative Category-wise Funding for Key Activities Per Project Institution Selected under Sub-Component 1.2 (Scaling-Up Postgraduate Education and Demand-Driven Research & Development and Innovation):

S. No.	Activities	Category of Expenditure	Percentage (%)	Cost (Rs. in crore)	
1	Improvement in teaching, training and learning facilities	(i) Procurement of Goods :			
		(a) Equipment	30%	40	5.000
		(b) Furniture	2%		
(c) Books & LR's & Software	7%				
(d) Minor Items	1%				
		(ii) Refurbishment (Minor Civil Works)	3	0.375	
		(iii) Consultancy Services	2	0.250	
2	Providing Teaching and Research Assistantships for significantly increasing enrolment in existing and new Masters and Doctoral programmes in Engineering disciplines	Teaching and Research Assistantships	20	2.50	
3	Enhancement of R&D and Institutional consultancy activities	Research and Development	5	0.625	
4	Faculty and Staff development for improved competence based on Training Needs Analysis (TNA)	Faculty and Staff Development	10	1.250	
5	Enhanced interaction with Industry	Industry Institute Interaction	5	0.625	
6	Institutional Management Capacity enhancement	Institutional Management Capacity enhancement	2	0.250	
7	Implementation of Institutional reforms	Institutional reforms	1	0.125	
8	Academic support for weak students	Academic Support for weak students	2	0.250	
9	Incremental Operating Cost	Incremental Operating Cost <sup>25</sup>	10	1.250	
<b>TOTAL</b>			<b>100</b>	<b>12.500</b>	

**Notes :**

- The funding for key activities as suggested above are purely indicative. The Institutions participating in this Sub-component should focus on enhancing the research facilities, modernization and strengthening of laboratories for MTech, PhD and faculty research, etc. and hence expenditure on Goods (equipment, furniture, learning resources, course-specific software etc) could be higher than 40%. However, the Institution should ensure the implementation of all the other indicated activities.
- Expenditure on Minor Civil Works in a State shall not exceed 3% of the cumulative allocation for all the Institutions selected under Sub-component 1.2 in the State.
- Expenditure on Incremental Operating Cost in a State shall not exceed 10% of the cumulative allocation for all the Institutions selected under Sub-component 1.2 in the State.
- Salary expenditure of faculty and staff appointed on contract against the existing vacancies can not be charged to the Project. However, the salary expenditure of contractual faculty and staff appointed against new posts created under the Project can be charged to the Project.

<sup>25</sup> The Incremental Operating Cost means the costs of operation and maintenance of equipment, office expenses, hiring of vehicles, salaries and allowances of additional staff and travel and supervision costs incurred for the purposes of carrying out the project. The cost includes organizing workshops, seminars etc., all expenses for training programme including training / course fee, consumables, Consultants (experts) fee related to R&D.

**Table-17 (a)**  
**Indicative Category-wise Funding for Key Activities per Centre of Excellence**  
**(Sub-Sub-Component 1.2.1)**

S. No.	Activities	Category of Expenditure	Percentage (%)	Cost (Rs. in crore)	
1	Infrastructure Improvement for applicable thematic research and development	(I) Procurement of Goods :		50	2.50
		(a) Equipment	43%		
		(b) Furniture	2%		
		(c) Books & LRs & Software	5%		
		(ii) Refurbishment (Minor Civil Works)	3	0.15	
		(iii) Consultant Services	2	0.10	
2	Providing additional Teaching and Research Assistantships for enrolment in Masters and Doctoral programmes in topics linked to economic or societal needs in the thematic areas	Teaching and Research Assistantships	10	0.50	
3	National/ International collaboration for Research and Development activities with academic institutions and R&D organizations	Research and Development	10	0.50	
4	Faculty training for enhancing research competence in thematic areas, both within India and abroad	Faculty and Staff Development	10	0.50	
5	Collaboration with Industry for applicable research and product development	Industry Institute Interaction	5	0.25	
6	Incremental Operating Cost	Incremental Operating Cost <sup>26</sup>	10	0.50	
<b>TOTAL</b>			<b>100</b>	<b>5.00</b>	

**Notes :**

- The funding for key activities as suggested above are purely indicative. The Institutions having CoE should focus on further scaling-up PG Education and undertaking cutting-edge applicable research and hence expenditure on Goods (equipment, furniture, learning resources, course-specific software, etc.) could be higher than 50%. However, the Institution should ensure the implementation of all the other indicated activities.
- Expenditure on Minor Civil Works for CoE shall not exceed 3% of the CoE's allocation.
- Expenditure on Incremental Operating Cost for CoE shall not exceed 10% of the CoE's allocation.
- Salary expenditure of faculty and staff appointed on contract against the existing vacancies can not be charged to the Project. However, the salary expenditure of contractual faculty/staff appointed against new posts created for the CoE (see Page No.121) can be charged to the Project.

<sup>26</sup> The Incremental Operating Cost means the costs of operation and maintenance of equipment, office expenses, hiring of vehicles, salaries and allowances of additional staff and travel and supervision costs incurred for the purposes of carrying out the project. The cost includes organizing workshops, seminars etc., all expenses for training programme including training / course fee, consumables, Consultants (experts) fee related to R&D.

**6.3 Strategy:**

- It is essential to ensure that the project funds received by an Institution are used only for the purpose for which given, with due regard to economy, efficiency and sustainable achievement of the Project's objectives.
- For regular monitoring of actual financial position, daily accounting of Books of Accounts is required. The Books of Account for the Project are to be maintained using double-entry book keeping principles. Also, standard books of account (Cash and Bank Books, Journals, Ledgers etc) are to be maintained at the SPFU and Institutions.
- The disbursement of funds to the project institutions will be based on the quarterly Financial Monitoring Report (FMR), which includes comparison of budgeted and actual expenditure and analysis of major variances.
- Release of funds to all entities will be accounted for as Advance in the Books of Accounts and treated as expenditure only upon submission of expenditure information through FMR.
- Release of funds to faculty, staff and suppliers will be accounted for as Advance in the Books of Accounts and treated as expenditure only upon submission of expenditure information through FMR.

**6.4 Fund Flow :**

The fund flow pattern for the Project will be as follows:

- At the State level the Department responsible for Technical Education will annually prepare a budget for entire 100% expenditure for all the State-sponsored Institutions, pedagogical training, projects under Innovation Fund and the SPFU and obtain the necessary approval of the State Legislature. The budget will be provided under the Head "Centrally Sponsored Scheme" in the State budget.
- Each CFI will annually prepare a budget for entire expenditure under the Project.
- The forecast of expenditure by CFIs and States will be forwarded to the MHRD and accordingly the advances will be provided by it to participating CFIs and States by budget approval in the Parliament.
- MHRD will straightaway release the funds to CFIs based on the Financial Monitoring Reports (FMRs).
- MHRD will release the Central Government share to States through Gol channels and funds will be received in the respective State Treasury.
- State Finance Department will make the allocations based on the approved budget estimate of the Department responsible for Technical Education in the State.
- The Department responsible for the Technical Education in the State will accord "**administrative sanction**" for incurring the expenditure for the allocated amount.
- The Treasury will give the "**budget authorization**".
- The Director of Technical Education/Commissioner of Technical Education/or equivalent officer, will submit the bill to the Treasury (Pay & Accounts Office) after (i) the administrative sanction and (ii) the budget authorization.
- The amount then will be credited by the treasury into the **Personnel Deposit Account (PDA)/ Personal Ledger Account (PLA)** opened in favour of The Director of Technical Education/Commissioner of Technical Education/or equivalent officer, in any Nationalized Bank for further operation of funds.
- SPFU will receive the funds through cheque in a commercial bank account opened for the Project from the Director of Technical Education/Commissioner of Technical Education/or equivalent officer.
- The project institutions will receive the funds from the SPFU through cheque in a commercial bank account opened for the Project.

- The project institutions will submit “Financial Monitoring Report” (FMR) quarterly to SPFU. SPFU will consolidate the FMR of all its project institutions and will submit the consolidated FMR to the NPIU. FMR will provide expenditure information for the previous quarter and a forecast of expenditure to be made in the next six months.
- CFIs will send FMR to the NPIU.
- NPIU will submit consolidated FMR of all States and CFIs and also of NPIU to CAAA and the World Bank.
- The expenditure reported in FMR will be finally confirmed subject to its certification in the Annual Audit Reports for each State/CFIs and NPIU.
- Timely submission of FMR by States/CFIs is mandatory for further disbursement of the grant by MHRD which is 45 days at the close of each quarter.
- The World Bank will make quarterly disbursements on the basis of FMR to Gol. Funds will be disbursed in a special account with the Reserve Bank of India, Central Accounts Section, operated by the Department of Economic Affairs (DEA) of the Government of India. The disbursement will be determined as the Forecast expenditure less Funds available. Funds available are defined as opening balances less reported expenditure.

#### **6.5 Electronic Financial Monitoring Report (e-FMR):**

- The Financial Monitoring Reports (FMRs) are to be submitted electronically. A software has been developed to enable all the project institutions, SPFUs and NPIU to enter the FMRs electronically through online access of a website. The data required for FMRs would be entered into the software by each individual project institution and which then will be consolidated by the software. The FMR generated by the software shall be shared with the World Bank for disbursements. A user manual for the software will be made available separately.

#### **6.6 Auditing:**

- C&AG empanelled Chartered Accountants will audit accounts up to 31<sup>st</sup> March of all States. The NPIU selected Chartered Accountants will audit accounts up to 31<sup>st</sup> March for all CFIs. The Audit report will cover Project Financial Statements, including a Statement of Receipt and Expenditure and a Balance Sheet, which is due by September 30<sup>th</sup> of each year.
- Audits will be carried out in accordance with ToRs which are documented in the Financial Management Manual (FMM) and are acceptable to the World Bank. The MHRD (through the NPIU) will provide the World Bank with a Consolidated Report on Audit of the Project within six months of close of the Financial Year i.e. by September 30<sup>th</sup> each year. Based on the key observations, the World Bank may request Gol to provide copies of Audit Reports of specific States and CFIs.
- Disbursement would be subject to receipt of Consolidated Report on Audit, which is due by September 30<sup>th</sup> of each year. As per the World Bank policies, if this Report is not received by end January of the following year, further disbursements will be suspended till receipt of the Report.

#### **6.7 Financial Management Manual:**

The “Financial Management Manual” (FMM) developed for the Project provides the essential information, to enable the SPFUs and project institutions to carry out effectively the financial operations in the Project. It is a guide to the implementation agencies for understanding the detailed Financial Management of the Project. For details refer to FMM at Appendix-I.

**Section-7**  
**PERMISSIBLE AND NON-PERMISSIBLE EXPENDITURE**

**Introduction :**

Permissible and non-permissible expenditure under the Project for Institutions, SPFUs and NPIU are given in Table 18 to 21 to facilitate planning of fund requirement and to avoid non reimbursable expenditure under the Project.

**Table-18**  
**Permissible<sup>27</sup> and Non-permissible Expenditures**  
**for Government Funded and Aided Institutions Participating in Sub-Component 1.1 : Strengthening**  
**Institutions to Improve Learning Outcomes and Employability of Graduates**

Activity/Category of Expenditure	Government Funded and Aided Institutions <sup>28</sup>	
	Permitted	Not Permitted
1. Improvement in teaching, training and learning facilities	Civil Works <sup>29</sup> <u>up to about 5%<sup>30</sup> of project allocation for the Institution for:</u> <ul style="list-style-type: none"> <li>• Refurbishment, repair works, extension of existing academic buildings such as classrooms, laboratories, workshops, computer centre and library</li> <li>• reducing environment degradation and complying with EMF (see Civil Works Manual at Appendix-III)</li> </ul>	<ul style="list-style-type: none"> <li>• Civil Works undertaken for betterment of hostels, staff quarters and non-academic structures</li> </ul>
	<ul style="list-style-type: none"> <li>• New equipment and furniture<sup>31</sup> <u>up to about 50% of project allocation for the Institution for:</u> <ul style="list-style-type: none"> <li>• modernizing and strengthening of existing UG and PG laboratories &amp; workshops, computer centre, library and support facilities</li> <li>• modernization of laboratories in supporting departments</li> <li>• modernizing classrooms</li> <li>• establishing new UG and PG laboratories, if any, required for the existing programmes</li> <li>• establishing laboratories for new PG programmes in Engineering disciplines provided that admissions to the new programmes are made latest by 2011</li> <li>• Faculty research and Institutional consultancy work</li> <li>• Physical education</li> <li>• Campus-wide networking of academic and administrative buildings, hostels and faculty residences, and enhancing internet facilities</li> </ul> </li> </ul>	
	<ul style="list-style-type: none"> <li>• Course specific software</li> </ul>	

<sup>27</sup> Expenditure is permissible only for the AICTE approved UG and PG teaching programmes, provided that Goods, Civil Works and Consultancy Services (including Pedagogical Training) are procured in accordance with the procurement methods and procedures given in the Procurement Manual [see Appendix-II] and are not declared ineligible expenditure by the external Financial Auditors.

<sup>28</sup> The term aided Institution also includes Institutions established and operated under Public-Private-Partnership mode.

<sup>29</sup> Expenditure for any Civil Work activity will not be admissible if undertaken with co-financing from any other source.

<sup>30</sup> Institutions may marginally exceed 5% of their allocation provided this is allowed by the State/MHRD within the aggregated limit of 5% of their total allocation.

<sup>31</sup> Expenditure for procurement of any equipment and furniture will not be admissible if procured with co-financing from any other source.



2. Modernization and Strengthening of Libraries	<ul style="list-style-type: none"> <li>• Procurement of print and digitized books and e-Journals</li> <li>• Expenditure for digitization of library books</li> <li>• Establishment of CD bank</li> <li>• Membership of INDEST-AICTE etc.</li> </ul>	
3. Providing Teaching and Research Assistantships to increase enrolment in existing and new PG <sup>32</sup> programmes in Engineering disciplines	<ul style="list-style-type: none"> <li>• Teaching Assistantships and Research Assistantships<sup>33</sup> for non-GATE qualified Masters and Doctoral students in Engineering disciplines</li> <li>• Foreign fellowships not exceeding 3 months duration for Doctoral candidates in Engineering disciplines subject to BoG approval on case to case basis</li> </ul>	<ul style="list-style-type: none"> <li>• Scholarships for GATE qualified students for Masters and Doctoral programmes are to be secured from Central, State and other agencies</li> </ul>
4. Research and Development and Institutional Consultancy Activities	<ul style="list-style-type: none"> <li>• Expenditure for securing sponsored projects and consultancy assignments</li> <li>• Expenditure for publication of research papers in refereed journals</li> <li>• Expenditure for commercialization of research products</li> <li>• Expenditure for patenting of research products</li> <li>• Travel cost, hospitality and honorarium paid to Consultant for participation in Research &amp; Development and for delivering Expert lectures</li> </ul>	<ul style="list-style-type: none"> <li>• Fiscal incentives for increased participation in research, sponsored projects and consultancy work (<i>the incentives can, however, be given from Institutional resources including IRG</i>)</li> <li>• All expenditure including travel and meetings associated with implementation of sponsored projects and consultancy assignments<sup>34</sup></li> </ul>
5. Faculty Qualification Upgradation as planned through TNA	<ul style="list-style-type: none"> <li>• Fees charged for Course work and use of research facilities; and consumables by the Institution (other than the parent Institution) where faculty is enrolled for qualification upgradation either through full-time or part-time or by sandwich joint arrangement</li> <li>• Expenses towards thesis writing and publication of thesis-based research papers</li> <li>• Consumables if faculty is registered for qualification upgradation on full-time or part-time basis within the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>• Salary, living expenses and travel expenses of faculty registered for qualification upgradation (on full or part time or by sandwich joint arrangement) either within the parent Institution or through deputation to another Institution</li> </ul>
6. In-house Basic Pedagogical Training of faculty from engineering disciplines and supporting departments	<ul style="list-style-type: none"> <li>• Full fee (training cost + overheads towards travel, boarding, lodging, travel, training materials, etc.) charged by the Training Provider selected by the SPFU (All the payments will be made by SPFU)</li> </ul>	<ul style="list-style-type: none"> <li>• Any payment to the faculty for attending the training programme</li> </ul>

<sup>32</sup> The term PG covers both Masters and Doctoral programmes

<sup>33</sup> The amounts of Teaching and Research Assistantships will be governed by the norms as prescribed by the UGC/AICTE or the State Governments.

<sup>34</sup> The expenditures are to be met from the budget of sponsored projects and consultancy assignments.

7. In-house Advanced Pedagogical Training of faculty from engineering disciplines and supporting departments	<ul style="list-style-type: none"> <li>• Full fee (training cost + overheads towards travel, boarding, lodging, travel, training materials, etc.) charged by the Training Provider selected by the SPFU (All the payments will be made by SPFU)</li> </ul>	<ul style="list-style-type: none"> <li>• Any payment to the faculty for attending the training programme</li> </ul>
8. Subject knowledge and research competence upgradation of faculty from Engineering disciplines and supporting departments as planned through TNA	<ul style="list-style-type: none"> <li>• Course fee; travel expenses, boarding and lodging, and sundry expenses /allowances as per applicable norms and rules when faculty is deputed outstation to another Institution (within India or abroad) for the duration of the Course, travel time and the time permitted by the BoG for visits to Institutions/Organizations of interest and relevance to the faculty in the vicinity of the location of training</li> <li>• Course fee and local travel expenses as per applicable norms and rules when faculty attends a Course in-station but at an Institution other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the faculty for attending the Course</li> </ul>
9. Training of senior non-teaching staff, administrative and finance officers, etc. (all not below the rank of a Lecturer)	<ul style="list-style-type: none"> <li>• Course fee; travel expenses; boarding, lodging, and sundry expenses/ allowances as per applicable norms and rules when the staff is deputed outstation to another Institution within India and travel time</li> <li>• Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution/ Organization other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the staff for attending the training programme</li> </ul>
10. Training of technical support staff	<ul style="list-style-type: none"> <li>• Course fee; travel expenses; boarding, lodging, and sundry expenses/ allowances as per applicable norms and rules when the technical support staff is deputed outstation to another Institution/Organization within India and travel time</li> <li>• Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the staff for attending the training programme</li> </ul>
11. Training of administrative and general support staff <sup>35</sup> in functional areas	<ul style="list-style-type: none"> <li>• Course fee; travel expenses; boarding, lodging, and sundry expenses/ allowances as per applicable norms and rules when the technical support staff is deputed outstation to another Institution/ Organization within India and travel time</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the staff for attending the training programme</li> </ul>

<sup>35</sup> Such training should mostly be organized within the Project Institution

	<ul style="list-style-type: none"> <li>Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution other than the parent Institution</li> </ul>	
12. Industry-Institute Interaction	<ul style="list-style-type: none"> <li>Travel cost, hospitality and honorarium paid to Industry personnel for participation in Curriculum Development / revision / restructuring, student assessment and Institutional bodies, and for delivering Expert lectures</li> <li>Expenditure for increasing I-I-I through PSAG</li> <li>Expenditure towards inviting Industries (excluding travel cost and lodging boarding) for campus interviews and hospitality during campus interviews</li> <li>Arranging tutoring by Industry Experts to prepare students for on- and off-campus job interviews</li> </ul>	<ul style="list-style-type: none"> <li>Honorarium to faculty Member In-charge of I-I-I activity (It can be paid from the Institutions IRG)</li> </ul>
13. Institutional Reforms	<p>a) <i>Curricular Reforms:</i></p> <ul style="list-style-type: none"> <li>travel cost, hospitality and honorarium paid to Industry personnel for participation in Curriculum Development/ revision/ restructuring and Curricular reforms;</li> <li>sundry expenditure on holding meetings of the concerned Committees</li> </ul>	
	<p>b) <i>Incentives to Faculty for Continuing Education Programmes, Consultancy and R&amp;D:</i></p> <ul style="list-style-type: none"> <li>honorarium for organizing and administering CE programmes</li> <li>honorarium for delivering lectures and training in CE programmes as per norms decided by the BoG</li> </ul>	<ul style="list-style-type: none"> <li>Fiscal incentives for increased participation in research, sponsored projects and consultancy work (<i>the incentives can, however, be given from Institutional resources including IRG</i>)</li> </ul>
	<p>c) <i>Accreditation:</i> Accreditation fee to NBA/NAAC.</p>	<ul style="list-style-type: none"> <li>Any payment to Accreditation Committee members in cash or kind</li> </ul>
14. Academic Support for Weak Students through Finishing School	<ul style="list-style-type: none"> <li>Honorarium to faculty and staff for taking bridge courses, remedial teaching classes and skills-development training</li> <li>Honorarium to faculty, staff, honorarium, TA and DA to outside Experts for specialized training in soft components including communication-presentation skills</li> </ul>	<ul style="list-style-type: none"> <li>Cost towards the boarding and lodging of students for attending the Finishing School</li> </ul>
15. Institutional Management Capacity Enhancement	<p>a) <u>Training of Institution Officials and Senior Faculty:</u></p> <ul style="list-style-type: none"> <li>Course fee; travel expenses, boarding and lodging, and sundry</li> </ul>	<ul style="list-style-type: none"> <li>Any other payment to the officials and senior faculty for attending the Course</li> </ul>

	<p>expenses/allowances as per applicable norms and rules when deputed out-station to another Institution (within India or abroad) for the duration of the Course, travel time and the time permitted by the BoG for visits to Institutions/Organizations of interest and relevance to the faculty in the vicinity of the location of training</p> <ul style="list-style-type: none"> <li>Trainer's fee and overheads; and sundry expenditure if training programmes organized within the parent Institution.</li> </ul> <p>b) <u>Orientation of BoG Members</u>: Travel costs, boarding and lodging expenditure and sitting fee to Board Members; sundry expenses in organizing Orientation Programme.</p> <p><u>Study Tours</u>: Travel expenses, boarding and lodging, and sundry expenses/allowances as per applicable norms and rules when deputed for study tour within India or abroad for the duration of the tour and travel time.</p>	
16. Organizing subject area training programmes, workshops, seminars and conferences	<ul style="list-style-type: none"> <li>Hospitality to participants</li> <li>Venue and logistic arrangements</li> <li>Replication of printed training materials</li> <li>Publication of proceedings</li> <li>Travel, boarding &amp; lodging for invited Experts</li> </ul>	<ul style="list-style-type: none"> <li>TA&amp;DA to participants</li> </ul>
17. Technical Assistance	<p>Consultancy services engaged for technical assistance related to:</p> <ul style="list-style-type: none"> <li>procurement of Civil Works and equipment,</li> <li>Pedagogical Training</li> <li>mentoring</li> <li>hand-holding for project implementation as required by weak Institutions</li> <li>external financial auditing</li> </ul>	
18. Salaries	<ul style="list-style-type: none"> <li>Salaries of additional full-time regular and contract faculty including adjunct faculty and staff appointed against posts created under the Project</li> </ul>	<ul style="list-style-type: none"> <li>Salaries to contract faculty and staff appointed against existing vacancies</li> <li>Salaries of Adjunct faculty appointed against existing vacancies (<i>These are to be borne by the Institution</i>)</li> </ul>

19. Maintenance of furniture and equipment including computers and other assets acquired under the Project	<ul style="list-style-type: none"> <li>• Maintenance of furniture</li> <li>• In-house maintenance of existing and new equipment</li> <li>• Maintenance of equipment including computers and related devices through Annual Maintenance Contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of buildings <i>(this should be carried out through Institution's own budget)</i></li> </ul>
20. Incremental Operating Cost	<p>Expenditure on:</p> <ul style="list-style-type: none"> <li>• BoG and other Committee Meetings</li> <li>• Obtaining Autonomous Institution status from the affiliating university and UGC</li> <li>• TA &amp; DA for faculty and staff attending workshops and meetings organized by the NPIU and SPFUs</li> <li>• TA &amp; DA for faculty and staff attending training in the World Bank procedures as arranged by the NPIU and SPFUs</li> <li>• Contract fee for outsourced services</li> <li>• Student training materials and other consumables</li> <li>• Occasional hiring of vehicles for project related work only</li> <li>• Office operation including stationery, postage, electronic communication, telephone, electricity, water, etc.</li> <li>• Expenditure on participation by faculty in seminars, conferences, workshops, etc.: <ul style="list-style-type: none"> <li>○ Registration fee; travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules when faculty is deputed outstation to another Institution (within India or abroad) for the duration of the seminar, conference or workshop, travel time and the time permitted by the BoG for visits to Institutions/Organizations of interest and relevance to the faculty in the vicinity of the location of seminar, workshop or conference</li> <li>○ Registration fee; and local travel expenses as per applicable norms and rules when participation is within-station but at an Institution other than the employer Institution</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the faculty for attending seminars, workshops, conferences, etc. if organized within the parent Institution or at another Institution but within-station</li> </ul>

**Table-18 (a)**  
**Permissible<sup>36</sup> and Non-permissible Expenditures for Private Unaided Institutions Participating in Sub-Component 1.1 : Strengthening Institutions to Improve Learning Outcomes and Employability of Graduates**

Activity/Category of Expenditure	Private Unaided Institutions	
	Permitted	Not Permitted
1. Improvement in teaching, training and learning facilities	-----	Any type of Civil Works
	<ul style="list-style-type: none"> <li>• New equipment for establishing laboratories for new PG programmes in Engineering disciplines provided that admissions to the new programmes are made latest by 2011</li> <li>• Furniture</li> <li>• course-specific software</li> </ul>	Equipment and furniture for: <ul style="list-style-type: none"> <li>• starting new UG programmes,</li> <li>• modernizing and strengthening of existing UG and PG laboratories &amp; workshops, computer centre, library and support facilities</li> <li>• modernization of laboratories in supporting departments</li> <li>• modernizing classrooms</li> <li>• establishing new UG laboratories</li> <li>• physical education</li> <li>• improving hostel facilities other than electronic networking</li> <li>• purchase of vehicles</li> </ul>
2. Modernization and Strengthening of Libraries	<ul style="list-style-type: none"> <li>• Procurement of print and digitized books and e-Journals</li> <li>• Expenditure for digitization of library books</li> <li>• Establishment of CD Bank</li> <li>• Membership of INDEST-AICTE etc.</li> </ul>	
3. Providing Teaching and Research Assistantships to increase enrolment in existing and new PG programmes in Engineering disciplines	<ul style="list-style-type: none"> <li>• Teaching Assistantships and Research Assistantships<sup>37</sup> for non-GATE qualified Masters and Doctoral students in Engineering disciplines</li> <li>• Foreign fellowships not exceeding 3 months duration for Doctoral candidates in Engineering disciplines subject to BoG approval on case-to-case basis</li> </ul>	<ul style="list-style-type: none"> <li>• Scholarships for GATE qualified students for Masters and Doctoral programmes are to be secured from Central, State and other agencies</li> </ul>
4. Faculty Qualification Upgradation as planned through TNA as per agreed funding pattern	<ul style="list-style-type: none"> <li>• Fees charged for Course work and use of research facilities; and consumables by the Institution (other than the parent Institution) where faculty is enrolled for qualification upgradation either through full-time or part-time or by sandwich joint arrangement</li> </ul>	<ul style="list-style-type: none"> <li>• Salary, living expenses and travel expenses of faculty registered for qualification upgradation (on full or part time or by sandwich joint arrangement) either within the parent Institution or through deputation to another Institution</li> </ul>

<sup>36</sup> Expenditure is permissible only for the AICTE approved PG teaching Programmes, provided that Goods, and Consultancy Services (including Pedagogical Training) are procured in accordance with the procurement methods and procedures given in the Procurement Manual [see Appendix-II] and are not declared ineligible expenditure by the external Financial Auditors.

<sup>37</sup> The amount of Teaching and Research Assistantships will be governed by the norms as prescribed by the UGC/AICTE or the State Governments or by the respective Board of Governors.

	<ul style="list-style-type: none"> <li>Expenses towards Thesis writing and publication of Thesis-based Research Papers</li> <li>Consumables if faculty is registered for qualification upgradation on full-time or part-time basis within the parent Institution</li> </ul>	
5. In-house Pedagogical Training of faculty from engineering disciplines and supporting departments as per agreed funding pattern	<ul style="list-style-type: none"> <li>Training fee charged by the Training Provider selected by the SPFU (The training fee payment will be made by SPFU)</li> </ul>	<ul style="list-style-type: none"> <li>Expenditure towards travel, boarding, lodging, training materials, etc. for training provider.</li> <li>Rental for training venue, if any.</li> <li>Any payment to the faculty for attending the training programme</li> </ul>
6. Subject knowledge and research competence upgradation of faculty from Engineering disciplines and supporting departments as planned through TNA	<ul style="list-style-type: none"> <li>Course fee; travel expenses, boarding and lodging, and sundry expenses/allowances as per applicable norms and rules when faculty is deputed out-station to another Institution (within India or abroad) for the duration of the Course, travel time and the time permitted by the BoG for visits to Institutions/Organizations of interest and relevance to the faculty in the vicinity of the location of training</li> <li>Course fee and local travel expenses as per applicable norms and rules when faculty attends a Course in-station but at an Institution other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>Any other payment to the faculty for attending the Course</li> </ul>
7. Training of technical support staff	<ul style="list-style-type: none"> <li>Course fee; travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules when the technical support staff is deputed outstation to another Institution/Organization within India and travel time</li> <li>Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>Any other payment to the staff for attending the training programme</li> </ul>
8. Industry-Institute Interaction	<ul style="list-style-type: none"> <li>Travel cost, hospitality and honorarium paid to industry personnel for participation in curriculum development/revision / restructuring, student assessment and Institutional bodies, and for delivering expert lectures</li> <li>Expenditure for increasing I-I-I through PSAG</li> </ul>	<ul style="list-style-type: none"> <li>Honorarium to faculty Member incharge of I-I-I activity (It can be given from the Institution's own IRG)</li> </ul>

	<ul style="list-style-type: none"> <li>• Expenditure towards inviting industries (excluding travel cost and lodging boarding) for campus interviews and hospitality during campus interviews</li> <li>• Arranging tutoring by industry experts to prepare students for on- and off-campus job interviews</li> </ul>	
9. Institutional Reforms	<p>a) <i>Curricular Reforms:</i></p> <ul style="list-style-type: none"> <li>• travel cost, hospitality and honorarium paid to industry personnel for participation in curriculum development/revision/restructuring and curricular reforms;</li> <li>• sundry expenditure on holding meetings of the concerned committees.</li> </ul> <p>b) <i>Accreditation:</i> Accreditation fee to NBA/NAAC.</p>	<ul style="list-style-type: none"> <li>• Any payment to Accreditation Committee Members in cash or kind.</li> </ul>
10. Academic Support for Weak Students through Finishing School	<ul style="list-style-type: none"> <li>• Honorarium to faculty and staff for taking bridge Courses, remedial teaching classes and skill development training</li> <li>• Honorarium to faculty, staff, honorarium, TA and DA to outside experts for specialized training in soft components including communication - presentation skills</li> </ul>	<ul style="list-style-type: none"> <li>• Cost towards the boarding and lodging of students for attending the Finishing School</li> </ul>
11. Institutional Management Capacity Enhancement	<p>a) <u>Training of Institution Officials and Senior Faculty:</u></p> <ul style="list-style-type: none"> <li>• Course fee; travel expenses, boarding and lodging, and sundry expenses/allowances as per applicable norms and rules when deputed out-station to another Institution (within India or abroad) for the duration of the Course, travel time and the time permitted by the BoG for visits to Institutions/Organizations of interest and relevance to the faculty in the vicinity of the location of training</li> <li>• Trainer's fee and overheads; and sundry expenditure if training programmes organized within the parent Institution.</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the officials and senior faculty for attending the Course</li> </ul>



	<p>b) <u>Orientation of BoG Members</u>: Travel costs, boarding and lodging expenditure and sitting fee to Board Members; sundry expenses on organizing Orientation Programme.</p> <p>c) <u>Study Tours</u>: Travel expenses, boarding and lodging, and sundry expenses/allowances as per applicable norms and rules when deputed for study tour within India or abroad for the duration of the tour and travel time.</p>	
12. Organizing subject area training programmes, workshops, seminars and conferences	<ul style="list-style-type: none"> <li>• Hospitality to participants</li> <li>• Venue and logistic arrangements</li> <li>• Replication of printed training materials</li> <li>• Publication of proceedings</li> <li>• Travel, boarding &amp; lodging for invited experts</li> </ul>	<ul style="list-style-type: none"> <li>• TA&amp;DA to participants</li> </ul>
13. Technical Assistance	<p>Consultancy services engaged for technical assistance related to:</p> <ul style="list-style-type: none"> <li>• pedagogical training</li> <li>• mentoring</li> <li>• external financial auditing</li> </ul>	
14. Salaries	<ul style="list-style-type: none"> <li>• Salaries of additional full-time regular and contract faculty and staff appointed against posts created under the Project for new PG programmes</li> </ul>	<ul style="list-style-type: none"> <li>• Salaries to contract faculty and staff appointed against existing vacancies</li> <li>• Salaries of Adjunct faculty appointed against existing vacancies (<i>These are to be borne by the Institution</i>)</li> </ul>
15. Maintenance of equipment including computers	<ul style="list-style-type: none"> <li>• In-house maintenance of existing and new equipment</li> <li>• Maintenance of equipment including computers and related devices through Annual Maintenance Contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of buildings and furniture (<i>this should be carried out through Institution's own budget</i>)</li> </ul>
16. Incremental Operating Cost	<p>Expenditure on:</p> <ul style="list-style-type: none"> <li>• Obtaining Autonomous Institution status from the affiliating university and UGC</li> <li>• TA &amp; DA for faculty and staff attending workshops and Meetings organized by the NPIU and SPFUs</li> <li>• TA &amp; DA for faculty and staff attending training in the World Bank procedures as arranged by the NPIU and SPFUs</li> <li>• Student training materials and other consumables</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the faculty for attending seminars, workshops, conferences, etc. if organized within the parent Institution or at another Institution but within-station</li> </ul>

	<ul style="list-style-type: none"><li>• Expenditure on participation by faculty in seminars, conferences, workshops, etc.:<ul style="list-style-type: none"><li>○ Registration fee; travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules when faculty is deputed outstation to another Institution (within India or abroad) for the duration of the seminar, conference or workshop, travel time and the time permitted by the BoG for visits to Institutions/Organizations of interest and relevance to the faculty in the vicinity of the location of seminar, workshop or conference</li><li>○ Registration fee; and local travel expenses as per applicable norms and rules when participation is within-station but at an Institution other than the employer Institution</li></ul></li></ul>	
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**Table-19**  
**Permissible<sup>38</sup> and Non-permissible Expenditures**  
**for Government Funded and Aided Institutions and Private Unaided Institutions Participating in**  
**Sub-Component 1.2 : Scaling-up Postgraduate Education and Demand-Driven Research &**  
**Development and Innovation**

Activity/Category of Expenditure	Government Funded and Aided Institutions <sup>39</sup> and Private Unaided Institutions	
	Permitted	Not Permitted
1. Improvement in teaching, training and learning facilities	a) Civil Works <sup>40</sup> for: <ul style="list-style-type: none"> <li>• refurbishment of existing structures/ spaces to create new laboratories for PG programmes and research</li> <li>• reducing environment degradation and complying with EMF (see Civil Works Manual at Appendix-III)</li> </ul>	<ul style="list-style-type: none"> <li>• Civil Works undertaken for betterment of academic buildings such as UG classrooms; UG existing laboratories, workshops, computer centre and library; constructing new spaces and betterment of hostels,</li> </ul>
	b) New equipment and furniture <sup>41</sup> for: <ul style="list-style-type: none"> <li>• establishing new PG laboratories for existing programmes</li> <li>• establishing laboratories for new PG programmes<sup>42</sup> in emerging areas of Engineering and Technology</li> <li>• Faculty research and Institutional consultancy work</li> <li>• Campus-wide networking of academic and administrative buildings, hostels and faculty residences and enhancing internet facilities</li> </ul>	
	c) Course-specific Software	
	d) Modernization and Strengthening of Libraries: <ul style="list-style-type: none"> <li>• Procurement of print and digitized books, e-Journals</li> <li>• Expenditure for digitization of Library Books</li> <li>• Establishment of CD Bank Membership of INDEST-AICTE etc.</li> </ul>	

<sup>38</sup> Expenditure is permissible only for the AICTE approved UG and PG teaching programmes, provided that Goods, Civil Works and Consultancy Services (including Pedagogical Training) are procured in accordance with the procurement methods and procedures given in the Procurement Manual [see Appendix-II] and are not declared ineligible expenditure by the external Financial Auditors.

<sup>39</sup> The term Aided Institution also includes Institutions established and operated under Public-Private-Partnership mode.

<sup>40</sup> Expenditure for any Civil Work activity will not be admissible if undertaken with co-financing from any other source. It should be generally limited to about 3% of Institution's project allocation.

<sup>41</sup> Expenditure for procurement of any equipment and furniture will not be admissible if procured with co-financing from any other source. Total equipment procurement should be limited to about 50% of the Institution's project allocation.

<sup>42</sup> Provided that admissions to the new programmes are made latest by 2011, more than 50% seats are occupied and there is sufficiency of faculty at all times

2. Providing Teaching and Research Assistantships for significantly increasing enrolment in existing and New Masters and Doctoral programmes in Engineering Disciplines	<ul style="list-style-type: none"> <li>Teaching Assistantships and Research Assistantships<sup>43</sup> for non-GATE qualified Masters and Doctoral students in Engineering disciplines</li> <li>Foreign fellowships not exceeding 3 months duration for Doctoral candidates in Engineering disciplines subject to BoG approval on case to case basis</li> </ul>	<ul style="list-style-type: none"> <li>Scholarships for GATE qualified students for Masters and Doctoral programmes are to be secured from Central, State and other agencies</li> </ul>
3. Research and Development and Institutional Consultancy Activities	<p>Expenditure for:</p> <ul style="list-style-type: none"> <li>securing sponsored projects and consultancy assignments</li> <li>publication of Research Papers in peer reviewed Journals</li> <li>commercialization of research products</li> <li>patenting of research products</li> <li>Travel cost, hospitality and honorarium paid to Consultant for participation in Research &amp; Development and for delivering Expert lectures</li> </ul>	<ul style="list-style-type: none"> <li>Fiscal incentives for increased participation in research, sponsored projects and consultancy work (<i>the incentives can, however, be given from Institutional resources including IRG</i>)</li> <li>All expenditure including travel and meetings associated with implementation of sponsored projects and consultancy assignments</li> </ul>
4. Developing research interest among UG students	<ul style="list-style-type: none"> <li>Fiscal incentive (as per norms approved by the BoG) to students that voluntarily associate with Industry oriented R&amp;D projects</li> <li>Travel cost of students that associate with an Industry for about 3-4 weeks during vacations to continue work on R&amp;D projects</li> </ul>	<ul style="list-style-type: none"> <li>Boarding and lodging and sundry expenses for spending time in Industry.</li> </ul>
5. Resource sharing through collaborative arrangements	<ul style="list-style-type: none"> <li>Travel expenses; boarding, lodging, and sundry expenses/allowances for faculty visiting Institutions and Industries within India to develop and implement joint projects with well defined deliverables.</li> </ul>	<ul style="list-style-type: none"> <li>Any other payment to the faculty for visits to Institutions and industries for joint projects.</li> </ul>
6. Faculty Qualification Upgradation as planned through TNA	<ul style="list-style-type: none"> <li>Fees charged for Course work and use of research facilities; and consumables by the Institution (other than the parent Institution) where faculty is enrolled for qualification upgradation either through full-time or part-time or by sandwich joint arrangement</li> <li>Expenses towards Thesis writing and publication of Thesis-based Research Papers</li> <li>Consumables, if faculty is registered for qualification upgradation on full-time or part-time basis within the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>Salary, living expenses and travel expenses of faculty registered for qualification upgradation (on full or part time or by sandwich joint arrangement) either within the parent Institution or through deputation to another Institution</li> </ul>

<sup>43</sup> The amounts of Teaching and Research Assistantships will be governed by the norms as prescribed by the UGC/AICTE or the State Governments or by the respective Board of Governors.

7. In-house Pedagogical Training of faculty from engineering disciplines and supporting departments	<ul style="list-style-type: none"> <li>• Full fee (training cost + overheads towards travel, boarding, lodging, travel, training materials, etc.) charged by the Training Provider selected by the SPFU (All the payments will be made by SPFU)</li> </ul>	<ul style="list-style-type: none"> <li>• Any payment to the faculty for attending the training programme</li> </ul>
8. In-house Advanced Pedagogical Training of faculty from engineering disciplines and supporting departments	<ul style="list-style-type: none"> <li>• Full fee (training cost + overheads towards travel, boarding, lodging, travel, training materials, etc.) charged by the Training Provider selected by the SPFU (All the payments will be made by SPFU)</li> </ul>	<ul style="list-style-type: none"> <li>• Any payment to the faculty for attending the training programme</li> </ul>
9. Subject knowledge and research competence upgradation of faculty from Engineering disciplines and supporting departments as planned through TNA	<ul style="list-style-type: none"> <li>• Course fee; travel expenses, boarding and lodging, and sundry expenses / allowances as per applicable norms and rules when faculty is deputed out-station to another Institution (within India or abroad) for the duration of the Course, travel time and the time permitted by the BoG for visits to Institutions/Organizations of interest and relevance to the faculty in the vicinity of the location of training</li> <li>• Course fee and local travel expenses as per applicable norms and rules when faculty attends a Course in-station but at an Institution other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the faculty for attending the Course</li> </ul>
10. Training of technical support staff	<ul style="list-style-type: none"> <li>• Course fee; travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules when the technical support staff is deputed outstation to another Institution/Organization within India and travel time</li> <li>• Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the staff for attending the training programme</li> </ul>
11. Industry-Institute-Interaction (I-I-I)	<ul style="list-style-type: none"> <li>• Travel cost, hospitality and honorarium paid to Industry personnel for participation in Curriculum Development / revision / restructuring, student assessment and Institutional bodies, and for delivering Expert lectures</li> <li>• Expenditure for increasing I-I-I through PSAG</li> </ul>	<ul style="list-style-type: none"> <li>• Honorarium to faculty member In-charge of I-I-I activity (It can be provided from Institution's IRG).</li> </ul>

	<ul style="list-style-type: none"> <li>• Expenditure towards inviting industries (excluding travel cost and lodging boarding) for campus interviews and hospitality during campus interviews</li> <li>• Arranging tutoring by Industry Experts to prepare students for on- and off-campus job interviews</li> </ul>	
12. Institutional Reforms	<p>a) <i>Curricular Reforms:</i></p> <ul style="list-style-type: none"> <li>• travel cost, hospitality and honorarium paid to Industry personnel for participation in Curriculum Development/revision/restructure and Curricular Reforms;</li> <li>• sundry expenditure on holding meetings of the concerned Committees.</li> </ul>	
	<p>b) <i>Incentives to Faculty for Continuing Education Programmes, Consultancy and R&amp;D:</i></p> <ul style="list-style-type: none"> <li>• honorarium for organizing and administering CE programmes</li> <li>• honorarium for delivering lectures and training in CE programmes as per norms decided by the BoG</li> </ul>	<ul style="list-style-type: none"> <li>• Fiscal incentives for increased participation in Research, sponsored projects and consultancy work (<i>the incentives can, however, be given from Institutional resources including IRG</i>)</li> </ul>
	<p>c) <i>Accreditation:</i> Accreditation fee to NBA/NAAC.</p>	<ul style="list-style-type: none"> <li>• Any payment to Accreditation Committee Members in cash or kind</li> </ul>
13. Academic Support for Weak Students through Finishing School	<ul style="list-style-type: none"> <li>• Honorarium to faculty and staff for taking bridge courses, remedial teaching classes and skill development training</li> <li>• Honorarium to faculty, staff, Honorarium, TA and DA to outside Experts for specialized training in soft components including communication-presentation skills</li> </ul>	<ul style="list-style-type: none"> <li>• Cost towards the boarding and lodging of students for attending the Finishing School</li> </ul>
14. Institutional Management Capacity Enhancement	<p>a) Training of Institution Officials and Senior Faculty:</p> <ul style="list-style-type: none"> <li>• Course fee; travel expenses, boarding and lodging, and sundry expenses/allowances as per applicable norms and rules when deputed out-station to another Institution (within India or abroad) for the duration of the Course, travel time and the time permitted by the BoG for visits to Institutions/ Organizations of interest and relevance to the faculty in the vicinity of the location of training</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the officials and senior faculty for attending the Course</li> </ul>

	<ul style="list-style-type: none"> <li>• Trainer's fee and overheads; and sundry expenditure if training programmes organized within the parent Institution.</li> </ul> <p>b) Orientation of BoG Members: Travel costs, boarding and lodging expenditure and sitting fee to Board Members; sundry expenses on organizing Orientation Programme.</p> <p>c) <u>Study Tours</u>: Travel expenses, boarding and lodging, and sundry expenses/allowances as per applicable norms and rules when deputed for study tour within India or abroad for the duration of the tour and travel time.</p>	
15. Organizing subject area training programmes, workshops, seminars and conferences	<ul style="list-style-type: none"> <li>• Hospitality to participants</li> <li>• Venue and logistic arrangements</li> <li>• Replication of printed training materials</li> <li>• Publication of proceedings</li> <li>• Travel, boarding &amp; lodging for invited Experts</li> </ul>	<ul style="list-style-type: none"> <li>• TA&amp;DA to participants</li> </ul>
16. Technical Assistance	<p>Consultancy services engaged for technical assistance related to:</p> <ul style="list-style-type: none"> <li>• procurement of Civil Works and equipment</li> <li>• pedagogical training</li> <li>• mentoring</li> <li>• hand-holding for project implementation as required by weak Institutions</li> <li>• external financial auditing</li> </ul>	
17. Salaries	<ul style="list-style-type: none"> <li>• Salaries of additional full-time regular and contract faculty and staff appointed against posts created under the Project</li> </ul>	<ul style="list-style-type: none"> <li>• Salaries to contract faculty and staff appointed against existing vacancies</li> <li>• Salaries of Adjunct faculty appointed against existing vacancies (<i>These are to be borne by the Institution</i>)</li> </ul>
18. Maintenance of equipment including computers	<ul style="list-style-type: none"> <li>• In-house maintenance of existing and new equipment</li> <li>• Maintenance of equipment including computers and related devices and assets provided under the Project through Annual Maintenance Contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of buildings and furniture (<i>this should be carried out through Institution's own budget</i>)</li> </ul>
19. Incremental Operating Cost	<p>Expenditure on:</p> <ul style="list-style-type: none"> <li>• BoG and other Committee Meetings</li> <li>• TA &amp; DA for faculty and staff attending workshops and Meetings organized by the NPIU and SPFUs</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the faculty for attending seminars, workshops, conferences, etc. if organized within the parent Institution or at another Institution but within-station</li> </ul>

	<ul style="list-style-type: none"><li>• TA &amp; DA for faculty and staff attending training in the World Bank procedures as arranged by the NPIU and SPFUs</li><li>• Contract fee for outsourced services</li><li>• Student training materials and other consumables</li><li>• Occasional hiring of vehicles for project related work only</li><li>• Office operation including stationery, postage, electronic communication, telephone, electricity, water, etc.</li><li>• Expenditure on participation by faculty in seminars, conferences, workshops, etc.:<ul style="list-style-type: none"><li>○ Registration fee; travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules when faculty is deputed outstation to another Institution (within India or abroad) for the duration of the seminar, conference or workshop, travel time and the time permitted by the BoG for visits to Institutions/ Organizations of interest and relevance to the faculty in the vicinity of the location of seminar, workshop or conference</li><li>○ Registration fee; and local travel expenses as per applicable norms and rules when participation is within-station but at an Institution other than the employer Institution</li></ul></li></ul>	
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**Table-19 (a)**  
**Permissible<sup>44</sup> and Non-permissible Expenditures**  
**under the Additional Grant for activities of Centre of Excellence**

Activity/Category of Expenditure	Government Funded and Aided Institutions <sup>45</sup> and Private Unaided Institutions	
	Permitted	Not Permitted
1. Improvement in teaching, training and learning facilities	<ul style="list-style-type: none"> <li>• Civil Works for: <ul style="list-style-type: none"> <li>• refurbishment of existing structures/ spaces to create new laboratories for thematic research</li> <li>• reducing environment degradation and complying with EMF (see Civil Works Manual at Appendix-III).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Civil Works undertaken for betterment of academic buildings such as classrooms; existing laboratories, workshops, computer centres and libraries; constructing new spaces and betterment of hostels,</li> </ul>
	<ul style="list-style-type: none"> <li>• New equipment and furniture<sup>46</sup> for laboratories for thematic research</li> </ul>	<ul style="list-style-type: none"> <li>• Equipment and furniture for: (a) starting new UG and PG programmes, and (b) improving hostel facilities</li> <li>• Purchase of vehicles</li> </ul>
	<ul style="list-style-type: none"> <li>• Establishment of a knowledge resource centre (library): <ul style="list-style-type: none"> <li>○ Print and digitized Books, e-Journals and reference material</li> <li>○ Electronic equipment for storage and dissemination through web</li> <li>○ Procurement of furniture</li> </ul> </li> </ul>	
2. Providing additional Assistantships for enrolment in Masters and Doctoral programmes in topics linked to economic or societal needs in the thematic areas	<ul style="list-style-type: none"> <li>• Teaching Assistantships and Research Assistantships<sup>47</sup> for non-GATE qualified Masters and Doctoral students</li> <li>• Foreign fellowships not exceeding 3 months duration for Doctoral candidates subject to BoG approval on case-to-case basis</li> </ul>	<ul style="list-style-type: none"> <li>• Scholarships for GATE qualified students for Masters and Doctoral programmes are to be secured from Central, State and other agencies</li> </ul>
3. National / International collaboration for Research and Development activities with Academic and R & D organizations.	<p>Expenditure for:</p> <ul style="list-style-type: none"> <li>• securing sponsored projects and consultancy assignments</li> <li>• publication of research papers in peer reviewed Journals</li> <li>• commercialization of research products</li> <li>• patenting of research products</li> </ul>	<ul style="list-style-type: none"> <li>• Fiscal incentives for increased participation in research, sponsored projects and consultancy work (<i>the incentives can, however, be given from Institutional resources including IRG</i>)</li> </ul>

<sup>44</sup> Expenditure is permissible only for the AICTE approved UG and PG teaching Programmes, provided that Goods, Civil Works and Consultancy Services (including Pedagogical Training) are procured in accordance with the procurement methods and procedures given in the Procurement Manual [see Appendix-I] and are not declared ineligible expenditure by the external Financial Auditors.

<sup>45</sup> The term Aided Institution also includes institutions established and operated under Public-Private-Partnership mode.

<sup>46</sup> Expenditure for procurement of any equipment and furniture will not be admissible if procured with co-financing from any other source. Total equipment procurement should be limited to about 50% of the institution's project allocation.

<sup>47</sup> The amounts of Teaching and Research Assistantships will be governed by the norms as prescribed by the UGC/AICTE or the State Governments or by the respective Board of Governors.

	<ul style="list-style-type: none"> <li>• Travel cost, hospitality and honorarium paid to consultant for participation in Research &amp; Development and for delivering expert lectures</li> <li>• Travel expenses; boarding, lodging, and sundry expenses/allowances for faculty visiting Institutions within India and abroad to develop and implement joint projects with well defined deliverables.</li> </ul>	<ul style="list-style-type: none"> <li>• All expenditure including travel and meetings associated with implementation of sponsored projects and consultancy assignments</li> <li>• Any other payment to the faculty for visits to Institutions for joint projects.</li> </ul>
4. Collaboration with Industry for applicable research and product development	<ul style="list-style-type: none"> <li>• Travel expenses; boarding, lodging, and sundry expenses/allowances for faculty visiting Industries within India and abroad to develop and implement joint projects with well defined deliverables.</li> <li>• commercialization of research products</li> <li>• patenting of research products</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the faculty for visits to industries for joint projects.</li> </ul>
5. Faculty training for enhancing research competence in thematic areas, both within India and abroad	<ul style="list-style-type: none"> <li>• Course fee; travel expenses, boarding and lodging, and sundry expenses /allowances as per applicable norms and rules when faculty is deputed out-station to another Institution (within India or abroad) for the duration of the Course, travel time and the time permitted by the BoG for visits to Institutions/Organizations of interest and relevance to the faculty in the vicinity of the location of training</li> <li>• Course fee and local travel expenses as per applicable norms and rules when faculty attends a course in-station but at an Institution other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the faculty for attending the Course</li> </ul>
6. Training of technical support staff	<ul style="list-style-type: none"> <li>• Course fee; travel expenses; boarding, lodging, and sundry expenses /allowances as per applicable norms and rules when the technical support staff is deputed outstation to another Institution/ Organization within India and travel time</li> <li>• Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the staff for attending the training programme</li> </ul>

7. Organizing thematic area training programmes, workshops, seminars and conferences	<ul style="list-style-type: none"> <li>• Hospitality to participants</li> <li>• Venue and logistic arrangements</li> <li>• Replication of printed training materials</li> <li>• Publication of proceedings</li> <li>• Travel, boarding &amp; lodging for invited Experts</li> </ul>	<ul style="list-style-type: none"> <li>• TA&amp;DA to participants</li> </ul>
8. Salaries	<ul style="list-style-type: none"> <li>• Salaries of additional full-time regular and contract faculty and staff appointed against posts created for the CoE</li> </ul>	<ul style="list-style-type: none"> <li>• Salaries to contract faculty and staff appointed against existing vacancies</li> <li>• Salaries of Adjunct faculty appointed against existing vacancies (<i>These are to be borne by the Institution</i>)</li> </ul>
9. Maintenance of equipment including computers	<ul style="list-style-type: none"> <li>• In-house maintenance of existing and new equipment</li> <li>• Maintenance of equipment including computers and related devices through Annual Maintenance Contracts</li> </ul>	<ul style="list-style-type: none"> <li>• Maintenance of buildings and furniture (<i>this should be carried out through Institution's own budget</i>)</li> </ul>
10. Incremental Operating Cost	<p>Expenditure on:</p> <ul style="list-style-type: none"> <li>• Contract fee for outsourced services</li> <li>• Office operation including stationery, postage, electronic communication, telephone, electricity, water, etc.</li> <li>• Expenditure on Participation by faculty in seminars, conferences, workshops, etc.: <ul style="list-style-type: none"> <li>○ Registration fee; travel expenses; boarding, lodging, and sundry expenses /allowances as per applicable norms and rules when faculty is deputed outstation to another Institution (within India or abroad) for the duration of the seminar, conference or workshop, travel time and the time permitted by the BoG for visits to Institutions/ Organizations of interest and relevance to the faculty in the vicinity of the location of seminar, workshop or conference</li> <li>○ Registration fee; and local travel expenses as per applicable norms and rules when participation is within-station but at an Institution other than the employer Institution</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the faculty for attending seminars, workshops, conferences, etc. if organized within the parent Institution or at another Institution but within-station</li> </ul>

**Table-20**  
**Permissible<sup>48</sup> and Non-permissible Expenditures**  
**for the National Project Implementation Unit (NPIU)**

Activity/ Expenditure Category	Permitted	Not Permitted
1. Civil Works	<ul style="list-style-type: none"> <li>Refurbishment of office building</li> </ul>	-----
2. Equipment and Furniture	<ul style="list-style-type: none"> <li>All equipment and furniture required for an efficient and modern offices of the NPIU and National Project Directorate</li> </ul>	-----
3. Training of senior and support staff of NPIU in functional areas	<ul style="list-style-type: none"> <li>Joint Review Missions</li> <li>Training programmes for Officials from SPFU</li> <li>Course fee; travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules when the NPIU staff is deputed outstation to another Institution/Organization within India and travel time</li> <li>Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution/Organization other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>Any other payment to the NPIU staff for attending the training programme</li> </ul>
4. Meetings of various Committees (NSC, NEC, Pedagogy Curriculum Development, Working Groups etc.)	<ul style="list-style-type: none"> <li>Travel expenses; boarding, lodging, and sundry expenses/allowances for out-station non-official members as per applicable norms and rules</li> <li>Local travel expenses for in-station non-official members as per applicable norms and rules</li> <li>Sitting fee to non-official members</li> <li>Operational cost</li> </ul>	
5. National Private Sector Advisory Group	<ul style="list-style-type: none"> <li>Travel expenses; boarding, lodging, and sundry expenses/allowances for out-station members as per Central Government applicable norms and rules</li> <li>Local travel expenses for in-station non-official members as per applicable norms and rules</li> <li>Salaries of support staff in PSAG Secretariat (hosted by either CII or FICCI) after one year experience of PSAG functioning</li> <li>Operational cost of PSAG meetings</li> </ul>	<ul style="list-style-type: none"> <li>Sitting fee for PSAG members</li> <li>Rental for PSAG Secretariat office</li> <li>Salaries of support staff in PSAG Secretariat during the First Year of the Project</li> <li>PSAG meeting venue rental</li> </ul>

<sup>48</sup> Expenditure is permissible only for Goods, Civil Works and Consultancy Services that are procured in accordance with the procurement methods and procedures given in the Procurement Manual [see Appendix-II] and are not declared ineligible expenditure by the external Financial Auditors.

6. In-house Basic and Advanced Pedagogical Training of faculty from Engineering disciplines and supporting departments of CFIs under Sub-component 1.1 & 1.2	<ul style="list-style-type: none"> <li>• Full fee (training cost + overheads towards travel, boarding, lodging, travel, training materials, etc.) charged by the Training Provider selected by the NPIU</li> </ul>	<ul style="list-style-type: none"> <li>• Any payment to the faculty for attending the training programme</li> </ul>
7. Organizing regional workshops each year for sharing good academic and governance practices and innovations	<ul style="list-style-type: none"> <li>• Operational expenditure for organizing and hosting workshops</li> <li>• Travel expenses; boarding, lodging, and sundry expenses/allowances for non-official out-station experts from academia and Industry including Foreign Experts as per Central Government applicable norms and rules</li> <li>• Local travel expenses for invited non-official local experts from academia and Industry as per applicable norms and rules</li> </ul>	<ul style="list-style-type: none"> <li>• TA&amp;DA to members of PSAG, officials of Industry Associations, other officials and representatives from SPFUs and project and non-project institutions</li> </ul>
8. System Management Capacity Enhancement (to be financed solely through the Innovation Fund)	<p>a) Study Tours:</p> <ul style="list-style-type: none"> <li>• Operational cost for organizing study tours of Vice-Chancellors, Policy Planners and Senior Administrators at the National and State levels including senior officials of NPIU and SPFUs</li> <li>• Travel, boarding, lodging and sundry expenditure for the duration of the tour and travel time for National level Policy Planners and implementers, Central University Vice-Chancellors and officials of NPIU</li> </ul>	<ul style="list-style-type: none"> <li>• Travel, boarding, lodging and sundry expenditure for the duration of the tour and travel time for State level Policy Planners and Senior Administrators, and State Universities' Vice-Chancellors and SPFU officials</li> </ul>
	<p>b) Professional Training Programmes:</p> <ul style="list-style-type: none"> <li>• Operational cost for organizing thematic training programmes for Vice-Chancellors, policy planners and senior administrators at the National and State levels including senior officials of NPIU and SPFUs</li> <li>• Travel, boarding, lodging and sundry expenditure for the duration of the training programme and travel time for National level policy planners and senior administrators, Central University Vice-Chancellors and officials of NPIU</li> </ul>	<ul style="list-style-type: none"> <li>• Travel, boarding, lodging and sundry expenditure for the duration of the training programme and travel time for State level policy planners and senior administrators, and State Universities' Vice-Chancellors and SPFU officials</li> </ul>
9. Technical Assistance	<p>Consultancy services engaged for technical assistance related to:</p> <ul style="list-style-type: none"> <li>• MIS and PMSS</li> <li>• Handholding of New States</li> <li>• studies and surveys</li> </ul>	

	<ul style="list-style-type: none"> <li>• development and web-hosting of Annual Training Calendar for faculty</li> <li>• mentoring</li> <li>• performance and technical auditing</li> <li>• external financial auditing</li> <li>• Other tasks</li> </ul>	
10. Salaries	<ul style="list-style-type: none"> <li>• Salaries of full-time regular and contract officials and staff against posts created under the Project</li> </ul>	
11. Maintenance of office space, furniture and equipment including computers and buildings	<ul style="list-style-type: none"> <li>• Maintenance of office building and furniture</li> <li>• Maintenance of equipment including computers and related devices through Annual Maintenance Contracts</li> </ul>	
12. Incremental Operating Cost	<p>a) Operational Expenditure on:</p> <ul style="list-style-type: none"> <li>• Orientation meetings for Evaluation Committee Members and Mentors, Performance, Technical and Fiduciary Auditors</li> <li>• National Task Force for developing Guidelines for effective functioning of Institutional BoGs</li> <li>• Conduct of all review and implementation support missions</li> <li>• Training and orientation workshops for SPFU officials, institutional faculty and staff</li> <li>• Consultation Meetings</li> <li>• Post-procurement audits of CFIs</li> </ul> <p>b) Maintenance of NPIU's website</p> <p>c) Rental of office space</p> <p>d) Contract fee for outsourced services</p> <p>e) Occasional hiring of vehicles for project related work only</p> <p>f) Office operation including stationery, printing of various documents, postage, electronic communication, advertising, telephone, electricity, water, TA&amp;DA, etc.</p> <p>g) Expenditure on participation of NPIU staff in meetings, workshops, etc.:</p> <ul style="list-style-type: none"> <li>• Travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules and travel time</li> <li>• Local travel expenses as per applicable norms and rules when participation is within-station but at a place other than the office</li> </ul>	<ul style="list-style-type: none"> <li>• Any payment other than local travel expenses to the staff for attending meetings and workshops within-station</li> </ul>

**Table-21**  
**Permissible<sup>49</sup> and Non-permissible Expenditures**  
**for the State Project Facilitation Units (SPFUs)**

Activity/ Expenditure Category	Permitted	Not Permitted
1. Civil Works	<ul style="list-style-type: none"> <li>• Refurbishment of office building</li> </ul>	-----
2. Equipment and Furniture	<ul style="list-style-type: none"> <li>• All equipment and furniture required for an efficient and modern SPFU office</li> </ul>	Purchase of vehicles
3. Training of senior and support staff of SPFU in functional areas	<ul style="list-style-type: none"> <li>• Course fee; travel expenses; boarding, lodging, and sundry expenses / allowances as per applicable norms and rules when the SPFU staff is deputed outstation to another Institution/ Organization within India and travel time</li> <li>• Course fee and local travel expenses as per applicable norms and rules when training is attended in-station but at an Institution/Organization other than the parent Institution</li> </ul>	<ul style="list-style-type: none"> <li>• Any other payment to the SPFU staff for attending the training programme</li> </ul>
4. Meetings of State Steering Committee	<ul style="list-style-type: none"> <li>• Travel expenses; boarding, lodging, and sundry expenses/allowances for out-station non-official members as per applicable norms and rules</li> <li>• Local travel expenses for in-station non-official members as per applicable norms and rules</li> <li>• Sitting fee to non-official members</li> <li>• Operational cost</li> </ul>	
5. In-house Basic and Advanced Pedagogical Training of faculty from Engineering disciplines and supporting departments of Project Government. funded and aided Institutions under Sub-Component 1.1 & 1.2	<ul style="list-style-type: none"> <li>• Full fee (training cost + overheads towards travel, boarding, lodging, travel, training materials, etc.) charged by the Training Provider selected by the SPFU</li> </ul>	<ul style="list-style-type: none"> <li>• Any payment to the faculty for attending the training programme</li> </ul>
6. In-house Basic and Advanced Pedagogical Training of faculty from Engineering disciplines and supporting departments of Project Private unaided Institutions under Sub-Component 1.1	<ul style="list-style-type: none"> <li>• Training fee charged by the Training Provider selected by the SPFU</li> </ul>	<ul style="list-style-type: none"> <li>• Expenditure towards travel, boarding, lodging, training materials, etc. for training provider.</li> <li>• Rental for training venue, if any.</li> <li>• Any payment to the faculty for attending the training programme</li> </ul>

<sup>49</sup> Expenditure is permissible only for Goods, Civil Works and Consultancy Services that are procured in accordance with the procurement methods and procedures given in the Procurement Manual [see Appendix-II] and are not declared ineligible expenditure by the external Financial Auditors.

7. In-house Pedagogical Training of faculty from Engineering disciplines and supporting departments of non-project Government funded and aided, and private unaided institutions	<ul style="list-style-type: none"> <li>• Training fee charged by the Training Provider selected by the SPFU</li> </ul>	<ul style="list-style-type: none"> <li>• Expenditure towards travel, boarding, lodging, training materials, etc. for training provider.</li> <li>• Rental for training venue, if any.</li> <li>• Any payment to the faculty for attending the training programme</li> </ul>
8. State Private Sector Advisory Group (optional)	<ul style="list-style-type: none"> <li>• Travel expenses; boarding, lodging, and sundry expenses/allowances for out-station members as per applicable norms and rules</li> <li>• Local travel expenses for in-station non-official members as per applicable norms and rules</li> <li>• Salaries of support staff in State-PSAG Secretariat (hosted by either CII or FICCI) after one year experience of PSAG functioning</li> <li>• Operational cost of State-PSAG Meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Sitting fee for State-PSAG Members</li> <li>• Rental for State-PSAG Secretariat office</li> <li>• Salaries of support staff in State-PSAG Secretariat during the First Year of the Project</li> <li>• State-PSAG Meeting venue rental</li> </ul>
9. System Management Capacity Enhancement (to be financed solely through the Innovation Fund)	<p>a) Study Tours:</p> <ul style="list-style-type: none"> <li>• Travel, boarding, lodging and sundry expenditure for the duration of the tour and travel time for State level policy planners and implementers, Vice-Chancellors of Universities affiliating project institutions and officials of SPFU</li> </ul>	
	<p>b) Professional Training Programmes:</p> <ul style="list-style-type: none"> <li>• Travel, boarding, lodging and sundry expenditure for the duration of the training programme and travel time for State level policy planners and senior administrators, University Vice-Chancellors and officials of SPFU</li> </ul>	
	<p>c) Establishment of Quality Assurance Practices:</p> <ul style="list-style-type: none"> <li>• Refurbishment of existing space, furniture and office equipment for the Secretariat of the Quality Assurance (QA) Cell (to be preferably located in the premises of either the State Technical University or the Directorate of Technical Education)</li> </ul>	



	<ul style="list-style-type: none"> <li>• Salaries of full time officers and staff</li> <li>• Expenditure towards development of Quality Assurance criteria, mechanism and the associated MIS</li> <li>• Travel, boarding, lodging and sundry expenditure for the duration of the tour and travel time for the QA Cell officials and experts during inspection visits to Institutions</li> <li>• Travel, boarding, lodging and sundry expenses and sitting-fee to non-official members of QA team during their meetings</li> <li>• Operational expenses for the QA Cell</li> </ul>	
	<p>d) Establishing a Task Force for strategic planning for Technical Education:</p> <ul style="list-style-type: none"> <li>• Travel, boarding, lodging and sundry expenses and sitting-fee to non-official members of the Task Force team during their meetings</li> <li>• Operational expenses for the meetings of the Task Force</li> </ul>	
	<p>e) Spreading best practices to non-project institutions:</p> <ul style="list-style-type: none"> <li>• Preparing interested institutions for academic autonomy through training of faculty to perform the associated functions</li> <li>• Cost training fee only for Pedagogical Training of faculty in non-project institutions</li> <li>• Cost of subject area training fee and travel of faculty in select specializations on cost-sharing basis</li> <li>• Cost towards delivery of bridge courses, extra classes and special coaching for weak students on cost sharing basis</li> </ul>	
	<p>f) Industry-Institute-Partnership-Promotion (IIPP) Cells:</p> <ul style="list-style-type: none"> <li>• Operational expenses of IIPP Cell (linked to S-PSAG) established by CII or FICCI in</li> </ul>	

	<p>its Headquarters</p> <ul style="list-style-type: none"> <li>• Salary of 2 full-time officials</li> <li>• Travel, boarding, and lodging expenses for the IIPP Cell officials on visits to Industries as per State approved norms and rules</li> </ul>	
	<p>g) Workshops for sharing best academic and governance practices:</p> <ul style="list-style-type: none"> <li>• Operational expenditure for organizing and hosting workshops</li> <li>• Travel expenses; boarding, lodging, and sundry expenses/allowances for non-official out-station experts from academia and industry including Foreign Experts as per applicable norms and rules</li> <li>• Local travel expenses for invited non-official local experts from academia and Industry as per applicable norms and rules</li> </ul>	<ul style="list-style-type: none"> <li>• TA&amp;DA to members of State-PSAG, officials of Industry Associations representatives from Project and non-project institutions</li> </ul>
	<p>h) Establishment of Curriculum Development Cells in Universities affiliating project institutions:</p> <ul style="list-style-type: none"> <li>• Refurbishment of existing space, furniture and office equipment for the Secretariat of the CD Cell</li> <li>• Travel, boarding, lodging and sundry expenses and sitting-fee to non-official members of CD Committees during their meetings</li> <li>• Honorarium to faculty serving in CD Cell as per host University norms</li> <li>• Sitting fee to faculty participating in curriculum development exercises as per host University norms</li> <li>• Operational expenses of the CD Cell and for the meetings of the CD Committees</li> </ul>	
<p>10. Technical Assistance</p>	<p>Consultancy services engaged for technical assistance related to:</p> <ul style="list-style-type: none"> <li>• Experts to guide Institutions carry out high quality SWOT and TNA</li> </ul>	<ul style="list-style-type: none"> <li>• Hiring of Experts to help Institutions prepare Proposals and implement Institutional projects (<b>not permitted for old States</b>)</li> </ul>

	<ul style="list-style-type: none"> <li>• Experts for helping State institutions prepare proposals and implement institutional projects (<b>permitted for new States only</b>)</li> <li>• Experts for helping / guiding Institutions to implement EAP and EMF</li> <li>• Pedagogical Training of faculty from project and non-project institutions</li> <li>• Professional training of technical and administrative support staff</li> <li>• Studies and surveys, if any</li> <li>• Mentoring</li> <li>• Performance and technical auditing</li> <li>• Post-procurement audits of Institutions</li> <li>• External financial auditing</li> <li>• Other tasks</li> </ul>	
11. Salaries	<ul style="list-style-type: none"> <li>• Salaries of full-time regular and contract officials and staff against posts created under the Project</li> </ul>	
12. Maintenance of office space, furniture and equipment including computers and buildings	<ul style="list-style-type: none"> <li>• Maintenance of office building and furniture</li> <li>• Maintenance of equipment including computers and related devices through Annual Maintenance Contracts</li> </ul>	
13. Incremental Operating Cost	<p>a) Operational Expenditure on:</p> <ul style="list-style-type: none"> <li>• Workshops for training Institutions in the preparation of Eligibility and Development Proposals</li> <li>• Joint Review Missions</li> <li>• Training programmes for faculty and staff from Institutions</li> <li>• Orientation meetings for mentors, performance, technical and fiduciary auditors</li> <li>• Field visits to Institutions for monitoring project implementation</li> <li>• Consultation meetings</li> <li>• Post-procurement audits of project institutions</li> </ul> <p>b) Maintenance of SPFU's website</p> <p>c) Contract fee for outsourced services</p> <p>d) Occasional hiring of vehicles for project related work only</p>	<ul style="list-style-type: none"> <li>• Any payment other than local travel expenses to the staff for attending meetings and workshops within-station</li> </ul>

	<p>e) Office operation including stationery, printing of various documents, postage, electronic communication, advertising, telephone, electricity, water, TA&amp;DA, etc.</p> <p>f) Expenditure on participation of staff in meetings, workshops, etc. related to the Project</p> <ul style="list-style-type: none"><li>• Travel expenses; boarding, lodging, and sundry expenses/allowances as per applicable norms and rules and travel time</li><li>• Local travel expenses as per applicable norms and rules when participation is within-station but at a place other than the office</li></ul>	
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## **Section-8**

### **PROCUREMENT MANAGEMENT**

#### **8.1 Procurement Guidelines:**

Procurement of all Goods and Works under the Project are to be carried out in accordance with the **World Bank "Guidelines: Procurement Under IBRD Loans and IDA Credits" May 2004 and revised October 2006** (Procurement Guidelines); and the agreed procedures and limits described in the Financing Agreement. The guidelines should be strictly followed to avoid penalties.

#### **8.2 Procurement Arrangements:**

Project institutions must form separate (i) Goods Procurement Committee and (ii) Building & Works Committee to manage all Institutional procurement activities for Goods and Works. The Committees will need to seek approval from, and will function under the supervision of the BoG. Institutions must also nominate a Coordinator for all procurement activities under the Project.

#### **8.3 Procurement Management Support System (PMSS):**

A web based Procurement Management Support System (PMSS) will be used in the Project. This system will be used to monitor the procurement activities of all entities participating in the Project. PMSS will help the procurement activities by reducing time, standardizing the processes followed, ensuring transparency, improved monitoring, support decision-making and compliance with the Procurement guidelines.

The PMSS is expected to generate Status Reports regarding procurement activities at the Institutional level, SPFUs and NPIU/MHRD. It will help in monitoring procurement at each level.

#### **8.4 Procurement Manual:**

The Procurement Manual developed for the Project provides the essential information and step-by-step procedures, about procurement of Goods, Civil Works and Services to guide procurement under the Project.

The Procurement Manual is intended to guide the implementation agencies to understand the procedures to be followed for procurement (for details refer Appendix-II) and to also ensure compliance with the agreed procedures.

#### **8.5 Institutional Procurement Plan:**

A Procurement Plan needs to be prepared clearly laying down the budget required by the Institutions for procurement activities. It is an essential tool for proper monitoring and execution of the procurement activities. The Procurement Plan should cover Goods, Civil Works, and Consultant Services required for the whole of the Project life.

Institutions are required to initially submit an 18 month Procurement Plan along with the Institutional Development Proposal in the prescribed formats (Table 22 & 23).

#### **8.6 Procurement of Goods:**

The Procurement of Goods by the project institutions will be in four categories: equipment, furniture, books & learning resources and minor items.

#### **8.7 Procurement of Works:**

The Project does not envisage large scale Civil Works but makes provisions to meet the essential requirements for acquiring excellence. Civil Works in project institutions include (i) repair works (ii) refurbishment works and (iii) extension of existing buildings.

The Civil Works Manual (see Appendix-III) developed for the Project, describes the types of civil works to be undertaken in the Project, and provides guidance for understanding of the procedures to be followed for each type of works. The Manual also provides guidance on the various environmental aspects that need to be integrated into the design and construction of civil works.

#### **8.8 Selection and Employment of Consultants / Services:**

The project institutions, for specialised requirements, can avail support and services of Consultants to achieve Institution's goal. Procurement of services under the Project will be carried out in accordance with the **World Bank "Guidelines: Selection and Employment of Consultants by the World Bank Borrowers" May 2004 and revised October 2006** (Consultancy Guidelines) and the agreed procedures and limits described in the Financing Agreement. The guidelines should be strictly followed to avoid penalties.

#### **8.9 Selection of Consultants for conducting Pedagogy Training**

Selection of Consultants for Pedagogy Training will be carried out by the respective States for State Institutions and NPIU for CFIs. Initially NPIU will prepare model bidding documents for the process and also conduct the workshops for capacity building of SPFUs imparting knowledge of the entire selection process. The method to be followed for selection of consultants is an appropriately adapted Quality & Cost Based Selection (QCBS). NPIU will restrict its prior review to the first contract from each State. The steps for the selection of consultant are:

- NPIU publishes advertisement for empanelment in national newspapers, UNDB etc.
- Empanelment of training providers will be done by NPIU based upon capability statement and past experience.
- State constitutes cluster of Institutions depending upon the number of Institutions in the respective State. In case of clusters, each cluster will act as separate package thus separate contracts shall be signed for each cluster.
- State shall invite, through letters, EoIs from the training providers empanelled by the NPIU detailing all clusters in a State.
- For each cluster, 6 training providers will be shortlisted based on pre-declared criteria.
- Request for Proposal (RFP) is prepared by State and issued to all shortlisted consultants for each cluster in State asking for Technical and Financial Proposals separately.
- Technical evaluation of all the proposals shall be carried out by a committee led by SPFU comprising representatives from the concerned Institutions.
- Public opening of the Financial Proposals of the technically qualified consultants only.
- The consultants are ranked based on the combined evaluation on the basis of technical points and financial points scored.
- The State seeks No Objection from NPIU.
- The highest ranked consultant shall be called for negotiation.
- On successful completion of negotiation, contract is signed with the consultant.

#### **8.10 Procurement Audits:**

The World Bank will appoint auditors to monitor the procurement activities periodically. Additionally, teams from NPIU and SPFUs will also visit Institutions to monitor the procurement activities undertaken.

Yearly self-audits are to be conducted at Institutional level by the SPFUs and Institutional officials for procurement activities, and reports on the findings are to be sent to the NPIU (in the reporting format given in Procurement Manual) along with remedial actions taken to make improvement for the deviations noticed.

**Table-22**  
**18-month Procurement Plan for Works and Goods\***

Name of the Institution with location: -----

Package No.	SI No.	Activities	Description of Works/ Goods	Estimated Cost (Rs)	Method of Procurement	Design/ Investigation Completion/ Specification Finalization (Date)	Estimate Sanctioned (Date and Value)	Preparation of Bid Document (Date)	Date of Receipt of Bank's No Objection to Bidding Document**	Bids		Contract Award (Date/ Value)	Date of completion of Contract
										Invitation (Date)	Opening (Date)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1													
2													
3													

\* Goods cover Equipment, Furniture and Books & Learning Resources

\*\* Applicable in case of 'Prior Review' by the World Bank.

Note: For Column 6, state ICB/NCB/Direct Contracting/Shopping method as appropriate

**Table-23  
18-month Procurement Plan for Consultant Services**

Name of the Institution with location: -----

SI No.	Activities	Description of Services	Estimated Cost (Rs)	Methods of Selection @	ToR Finalization (Date)	Advertisement (Date)	◆ RFP Final Draft to be Forwarded to the Bank (Date)**	No Objection from the Bank for RFP (Date)**	RFP Issued (Date)	Proposals Received (Date)	Evaluation (Date)	No Objection by the Bank (Date)**	Contract Value & Date of Award	Contract Completion (Date)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

◆ RFP (Request for Proposal): Same as 'Bid Document' # Technical and Financial

\*\* Applicable in case of 'Prior Review' by the World Bank

@ State whether (i) Single firm or individual; or (ii) Competitive procedure. If Competitive, then state whether Quality & Cost Based Selection (QCBS) or Least Cost Selection procedure, etc.



## **Section-9**

### **EQUITY ACTION PLAN**

**9.1 Objective:**

To ensure that all students and faculty in the project institutions have equal opportunity to avail the benefits of the Project with substantial improvement in the performance of weak students.

**9.2 Scope:**

All project institutions will be responsible to ensure adherence to the Equity Action Plan (EAP).

**9.3 Strategy:**

NPIU and SPFUs will assess the efforts of project institutions in the implementation of the Equity Action Plan to ensure equity at all levels in the Institutions under the Project. All Institutions should include Institutional EAP in their Institutional Development Proposals. The EAP should be a part of each Institution's MoU with the concerned project authorities.

**9.4 Activities of Equity Action Plan:**

Table-24 gives the details of Equity Action Plan for the Project:

**Table-24**  
**Details of Equity Action Plan**

<b>S. No.</b>	<b>Items</b>	<b>Actions</b>	<b>Implementation Agency</b>	<b>Frequency</b>	<b>Monitoring Indicators</b>
(i)	To identify weaknesses in all students and take remedial steps	Institutions to plan and execute bridge courses/remedial teaching (e.g. extra classes, tutorials) to bring all students to the required level of proficiency to cope with the main subjects	Project institutions	Diagnostic tests and plans completed within first month of each academic year; remedial measures carried out continuously thereafter	Percent of students transiting from first to second year with all first year courses passed
(ii)	Institution to improve communication-presentation skills through their wide use in curricula and, where needed, to provide special skills training to students with priority to the weak students	To be decided by the institution	Project institutions	Continuous	<b>Improvement in job placement of students, especially among those with disadvantaged backgrounds</b>
(iii)	Give under-qualified teachers priority in opportunities to upgrade qualifications	Institutions to identify needs and indicate in their Faculty Development Plan how they would build equity to upgrade faculty qualifications	Project institutions and SPFUs	Yearly	Increase in the percentage of teachers enrolled in MTech reported yearly

S. No.	Items	Actions	Implementation Agency	Frequency	Monitoring Indicators
(iv)	Training of teachers in subject matter and pedagogy	Training Needs Analysis (TNA) to be carried out for all teachers in all project institutions by appropriately qualified/trained experts	Project institutions and SPFUs	TNA to be done before the preparation of Institutional Development Proposals; reporting every six months.	<b>Percent of planned training completed as reported/aggregated 6 monthly</b>
		All institutions to prepare Faculty Development Plan for the Project period (using identified providers for Pedagogy or National Training Calendar for subject training), giving priority to the teachers with the most significant gaps in knowledge and skills as diagnosed by the TNA	Project institutions and SPFUs		
		All teachers are to be covered by training in pedagogy	Project institutions and SPFUs		
		Domain training is to be done on the basis of need	Project institutions and SPFUs		
		Institutions to report to SPFUs on progress in training plan every 6 months (by name, department, individual characteristics (including SC/ST/OBC, M/F, age, years of service, level, degree qualifications), type and duration of training received, etc., and SPFUs to send aggregated reports to NPIU			
		Training providers to furnish training evaluation results (which indicate the extent to which the gaps in a trainee's knowledge or skills have been addressed) to Institutions and SPFUs	Project institutions and SPFUs		

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		In addition the Project would carry out Satisfaction Surveys to assess training achievements	Project institutions and SPFUs		
(v)	Make campuses physically and socially gender-friendly; especially provide adequate and suitable facilities to women students and faculty	Institutions to specify in their IDPs what actions they would take to ensure a gender-friendly campus--both 'soft' actions, and Civil Works where necessary	Project institutions	At the time of IDP and actions implemented as proposed	Institutions to provide descriptive reports of actions taken including number of beneficiaries
(vi)	Selection of State and Institutions from weak regions	Already discussed extensively and included in the selection process	MHRD/SPFUs/ NPIU	At the time of selection	
(vii)	Hold Knowledge Workshops yearly to improve knowledge sharing and information	<b>SPFUs and Institutions to organize workshops with thematic focus</b>	SPFUs / Groups of 3 project institutions	Yearly	

## **Section-10**

### **ENVIRONMENT MANAGEMENT FRAMEWORK**

#### **10.1 Objective:**

To ensure compliance with Environment Management Framework (EMF) in all project institutions.

#### **10.2 Scope:**

All project institutions will be responsible for ensuring adherence to the Environment Management Framework (EMF).

#### **10.3 Strategy:**

NPIU and SPFUs will frequently monitor compliance with the Environment Management Framework (EMF) in all project Institutions and ensure implementation of corrective actions, as may be required.

#### **10.4 Environment Management Framework:**

The EMF seeks to reduce environmental degradation that may arise due to project activities and to also help in compliance with various related regulations and norms. It lays out various options/measures for enhancing environmental performance during the planning, designing, implementation and operation stage of the proposed Civil Works.

The EMF will ensure safer and environmental friendly designing of the infrastructure as per applicable norms for water supply arrangements, sanitation arrangements, waste water discharge arrangements, with adoption of relevant code/s applicable for earthquake, cyclone, flood, landslides and as per the recommendations of National Disaster Management Authority (NDMA), etc. It will also ensure other arrangements/facilities such as barrier free access for the physically challenged, signages inside and outside of the building, notice boards for display of information, fire and electrical safety arrangements, provision of alarms or hooters to alert building occupiers in case of emergency, clear demarcation of escape routes and assembly points for emergency situations, provision of parking, preservation of existing trees to the extent possible, etc.

In addition, EMF will also encourage project Institutions to adopt various environment augmentative measures like rain water harvesting, use of heat reflecting glass, promotion of energy efficient lighting, use of renewable energy, minimization of paved area, appropriate use of colours for buildings and walkways, use of locally available materials, etc. for all works undertaken in the Project.

The EMF has been integrated and made a part of the Civil Works Manual prepared for the Project to ensure compliance with various environment management aspects (for details refer Appendix-III).

## **Section-11**

### **DISCLOSURE MANAGEMENT FRAMEWORK**

**11.1 Objective:**

To ensure accountability and transparency in project implementation and its achievements including those related to Fiduciary Aspects, Environmental Management Framework (EMF) and Equity Action Plan (EAP).

**11.2 Scope:**

NPIU, SPFU and the project Institutions will be responsible to ensure adherence to Disclosure Management Framework.

**11.3 Strategy:**

NPIU, SPFUs and project Institutions will implement the Disclosure Management Framework under the Project to ensure high level of transparency and accountability. Information on Project progress in all areas such as Academic, Procurement, Financial, EMF, EAP etc. will be made available to the public through respective websites.

**11.4 Activities of Disclosure Management Framework:**

The following table gives in brief the mechanism for Disclosure Management:

**Table-25 (a)**  
**Disclosure Management by NPIU**

S. No.	Field	Action	Frequency	
1	Procurement Management  Transparency and accountability in procurement in conformity to the World Bank Guidelines	Procurement Manual has been prepared and made available on NPIU's Website for guidance of Institutions. In addition, NPIU will organize workshops to train the Institutional and SPFU officials	Initially cover all States and all Institutions in a span of 3 months  Will conduct workshops once in 6 months	
		All data related to procurement made by Institutions will be maintained through PMSS.	Continuous	
		Making of the following information publicly available on the website of NPIU:		
		All general and specific procurement notices, notices inviting tenders expressions of interest, request for proposals, NCB documents and agenda/corrigenda to bids, information on bids received, and details of contracts awarded	To be implemented from project effectiveness	
		Project Review and Mid-Term Review reports	After each Joint Review Mission and Mid-Term Review Mission	
2	Complaint Mechanism	Handling complaints relating to procurement, fraud and corruption and quality of construction in accordance with GoI and participating States administrative procedures	To be implemented from project effectiveness	
		A procurement complaints monitoring database shall be maintained	To be implemented from project effectiveness	
		Submitting yearly reports to the World Bank	Within 30 days of the end of the year	

3	Financial Management  Progress in use of Funds and submission of timely reports for monitoring, facilitation and accounting purposes	NPIU will organize workshops to train the Institutions and SPFU officials.  Financial Management Manual has been prepared and made available on NPIU's Website for guidance of the SPFUs/Institutions	Initially cover all States and all Institutions in span of 3 months will conduct workshops once in 6 months
		Quarterly Financial Monitoring Report  Consolidated Audit Certificate	Quarterly  Yearly
4	Selection of States, Institutions, and monitoring implementation of the Project	The Minutes of all NSC meetings on selection and other matters will be published on NPIU website. Summary of Evaluation Reports of all Institutions and all details regarding the Project including all announcements / documents etc will be sent by email	As and when occurs
5	Accountability on project achievements	Performance and data audits: The following documents would be put on NPIU's website a) Performance and Data Audit Reports. b) Student/Faculty satisfaction surveys c) Employer satisfaction survey	Twice annually



**Table-25 (b)**  
**Disclosure Management by SPFUs**

S. No.	Field	Action	Frequency
1	Procurement Management	All data related to procurement made by Institutions will be maintained through PMSS.	Continuous
	Transparency and accountability in procurement in conformity to the World Bank Guidelines	Making of the following information publicly available on the website of SPFUs:	
		Information relating to physical and financial progress under each contract awarded on the basis of NCB procedures. Such information to be made available within 30 days from the end of each calendar quarter	To be implemented from project effectiveness
		All general and specific procurement notices, notices inviting tenders expressions of interest, request for proposals, NCB documents and agenda/corrigenda to bids.	To be implemented from project effectiveness
		All information on bids received, and details of contracts awarded for NCB	To be implemented from project effectiveness
2	Complaint Mechanism	Handling complaints relating to procurement, fraud and corruption and quality of construction in accordance with Gol and participating States administrative procedures	To be implemented from project effectiveness
		A procurement complaints monitoring database shall be maintained	To be implemented from project effectiveness
		Submitting yearly reports to the NPIU	Within 30 days of the end of the year

3	Financial Management  Progress in use of Funds and submission of timely reports for monitoring, facilitation and accounting purposes	Quarterly Financial Monitoring Report	Quarterly
		Consolidated Audit Certificate of SPFU and all State Institutions	Yearly
4	Monitoring implementation of the Project	The minutes of State Steering Committee meetings will also be published on the SPFU's website.	As and when occurs
5	Environmental Management Framework (EMF)  To Create awareness among Institutions to take actions related to Environment Management.	Ensuring compliance with requirements of EMF in Civil Works undertaken in the project Institutions.	To be implemented from project effectiveness
6	Equity Action Plan  To ensure that all students and faculty have equal opportunity to avail the benefits of the Project and to improve performance of weak students.	Ensuring compliance with requirements of EAP in the project Institution.	To be implemented from project effectiveness

**Table-25 (c)**  
**Disclosure Management by Institutions**

S. No.	Field	Action	Frequency
1	Procurement Management	All data related to procurement made by Institutions will be maintained through PMSS.	Continuous
	Transparency and accountability in procurement in conformity to the World Bank Guidelines	Making of the following information publicly available on the website of respective Project Institutions:	
		Information relating to physical and financial progress under each contract awarded on the basis of NCB procedures. Such information to be made available within 30 days from the end of each calendar quarter	To be implemented from project effectiveness
		All general and specific procurement notices, notices inviting tenders expressions of interest, request for proposals, NCB documents and agenda/corrigenda to bids.	To be implemented from project effectiveness
		All information on bids received, and details of contracts awarded for NCB	To be implemented from project effectiveness
2	Complaint Mechanism	Handling complaints relating to procurement, fraud and corruption and quality of construction in accordance with Gol and participating States administrative procedures	To be implemented from project effectiveness
		A procurement complaints monitoring database shall be maintained	To be implemented from project effectiveness
		Submitting yearly reports to the SPFU	Within 30 days of the end of the year

3	<p>Financial Management</p> <p>Progress in use of Funds and submission of timely reports for monitoring, facilitation and accounting purposes</p>	Quarterly Financial Monitoring Report	Quarterly
4	Accountability on project achievements	<p>The following document would be put on Institution's website:</p> <p>Minutes of the BoGs meetings at the Institution</p>	As and when occurs
5	<p>Environmental Management Framework (EMF)</p> <p>To Create awareness among Institutions to take actions related to Environment Management.</p>	Ensuring compliance with requirements of EMF in Civil Works undertaken in the project Institutions.	To be implemented from project effectiveness
6	<p>Equity Action Plan</p> <p>To ensure that all students and faculty have equal opportunity to avail the benefits of the Project and to improve performance of weak students.</p>	Ensuring compliance with requirements of EAP in the project Institution.	To be implemented from project effectiveness

# **ANNEXES**

## GUIDELINES ON IMPLEMENTATION OF REFORMS

### 1. Exercise of autonomies:

Affiliated Institutions have to be given Autonomous Institution status for the purposes of this Project. Autonomous Institutions under a University will thus be able to exercise full academic autonomy except for the award of degrees, which will continue to be conferred by the University. All institutions are required to have a Board of Governors. All powers for institutional management through exercise of the 4 autonomies is to be vested in the BoG and will be exercised as per the Memorandum of Association (MoA)/Government Orders/Government Regulations. The BoG will in turn suitably delegate functional powers to various institutional functionaries and committees.

Brief description of autonomies is as follows:

#### (i) Managerial Autonomy:

##### a) The BoG will:

- delegate suitable Academic, Financial and Administrative powers to various institutional functionaries to streamline the running of the institution. The BoG will frame rules and procedures for accountability at each level;
- form committees, sub-committees or advisory committees in appropriate areas to support functioning of the BoG. The BoG may empower the Head of Institution to do so;
- have Financial Autonomy with regard to preparation, sanctioning and spending the budget to achieve the objectives of the institution;
- have the powers to appropriate the funds and to re-appropriate the same under certain circumstances;
- evolve proper set of rules and procedures for exercise of its powers as per the MoA/Government Orders/Regulations;
- delegate the financial powers to various levels of functionaries for efficient discharge of their functions;
- delegate financial and administrative powers to the faculty concerned for operating R&D projects, consultancies, continuing education programmes, organising conferences/seminars, etc.; and
- evolve norms for operating the Four Funds and operating recurring expenditure.

- b) All academic, administrative, financial procedures and decisions should be transparent and care should be taken to involve maximum participation of stakeholders (faculty, staff, students, parents of students, industry, etc.) in the decision making process.

#### (ii) Administrative Autonomy:

- a) All actions of the Director in connection with continuing education programmes, faculty consultancy, faculty development programmes, Industrial consultancy, organisation of seminars and conferences should be reported to the BoG.
- b) On the recommendation of the Head of the Department, the Director will approve the deputation of faculty to attend seminars, conferences, and training programmes. BoG will need to evolve the norms for the same.
- c) It is suggested that Directors may delegate some of his/her administrative powers to the Deans, Heads of Department and Professors.

**(iii) Financial Autonomy:**

- a) For day-to-day functioning adequate financial powers to the Director and other functionaries are to be delegated by the BoG. The suggested minimum financial powers to be delegated are as under:
- Director or Principal of an institution or Dean of a University institutions/ Head of University Faculty/ Department--- Rs. 50.00 lakh for single purchase order
  - Head of the Department or equivalent--- Rs.1.00 lakh for single purchase order
  - All single item expenditure above Rs. 50.00 lakh will need to be approved by the BoG. Similarly, all single item expenditure above Rs.1.00 lakh by a Head of the Department will need approval from the Director/Principal/Dean
- b) Re-appropriation up to 10% of the project fund allocation for an activity may be done by the Director/Principal/Dean with concurrence of the BoG.
- c) Re-appropriation above the 10% limit will need prior approval from the NPIU.

**(iv) Academic Autonomy:**

The project institutions are required to possess/obtain academic autonomy and carry out all the functions listed below:

**Table-26**  
**Academic Functions to be Carried out as an Autonomous Institution**

S. No.	Parameters / Functions
1	Admission of students based on merit as per State/Gol Admission Policy (as applicable) on common entrance examination, counselling, and reservation
2	Determine own curricula, course content, curricula implementation and methods of training
3	Develop credit based curriculum
4	Permit credit exemption for previous attainments
5	Introduce flexibility in the curriculum with choice of electives
6	Evolve new methods of summative evaluation and their frequency, conducting examinations and declaring results
7	Develop new methods of formative and internal evaluation as per advice from Experts
8	Add value addition courses as per market demand
9	Develop an effective system for faculty evaluation by students.
10	Start new courses, new programmes and re-orient and restructure or delete existing programmes (these actions, if undertaken under the Project, will need to observe project directives as given in the main text of PIP)
11	Introduce innovations in teaching/learning processes through controlled experimentation
12	Conduct Continuing Education, Distance Learning and e-Learning and skill enhancement programmes as per market needs
13	Enter into collaborative arrangements with outside bodies /experts for curricula development, employment oriented value addition to courses, new teaching learning methodologies and innovations
14	Depute faculty for academic advancement
15	Develop faculty training needs assessment scheme in line with academic requirements and institutional objectives
16	Inviting experts including Industry experts for special lectures

**2. Governance system with participation of stakeholders:**

Stakeholders in Technical Education institutions are: students and their parents, faculty, staff, employers, community leaders, Government, quality assurance bodies, University, Industry etc. It may not be possible to include all stakeholders in the governance of an institution but mechanism should be evolved for interacting with those who find no direct representation in the governance system.

It is suggested that the following Committees may be formed for governance of institutions:

**Board of Governors (BoG):** The BoG is to be constituted with the relevant structure according to UGC guidelines as given in Annex-II. In case of existing BoGs, the structure will need to be acceptable to the Autonomous Institution status granting authority. Minor adjustment in number of Board members and composition can be made. However, the Chairman of BoG must be an educationist, industrialist, or professional from outside the Government. The BoG should meet at least four times in a year.

The BoG will, in addition to performing functions listed under Annex-I (1) (i), carry out the following functions:

- Fix the fees and other charges payable by the students on the recommendations of the Finance Committee;
- Institute scholarships, fellowships, studentships, medals, prizes and certificates on the recommendations of the Academic Council;
- Approve starting of new programmes of study leading to degrees and diplomas;
- Determine pay packages to attract and retain quality faculty and staff;
- Assess justification / necessity of foreign travel by faculty; and
- Perform such other functions and form such committees, as may be necessary and deemed fit for the proper development, and fulfilment of the objectives for which the institution has been declared as autonomous.

The BoG may constitute following Committees for taking decisions on its behalf:

- Academic Council/Committee : As per Act / MoA
- Academic Quality Assurance Committee
- Finance Committee : As per Act / MoA  
(These two Committees will have representatives of faculty as their members)
- Building and Works Committee
- Purchase Committee
- Disciplinary Committee
- Institution Development Committee
- Students Affairs Committee
- Library Committee
- Grievance Committee
- Anti Sexual Harassment Committee (ASH)
- Any other Advisory Committees (as per need)

Except for the Academic Council/ Committee and the Finance Committee, all other committees may be permitted to be constituted by the Director with approval of the BoG. These Committees will consist of representatives of stakeholders, functionaries of the University including students in some of the Committees where their presence is required.

The Director should ensure that opinion of all stakeholders on the issues related to Institutional Governance is available to the BoG / management through their representation in concerned committee.

Proper formulation and functioning of these Committees would lead to transparent, congenial, fair and participative management based on mutual trust.



### 3. Use of Block Grant:

Block Grant for at least the non-salary, non-plan grant to Government funded and aided institutions is an eligibility condition to be complied with by all States for participation in the Project.

The BoG will:

- Allocate/reallocate the Block Grant to expenditure categories except “Salaries” in the best interest of the institution.
- Take fiscal decisions for better financial management of the institution based on broad guidelines agreed with the State Government.
- Special grants will need to be provided by States as ‘force majeure’ in the event of revision of scales of pay and for other unforeseen events.

### 4. Establishment of four Funds:

- a) Creation and establishment of Four Funds is a Project requirement that is to be complied with by all institutions.
- b) The purpose of these Funds is to ensure sustainability of the reform process beyond the Project period.
- c) Separate Bank Account has to be opened for each of the Four Funds namely;
  - Corpus Fund
  - Faculty Development Fund
  - Equipment Replacement Fund
  - Maintenance Fund
- d) These Funds should not be used during the Project period as funds for various activities are available under the Project.
- e) The authority for opening these Accounts will be with the BoG of the institution. Each project institution is to build these Funds with annual contribution into each Fund equal to at least 0.5% (total 2%) of annual total recurring expenditure of the institution. Sources could be a definite percentage of fee collection from students, savings from Block Grant, donations from alumni and charitable organizations, IRG including commercial use of facilities, consultancy earnings (institutional share), and matching Grants from Government/management on IRG etc.
- f) Each institution may additionally contribute from annual savings to the Corpus Fund.

### 5. Revenue Generation:

- a) In order that faculty and staff feel encouraged to develop and take up revenue raising activities and programmes over and above their routine academic and other duties in the institution, they should be given an appropriate share of the revenue earned as an incentive.
- b) Contributions and performance of faculty and staff in such activities needs to be recognised through awards, rewards or promotions.
- c) The concerned persons (faculty and staff involved in revenue generating activity) should be given due freedom to utilize part of the earnings to develop office and laboratory facilities, purchase of literature and attendance at conferences.
- d) Revenue generation activities could include:
  - Consultancy projects sponsored by private or public sector industry,
  - Sponsored research projects,
  - Offering specially tailored continuing education programmes,

- Offering specially designed Degree programmes for candidates from public sector undertakings,
  - Industry-Institute interactive programmes ensuring mutual benefits including revenue generation for the institution, and
  - Commercial activities [commercial use of facilities, earning from Incubation Centres and Scientific and Technology Entrepreneurship Programme (STEP)].
- e) Improving facilities for personal academic research and travel for attending conferences could be permitted from the sponsored project funds as per rules of the sponsoring organisation.

#### **6. Filling-up Faculty and Staff Vacancies:**

Vacancies must be filled subject to any rationalization of cadre necessitated by student increase/decrease, and curricula compulsions as per AICTE norms. Ban on filling vacancies, if any, needs to be lifted by the concerned Government/management. Till such time regular appointments are made by the concerned Government/management, BoGs need to be empowered to appoint faculty and staff with the required qualifications and experience on contract basis for 11 months or longer terms.

- a) Re-assess and rationalise the requirement of the total faculty (including Physics, Chemistry and Mathematics) by following the AICTE norms.
- b) For Faculty requirements as per AICTE norms, the faculty student ratio for UG programmes in Engineering / Technology is 1:15. It is suggested that an attempt should be made to have a preferred ratio of 1:12. For the Masters programmes in Engineering / Technology, the required faculty student ratio is 1:12 but preferably it should be 1:10.
- c) The posts equivalent to faculty is not to be considered for the calculation of faculty student ratio.

#### **7. Student Performance Evaluation:**

Student Performance Evaluation is generally of two types: Summative and Formative. The Summative ones carry marks/grades and lead to the student's final performance grading, while the Formative ones are used to encourage the student to do better by pointing out their weakness/mistakes and advising them how to perform better. Such evaluations are instrumental in real learning promotion since these are not used for grading purposes although grades/marks are given to keep track of improvement in performance. To make the Summative Evaluation robust and reliable, a number of tests must be taken as one annual or semester examination may not give reliable evaluation.

- a) Salient Points:
  - Student performance up-gradation is the basic goal for any good institution
  - The present practice of merely evaluating is not sufficient. It is basically inspection focused. The Quality emphasis must inspire a marked improvement-focused approach.
  - Thus, a new process must be evolved with this focus in mind. This may be adapted to bring about improvement-focused reform.
  - Students and faculty will benefit largely from this reformation of student evaluation process. It must be re-designed to improve formative inputs as well. The faculty may decide to lead by example by giving examples of how to answer some mock tests.
  - The Formative evaluation must be used to help the students to improve their performance by pointing out the areas of potential improvement, related to various deficiencies and weaknesses identified by the faculty in various forms of tests/assessments.

- The examples of using Formative approach are giving open and closed-book mock tests, mock assignments, mock quizzes, mock presentations, orals, individual and group assignments, etc. Note that these are not meant for student evaluation for grading. These are to be used for identifying the areas for improvement.
- Such Formative evaluations are useful in real learning promotion, as it is not used for grading purposes. A brainstorming by faculty with students can help to identify various Formative options that may add significant value addition. It should be made amply clear to the students that Formative tests are for improvement only.
- While Summative evaluation involves marks and/or grade assessment (present practice), the Formative ones must be used to encourage the students to perform better.
- A combination of Formative and Summative (grading/marks) will help to keep track of improvement in performance. The faculty and students need to self-assess how the formative inputs are beneficial.
- For a reliable and robust evaluation process a number of summative tests must be taken (>3 suggested) during each semester.
- Transparency, fairness, consistency and accountability in grading must be ensured. The aggrieved student may be allowed to see the evaluation.
- The tests must have components like fundamentals of academics, industry relevant problems and innovative questionnaire/creativity development challenges. More the variety of tests, the greater will be the robustness of evaluation.
- Weak students should be given every opportunity to improve. This will develop a greater respect for the institution by the students.
- Many a times, the student does not have an idea of how he/she can perform better, though he/she possesses the knowledge. The Formative approach will help achieve this.
- As an education system, the aim is to improve the quality product from the institution. So, a combination of summative and formative tests to judge various attributes of students is very important.

b) Steps:

- Organize regular workshops for the faculty, to sensitize them towards Total Quality Management as applied to Education. It is important to change the conventional mindset from inspection to a quality improvement mindset. Performance evaluation is both Summative (measure) and Formative (improve).
- There should be some summative and many (greater variety of) formative evaluations. The variety may include identifying how students approach various types of problems (quantitative, qualitative, logical reasoning, etc). Even the presentation approach may be tested. Then the faculty may identify how to improve these, based on student performance.
- Set new goals for a fair, consistent, transparent and accountable evaluation. Evaluation of students' performance should be disclosed to the students.
- Ensure, at least three summative evaluations in a semester. Starting one at 4 weeks followed by a mid-semester evaluation. These are for the purpose of mid-semester corrections and also in identifying critically where the faculty/students need more improvement in the teaching/learning process.
- Facilitate faculty efforts to help students to improve their performance through improved knowledge and by better presentations.
- Develop modus operandi for various types of assessments including open book tests/ closed book tests/take home tests/assignment/tutorial/group work test/oral presentation, etc. Brainstorming with students will give more inputs.

- The evaluation must test not only the fundamentals taught but also the innovative skills of the students. Promote a healthy culture for dealing with some challenging and industry relevant problems.
- Identify mistakes and achievement of desired levels of performance. Develop a detailed Academic Improvement Plan. This can be made mandatory in case of weak students. Their performance improvement must be closely monitored.
- Set a process of monitoring the improvement in the performance of all students. A self-assessment by the faculty and the resulting counselling sessions with academically weak students must be encouraged.

c) Benefits:

- Improvement in students' knowledge, abilities and competencies.
- Improvement in students' self-directed learning and innovative thinking.
- Weak students will get adequate guidance and opportunity to improve.
- Academics will be closely related to industrial relevance and will prepare students in solving challenging semi-structured problems (industry cases etc).
- Standardization of the evaluation improvement processes.
- Development of a knowledge base for improvement and its documentation for future use. Interim change in faculty will have minimal effect in the performance.
- A quality improvement focused Education System will thus evolve.

**8. Performance appraisal of faculty by students and faculty counselling:**

This is a very useful tool in improving teaching effectiveness. The purpose of this evaluation should be clearly understood. The main purpose should be to help a faculty to improve his/her teaching/learning management skills. Both, the assessment by students and the counselling followed by such assessment are to help a faculty recognize his/her weakness and remedy them to improve the learning of students. There are various variations of the frequency of such assessments. Weaknesses in delivery, lack of interactivity, emphasis on self-learning and choice of assignments can all be remedied if the assessment is done during the early part of the course, say after 10 lectures. An exit assessment taken at the end of the course gives an insight into the total effectiveness of the course and the learning achievement and deficiencies. This assessment is useful both for the faculty who is going to take the next level of the course with the same batch of students (to ascertain the level of knowledge and skills gained in the prerequisite course) and the faculty who delivered the course to rectify his/her shortcomings for the next batch of students taking the same course (by noting what portions require more emphasis, what additional knowledge skills and applications to be included). A combination of an initial assessment and an exit assessment along with a mid-term assessment would be the ideal solution as this would allow self-correction by the faculty as the course progresses and would enhance teaching /learning effectiveness.

Faculty must be taken into confidence for these assessments and the instruments should be so designed as to eliminate casual, bogus or faulty assessment. The faculty should share the results of the assessment only with his/her Head of Department. Some institutions publish the assessment to reward good teaching in form of best faculty awards, etc. Faculty is always apprehensive that these assessments could affect their promotion or vertical mobility. They must be assured that this is not the purpose and in any case since promotion opportunities occur only once in five years, counselling would have improved the assessment grading of even the poorest faculty over this period.

a) Salient Points:

- This is a very useful tool in improving teaching effectiveness. It is important to re-emphasize, that the basic purpose is to help the faculty improve without feeling threatened about job loss or promotion, etc.
- Preferably there must be three stages for faculty evaluation--Early (by 1 month), Mid-Course (by 2-3 months) and Final (by end-of-course).
- The first two should be utilized for mid-course corrections to help faculty to become more effective.
- The final assessment is aimed at both assessing the improvements as well as collecting feedback that may be useful for future delivery of the course by the faculty.
- Faculty must be taken into confidence during each assessment and the benefits to the faculty and students and the improvement in quality of education should be well explained.
- Process must be designed for effective data collection for faculty evaluation.
- Each faculty must be motivated for regular self assessment. This will give the faculty a clear perspective of what is expected from her/him for providing quality education.
- Student feedback and self assessment must be shared only with HoD (for purely facilitative purposes and towards improvements).
- The BoG must ensure that these assessments are used only for faculty improvement not for promotion, giving incentives, etc.
- The HoD may appoint a suitable Counsellor (e.g. someone senior enough/ highly respectful with good teaching qualities) to help the faculty.
- Improvement in teaching may be monitored and results shared with the faculty.

b) Steps:

- Develop formats for student feedback regarding the assessment of a faculty on a course. Some benchmarks of IIT-system Feedback Forms may be suitably adopted to individual contexts.
- Similarly, develop the faculty self-assessment formats. This should have important teaching parameters including use of teaching aids, development of course file, accessibility of faculty, summary of formative work done by him/her, syllabus covered, beyond syllabus efforts, types of tests given, man-days devoted to formative efforts, etc.
- Promote faculty self-assessment and facilitate faculty's self-improvement efforts. This may need sharing of improvement areas, joining special courses, etc. But never use negative methods to pressurize faculty. The focus must remain self-improvement. So approach must be motivational and constructive.
- Plan to collect the comprehensive students' feedback for faculty evaluation (at least three times per semester):
  - Early (by 1 month) i.e. macro level feedback on the basis of knowledge, skills, attitude and values.
  - Mid-Course (by 2-3 months) detailed feedback on the basis of total effectiveness of the course contents, delivery and teaching-learning process. Student suggestions may help in mid-semester corrections.
  - Final (by end-of-course) detailed feedback regarding achievement of objectives, knowledge skills and improvements needed further.

- Counselling recommendation on the basis of class performance of students and their feedback. The management skills and participation in other institutional activities must also be taken into account. These inputs are not for promotion, etc. Ensure that the assessment is for the purpose of improvement and not for promotions, increments, etc.
- Student feedback and self-assessment must be shared with HoD only.
- Assessment of achievement and deficiency, if any must be counselled by HoD. It may be useful to nominate a respectful and widely acceptable faculty as a counsellor. Further the counsellor should be senior to the faculty concerned.

c) Benefits:

Information through this concept can be used to:

- Help faculty to improve either by themselves or through proper counsellors,
- Improve the quality of the teaching-learning process and its effectiveness,
- Help to improve the course content, industrial relevance and instructional delivery,
- Help continuous improvement in teaching quality and learning objectives,
- Help to improve the performance of students and the quality of teaching, and
- Continually motivate faculty for greater quality and encourage them to do better. This will ensure a proper mix of proficiency and efficiency in the quality of instruction offered to students.

#### **9. Faculty Incentives for Continuing Education, Consultancy, Research and Development, etc.:**

All faculty should be encouraged to participate in organizing and/or contributing to, and attending Continuing Education (CE) Programmes, to offer consultancy to Industry and to take part in Research and Development (R&D) activities in the institution. Institutions should prepare, at the beginning of every semester, a faculty engagement chart which should indicate not only the faculty's teaching commitments, but also his/her expected involvement in administration, Continuing Education, network activities, research and development activities including curriculum and laboratory development, consultancy, etc. At the beginning of the next semester, every faculty should fill in the Faculty Achievement Chart indicating the actual hours spent in various activities in the previous semester including the vacation period (if used for some of these activities). The reasons for over or under achievement from planned hours should be explained. He/She should also indicate his/her achievements during the period e.g. publications, recognition and awards, patents, invited lectures, participation in National Policy making bodies, student assessment grading, consultancy earnings, etc.

a) Highlights:

- Faculty should take active interest in organizing and/or contributing to and attending CE programmes. The institution must facilitate such positive efforts.
- Promote resource generation and knowledge dissemination activities, and the benefits must be shared with other faculty.
- Institutions should facilitate better working conditions and promote critical and innovative thinking initiatives. Develop a culture for improved earning through value added efforts for running state-of-art education programmes in new areas/fields.
- Institutional efforts for consulting industry and involvement in R&D should be adequately encouraged.
- The emphasis should be laid on motivating faculty for these activities.

- A balance has to be maintained between a faculty's teaching commitments and his/her involvement in administration, CE, networking, R&D activities, etc.
- Active involvement in each of these activities can be measured by the number of hours spent on these tasks in a semester.
- Due recognition for involvement in these activities must be given to the faculty. Both monetary and non-monetary awards must be given for significant contributions from institutional funds.

b) Steps:

- Identify academic and career progression needs of the faculty.
- Management should become a facilitator to the faculty's career growth and in supporting various CE, consultancy, R&D activities, etc.
- Motivate faculty for CE. Full institutional support must be extended for attending conferences, workshops, seminars, etc. outside India. The CE programmes within the campus or within India can be 1 or 2 in a two-year timeframe. A budget may be set aside for this activity every year.
- Faculty motivation for consultancy (industry problem solving) must be encouraged. This should include institutional as well as individual effort through higher benefit sharing. Similarly, the CE programmes coordinated by faculty must be given due weightage. The benefits must be adequately shared with each faculty.
- Motivate faculty for R&D by providing books and journal allowance. Encourage and support faculty for obtaining higher qualifications such as PhD. Faculty may be rewarded for publishing quality papers in journals of high repute.
- Facilitate an increased research interaction in the network for acquiring wider benefits.
- Systematic assessment of faculty teaching commitments and his/her expected involvement in administration, Continuing Education, network activities, etc., should be carried out.
- Each faculty should be required to submit a self assessment chart every semester. A plan for various activities, goals, objectives during each year may also be encouraged.
- Motivate the development of quality improvement proposals and support these wherever feasible. Promote innovation and industry relevant enrichments in the academic programmes. Also, facilitate the professional career growth of faculty.
- Bestow awards and merit to the deserving faculty for excellent overall performance.

c) Benefits:

- Greater opportunities for academic and professional growth for deserving faculty.
- Faculty can earn more and create more value for community and industry.
- Better academic reputation and ranking of the institution. All stakeholders will benefit adequately.
- Increase in innovation potential (R&D) and industrial relevance (Consultancy, CE etc.) to improve the value/quality of academics. This will result in immense benefits for students also.
- Job enrichment and opportunities to create more value will act as an additional incentive to attract best faculty in the increasingly competitive market.

## UNIVERSITY GRANTS COMMISSION (UGC) GUIDELINES FOR SCHEME OF AUTONOMOUS INSTITUTIONS

### 1. Objective:

The National Policy on Education (1986-92) formulated the following objectives for Autonomous Institutions. An Autonomous Institution will have the freedom to:

- Determine and prescribe its own courses of study and syllabi, and restructure and redesign the courses to suit local needs;
- Prescribe rules for admission in consonance with the Reservation Policy of the State Government;
- Evolve methods of assessment of students' performance, the conduct of examinations and notifications of results; and
- Use modern tools of educational technology to achieve higher standards and greater creativity; and promote healthy practices such as community service, extension activities, project for the benefit of the society at large, neighborhood programmes, etc.

### 2. Relationship with the parent University, the State Government and other educational institutions:

Autonomous Institutions are free to make use of the expertise of University departments and other institutions to frame their curricula, devise methods of teaching, examination and evaluation. They can recruit their faculty according to the existing procedures.

The parent University will accept the methodologies of teaching, examination, evaluation and the course curriculum of its autonomous institutions. It will also help the institutions to develop their academic programmes, improve the faculty and to provide necessary guidance by participating in the deliberations of the different bodies of the institutions.

The role of the parent University will be:

- To bring more Autonomous Institutions under its fold;
- To promote academic freedom in Autonomous Institutions by encouraging introduction of innovative academic programmes;
- To facilitate new courses of study, subject to the required minimum number of hours, instruction content and standards;
- To permit them to issue their own provisional, migration and other certificates;
- To do everything possible to foster the spirit of autonomy;
- To ensure that Degrees/Diplomas/Certificates issued indicate the name of the institution;
- To depute various nominees of the University to serve in various committees of the autonomous institutions and get the feedback on their functioning; and
- To create separate wings wherever necessary to facilitate the smooth working of the Autonomous Institutions.



The State Government will assist the Autonomous Institutions by:

- Avoiding, as far as possible, transfer of faculty, especially in institutions where academic innovation and reforms are in progress, except for need based transfers;
- Conveying its concurrence for the extension of autonomy of any institution to the Commission within the stipulated time of 90 days after receipt of the Review Committee Report, failing which it will be construed that the State Government has no objection to the institution continuing to be autonomous; and
- Deputing nominees on time to the Governing Body and other bodies wherever their nominees are to be included.

### **3. Requirement:**

The parent University will confer the status of autonomy upon an institution that is permanently affiliated, with the concurrence of the State Government and the University Grants Commission.

The Act and Statutes of the University may need to be amended to provide for the grant of autonomy of affiliated institutions.

Before granting autonomy, the University will ensure that the management structure of the applicant institution is adequately participatory and provides ample opportunities for academicians to make a creative contribution.

### **4. Procedure for Approval by the UGC:**

The approval for the grant of autonomous status will be done in two stages. At Stage-I, a Screening Committee will be constituted by the UGC. The composition of the Committee will be as follows:

- a) Three to five experts nominated by the UGC (one of the experts will be nominated as Convener)
- b) Secretary of Higher Education or his/her nominee (in the case of TEQIP-II, Secretary responsible for tertiary level engineering education)
- c) Chairman, State Council for Higher Education or his/her nominee (in the case of TEQIP-II, the Council responsible for tertiary level engineering education)
- d) Director of Collegiate Education or his/her nominee (in the case of TEQIP-II, the Director responsible for tertiary level engineering education)
- e) Vice-Chancellor or his/her nominee
- f) Joint Secretary (Autonomous Institutions), Member Secretary

The Convener will chair the Committee. The cases of short listed institutions shall be sent to the State Government for approval, wherever required. If no response is received from the State Government within a period of six weeks, it will be assumed that it has No Objection to the proposal.

At Stage-II, short listed institutions will be visited by another Expert Committee constituted by the UGC. The Committee will submit its report with its findings and recommendations to the UGC. Thereafter, the UGC may send its recommendation to the University concerned for conferment of autonomy.

The University will notify the institutions concerned. Autonomy will be conferred initially for a period of six years.

**5. UGC guidelines for composition and functions of Board of Governing Body:**

i) Constitution of Governing Body of Government Funded/Aided Autonomous Institution

Number	Category	Nature
3 Members, one of them to be Chairperson	Educationist, Industrialist, Professional	Nominated by the State Government. Persons of proven academic interest with at least PG level qualification
2 Members	Faculty of the institution	Nominated by the Principal, based on seniority
1 Member	Educationist or Industrialist	Nominated by the Principal, for two years
1 Member	UGC nominee	Nominated by the UGC
1 Member	State Government nominee	Nominated by the State Government
1 Member	University nominee	Nominated by the University
1 Member	Principal of institution	Ex-officio

ii) Constitution of Governing Body of Private Unaided Autonomous Institution

Number	Category	Nature
5 Members	Management	Trust or management as per the constitution or byelaws, with the Chairman or President / Director as the Chairperson.
2 Members	Faculty of the institution	Nominated by the Principal, based on seniority
1 Member	Educationist or Industrialist	Nominated by the Management
1 Member	UGC nominee	Nominated by the UGC
1 Member	State Government nominee	Academician not below the rank of Professor or State Government official of Directorate of Higher Education/ State Council of Higher Education
1 Member	University nominee	Nominated by the University
1 Member	Principal of institution	Ex-officio

iii) Constitution of Governing Body of University Constituent Autonomous Institution

Number	Category	Nature
3 Members, one of them to be Chairperson	Educationist, Industrialist, Professional	Nominated by the University, persons of proven academic interest with at least PG level qualification
2 Members	Faculty of the institution	Nominated by the Principal, based on seniority
1 Member	State Government nominee	Nominated by the State Government
1 Member	University nominee	Nominated by the University
1 Member	UGC nominee	Nominated by the UGC
1 member	Principal of institution	Ex-officio

*Term: Two years, except for the UGC nominee whose term will be a full six years.*

**6. Functions:**

Subject to the existing provision in the bye-laws of respective institution and rules laid down by the State Government, the Governing Body\* of the above institutions shall have powers to:

- Fix the fees and other charges payable by the students of the institution on the recommendations of the Finance Committee.
- Approve institution of scholarships, fellowships, studentships, medals, prizes and certificates on the recommendations of the Academic Council.
- Approve institution of new programmes of study leading to Degrees and/or Diplomas.
- Perform such other functions and institute such committees, as may be necessary and deemed fit for the proper development, and fulfill the objectives for which the institution has been declared as autonomous.

\*Governing Body/Governing Board/Board of Management/Executive Committee /Management Committee, as may be named.

**MEMORANDUM OF UNDERSTANDING  
BETWEEN  
MINISTRY OF HUMAN RESOURCE DEVELOPMENT (MHRD)  
GOVERNMENT OF INDIA  
AND  
(THE STATE OF \_\_\_\_\_)  
FOR IMPLEMENTATION OF PROJECT (TEQIP-II) UNDER  
TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME**

THIS MEMORANDUM OF UNDERSTANDING is made on this \_\_\_\_\_ day of \_\_\_\_\_ 2010 between \_\_\_\_\_ the President of India acting through Shri \_\_\_\_\_ Education Secretary/ Additional Secretary, Ministry of Human Resource Development (MHRD), Government of India (hereinafter called the 'THE FIRST PARTY') and the Governor/Administrator of the State/UT of (name of the State) through Shri \_\_\_\_\_, Secretary, State of \_\_\_\_\_ (hereinafter called the 'THE SECOND PARTY').

WHEREAS it has been the concern of the 'THE FIRST PARTY' to scale-up and support ongoing efforts to improve quality of Technical Education and enhance existing capacities of the institutions to become dynamic, demand-driven, quality conscious, efficient and forward looking, responsive to rapid economic and technological developments occurring both at National and International levels. Accordingly, the Government of India launched a Technical Education Quality Improvement Programme (TEQIP) as a long-term Programme of 10-12 years duration to be implemented in three phases. The first phase of the Technical Education Quality Improvement Programme (TEQIP) commenced in March 2003 and ended in March 2009. In continuation, the second phase of the TEQIP is now planned as Project TEQIP-II.

AND WHEREAS in pursuance of this concern, the Project objectives are:

- Strengthening institutions to produce high quality engineers for better employability
- Scaling-up PG education and Demand-Driven Research & Development and Innovation
- Establishing Centers of Excellence for focused applicable research
- Training of faculty for effective teaching
- Enhancing institutional and System Management effectiveness

AND WHEREAS the comprehensive description and operating conditions for the Project are contained in the document entitled the Project Implementation Plan (hereinafter called 'THE PIP').

THE PARTIES AGREE AS FOLLOWS:

**SECTION A:**

As conditions for participation in 'THE PROJECT', 'THE SECOND PARTY' agrees to:

- establish the State Project Facilitation Unit (hereinafter called 'THE SPFU') in the Department of State Government responsible for Technical Education/State Directorate of Technical Education, headed by Director of Technical Education or the equivalent officer responsible for Technical Education in that department. He/She will be assisted by an academician in Technical Education with adequate staff to facilitate implementation and supervision of the project activities, in the State with 4 Units, namely Academic Unit,

Procurement Unit, Financial Management Unit, and Monitoring & Evaluation Unit [States with less than 5 project institutions to establish two number of Units namely: (a) Academic and M&E Unit, and (b) Procurement and Financial Management Unit] and sustain it with continuity throughout the Project period. The SPFU will supervise the project in the State project institutions and will facilitate its supervision by 'THE FIRST PARTY' and the World Bank.

- establish State Evaluation Committee and any other relevant Committee as and when necessary.
- establish a 9-10 member State Steering Committee (SSC), with the composition as below:
  - Principal Secretary/ Secretary responsible for tertiary level Engineering Education, as the Chairperson;
  - Financial Controller of the State Department concerned with tertiary level Engineering Education in the State/UT or his/her nominee;
  - Director, Department of Higher Education, MHRD or his/her nominee
  - Two industry members, nominated by major industry Associations;
  - Three members having recognized expertise and interest in engineering education, nominated by the State Government;
  - One nominee of the State Private Sector Advisory Group (S-PSAG)<sup>1</sup>;
  - Director for Technical Education in the State [being Head of the State Project Facilitation Unit (SPFU)], as the Member-Secretary.
- follow the Project guidelines and procedures prescribed in the Project Implementation Plan (PIP) and as may be prescribed from time to time by the Government of India for implementation of the Project in pursuance of the obligations set forth or referred to in the Financing Agreement dated -----between IDA and Government of India.
- follow the procedures for Procurement of all Goods, Works and Services in accordance with the World Bank Guidelines: Procurement under IBRD Loans and IDA Credits May 2004 and revised October 2006 (Procurement Guidelines); and Guidelines: Selection and Employment of Consultants by World Bank Borrowers May 2004 and revised October 2006 (Consultancy Guidelines) and the agreed procedures and limits described in the Financing Agreement.
- establish a State Private Sector Advisory Group in the State (optional).
- comply with the following:
  - to issue orders to project institutions to seek and obtain autonomous status as per the UGC norms and procedures.
  - to continue funding to project institutions beyond the second year of the Project subject to their obtaining the autonomous status (applicable to institutions participating in Sub-component 1.1).
  - to adopt a Block Grant pattern for fund releases of at least the non-salary non-Plan component of grants to the project institutions.

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<sup>1</sup> Formation of S-PSAG is Optional for a State. If the S-PSAG is constituted for a State, then only the nomination from S-PSAG will be there in the SSC.

- to permit project institutions to retain and utilize the revenue generated, including 100% of tuition and other fee and charges from students without adjusting the revenue retained in their non-Plan grants.
  - to direct the project institutions to establish Four Funds each in a separate Bank account, namely the Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund (for maintenance of buildings and equipment).
  - to direct each project institution to build these funds with annual contribution into each fund equal to at least 0.5% (total 2%) of annual recurring expenditure of the institution.
  - to direct each institution to additionally contribute the amount of annual savings into the Corpus Fund; and to issue guidelines for proper management of these funds after closure of this Project.
  - to authorize each project institution to fill up the faculty vacancies (over and above the benchmark value) to 100% on 11 month or longer contracts till such time that these vacancies are filled-up on a regular basis.
  - to constitute Board of Governors at each project institution and ensure that the Board of Governors meets at least 4 times in a year.
  - to ensure implementation of both academic and non-academic reforms by all project institutions.
  - to ensure that project institutions secure pedagogical training for their faculty.
  - to extend the benefit of pedagogical training to faculty from non-project institutions.
  - to sponsor and support private unaided institutions.
  - to seek allocation of funds under Innovation Fund and Pedagogical Training as per the provisions made.
  - to support and participate in the support systems developed for the Project like MIS, PMSS, etc.
  - to follow the guidelines as per the various manuals developed for the Project like Procurement Manual, Civil Works Manual, Financial Management Manual, etc.
- sign MoUs with the Government funded, Government aided and private unaided institutions in the formats suggested in PIP.
  - implement the Disclosure Management Framework under the Project to ensure high level of transparency and accountability.
  - comply with the terms and conditions for the release of first and subsequent Grant by 'THE FIRST PARTY' as described at Section C and release its matching share of Grant accordingly.
  - submit to 'THE FIRST PARTY' all reports and documents relating to progress of the Project, Accounts, Audit, Procurement, Disbursement and Annual Work Plan, as specified in the PIP and at such frequency as may be required by 'THE FIRST PARTY'.
  - maintain a separate account and record of the Project Grant received from 'THE FIRST PARTY' through the State Treasury and render annual accounts and Utilization Certificates.

- furnish to 'THE FIRST PARTY' quarterly the Financial Monitoring Reports (FMRs) in the prescribed format in accordance with the procedures as mentioned in the Financial Management Manual.
- get the accounts of the SPFU at (Name of the project State) and the project institutions audited as indicated in the PIP. The audited accounts along with a copy of the audit report shall be furnished to 'THE FIRST PARTY' every year as per the schedule indicated in the PIP.
- submit necessary Utilization Certificates to 'THE FIRST PARTY' for release of subsequent Grant.
- meet all necessary and incidental expenses for the performance of responsibilities like expenses for meetings, travel, professional fees, cost for pre-project activities, etc. which will not be the liability of the 'THE FIRST PARTY', unless specifically mentioned under this MoU or otherwise agreed in writing.

#### **SECTION B:**

'THE FIRST PARTY' agrees to:

- release the Grant as described at Section C.
- render or arrange to render such technical assistance and guidance as may be needed by 'THE SECOND PARTY', from time to time for an effective and efficient implementation of the Project.
- take corrective actions with regard to the non-performing institutions in States/UTs.
- review the findings of audits and maintain the policy reforms and conduct evaluation studies.

#### **SECTION C:**

- 'THE FIRST PARTY' and 'THE SECOND PARTY' will jointly share expenditure as approved by the National Steering Committee for 'THE PROJECT'. 'THE FIRST PARTY' in each project year will release the share of Grant for funding Government funded/ Government aided institutions towards the approved project cost of 'THE SECOND PARTY', in the ratio of 75:25 between 'THE FIRST PARTY' and 'THE SECOND PARTY' for all States except in the Special Category States, for which the ratio will be 90:10.
- For private unaided institutions the project cost will be shared in the ratio of 20:20:60 i.e. 20% funding from institutions, 20% funding as Grant from 'THE SECOND PARTY' and 60% funding as Grant from 'THE FIRST PARTY' for private unaided institutions selected under sub-component 1.1 and for private unaided institutions selected under sub-component 1.2, it will be in the ratio of 75:25 between 'THE FIRST PARTY' and 'THE SECOND PARTY' for all States except in the Special Category States, the ratio will be 90:10.
- 'THE FIRST PARTY' will release the Grant as described above to 'THE SECOND PARTY' in four instalments during each project year in a timely manner for the anticipated expenditures of 'THE SECOND PARTY' for implementation of eligible activities, provided 'THE SECOND PARTY' releases its matching share as required to be provided by 'THE SECOND PARTY' as the case may be under intimation to 'THE FIRST PARTY'. Disbursement of Grant to 'THE SECOND PARTY' will be based on Quarterly Financial Monitoring Reports (FMRs).

- 'THE SECOND PARTY' will make 100 percent provision in their budget and will certify that this has been done when making a request for release of each instalment of Central share.
- 'THE SECOND PARTY' will be responsible for release of Grant to the respective institutions as per the agreement between the State and the institution and will certify that this has been done when making a request for the release of each instalment of Central share.
- 'THE FIRST PARTY' and 'THE SECOND PARTY' agree to accept the following Key Performance Indicators (KPIs):
  - Percentage of UG and PG programmes that are accredited
  - Percentage of institutions with academic autonomy
  - Percentage of faculty with a Masters or a PhD degree
  - Number of Masters and PhD students enrolled
  - Percentage revenue from externally funded R&D projects and consultancies in total revenue
  - Increase in the number of publications in refereed journals
  - Transition rate for students from disadvantaged background and by gender

#### **SECTION D:**

- 'THE FIRST PARTY' will provide all necessary support to 'THE SECOND PARTY' in particular, through a National Project Implementation Unit (hereinafter called 'THE NPIU'). The functions of 'THE NPIU' are indicated in Section-5 of 'THE PIP'.
- 'THE SECOND PARTY' will mainly be responsible for implementing and monitoring the Project in the State/UT of ----- with the assistance of 'THE SPFU'. The functions of 'THE SPFU' are indicated in Section-5 of 'THE PIP'.

#### **SECTION E:**

The Project implementation schedule:

- The Project became effective on \_\_\_\_\_ 2010.
- The Project is expected to proceed at uniform rate over four years commencing on \_\_\_\_\_ 2010, and expected to be completed in 2014. Preparatory activities carried out after signing of MoUs will be financed retroactively.

#### **SECTION F:**

- If, as a result of slow implementation by 'THE SECOND PARTY', 'THE FIRST PARTY' incurs commitment charges in respect of the Financing Agreement, 'THE FIRST PARTY' shall seek compensation from 'THE SECOND PARTY' for these charges.

#### **SECTION G:**

- By this Memorandum of Understanding both parties affirm their commitment to carry out the activities and achieve the objectives mutually agreed upon.
- Any dispute between the parties shall always be resolved by mutual consultation without any resort to arbitration or other form of legal remedy including resort to Court of Law.



- This Memorandum of Understanding will continue to be effective up to the closure of the Project.
- Adherence to the implementation of the MoU will be monitored bi-annually.
- Amendment to this MoU, if required, shall be carried out in writing duly authenticated and executed by both the parties.

Signed at New Delhi on -----this day of -----2010.

FOR AND ON BEHALF OF  
The Governor/Administrator  
State/UT Government of  
-----

FOR AND ON BEHALF OF  
The President of India

(Shri -----)  
Principal Secretary/Secretary  
(Name of the Project State)

(Shri -----)  
Education Secretary/Additional Secretary  
Department of Higher Education,  
Ministry of Human Resource Development  
Government of India

Witness 1\_\_\_\_\_

Witness 2\_\_\_\_\_

**MEMORANDUM OF UNDERSTANDING  
BETWEEN  
MINISTRY OF HUMAN RESOURCE DEVELOPMENT (MHRD)  
GOVERNMENT OF INDIA  
AND  
(NAME OF CENTRALLY FUNDED INSTITUTION)  
FOR IMPLEMENTATION OF PROJECT (TEQIP-II) UNDER  
TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME**

THIS MEMORANDUM OF UNDERSTANDING is made on this \_\_\_\_ day of \_\_\_\_\_ 2010 between \_\_\_\_\_ the President of India acting through Shri \_\_\_\_\_ Education Secretary/ Additional Secretary, Ministry of Human Resource Development (MHRD), Government of India (hereinafter called the 'THE FIRST PARTY') and (name of Centrally Funded Institution) through Prof \_\_\_\_\_, the Director \_\_\_\_\_ (hereinafter called the 'THE SECOND PARTY').

WHEREAS it has been the concern of the 'THE FIRST PARTY' to scale-up and support ongoing efforts to improve quality of Technical Education and enhance existing capacities of the institutions to become dynamic, demand-driven, quality conscious, efficient and forward looking, responsive to rapid economic and technological developments occurring both at National and International levels. Accordingly, the Government of India launched a Technical Education Quality Improvement Programme (TEQIP) as a long-term Programme of 10-12 years duration to be implemented in three phases. The first phase of the Technical Education Quality Improvement Programme (TEQIP) commenced in March 2003 and ended in March 2009. In continuation, the second phase of the TEQIP is now planned as Project TEQIP-II.

AND WHEREAS in pursuance of this concern, the Project objectives are:

- Strengthening institutions to produce high quality Engineers for better employability
- Scaling-up PG education and Demand-Driven Research & Development and Innovation
- Establishing Centers of Excellence for focused applicable research
- Training of faculty for effective teaching
- Enhancing institutional and System Management effectiveness

AND WHEREAS the comprehensive description and operating conditions for the Project are contained in the Document entitled the Project Implementation Plan (hereinafter called 'THE PIP').

THE PARTIES AGREE AS FOLLOWS:

**SECTION A:**

As conditions for participation in 'THE PROJECT', 'THE SECOND PARTY' agrees to:

- follow the Project guidelines and procedures prescribed in the PIP and as may be prescribed from time to time by the Government of India for implementation of the Project in pursuance of the obligations set forth or referred to in the Financing Agreement dated ----- between IDA and Government of India.

- follow the procedures for Procurement of all Goods, Works and Services in accordance with the World Bank Guidelines: Procurement under IBRD Loans and IDA Credits May 2004 and revised October 2006 (Procurement Guidelines); and Guidelines: Selection and Employment of Consultants by the World Bank Borrowers May 2004 and revised October 2006 (Consultancy Guidelines) and the agreed procedures and limits described in the Financing Agreement.
- achieve targets given in the Institutional Development Plan (IDP).
- implement all academic and non-academic reforms as committed under the Project and contained in Project Implementation Plan, 'THE PIP'.
- comply with Environment Management Framework (EMF).
- adhere to Equity Action Plan (EAP).
- constitute an Institutional Project Unit with senior faculty experienced in their respective functional areas and sustain it with continuity throughout Project life.
- implement the Disclosure Management Framework under the Project to ensure high level of transparency and accountability.
- secure pedagogical training for all the institution's faculty.
- comply with the terms and conditions for the release of first and subsequent Grants by 'THE FIRST PARTY' as described at Section C.
- to seek allocation of funds under Innovation Fund and Pedagogical Training as per the provisions made.
- to support and participate in the support systems developed for the Project like MIS, PMSS etc.
- to follow the Guidelines as per the various manuals developed for the Project like Procurement Manual, Civil Works Manual, Financial Management Manual, etc.
- submit to THE FIRST PARTY all reports and documents relating to progress of the Project, Accounts, Audit, Procurement, Disbursement and Annual Work Plan, as specified in the PIP and at such frequency as may be required by 'THE FIRST PARTY'.
- maintain a separate Account and record of the Project Grant received from 'THE FIRST PARTY' and render annual Accounts and Utilization Certificates.
- furnish to 'THE FIRST PARTY' the quarterly Financial Monitoring Reports (FMRs) in the prescribed format in accordance with the procedures as mentioned in the Financial Management Manual.
- get the Accounts of 'THE SECOND PARTY' (Name of the Centrally Funded Institution) audited as indicated in the PIP. The audited accounts along with a copy of the Audit Report shall be furnished to 'THE FIRST PARTY' every year as per the schedule indicated in the PIP.
- submit necessary Utilization Certificates to 'THE FIRST PARTY' for release of subsequent Grants.
- meet all necessary and incidental expenses for the performance of responsibilities like expenses for meetings, travel, professional fees, cost for pre-project activities etc. and will not be the liability of 'THE FIRST PARTY', unless specifically mentioned under this MoU or otherwise agreed in writing.

## **SECTION B:**

'THE FIRST PARTY' agrees to:

- release the Grant as described at Section C.
- render or arrange to render such technical assistance and guidance as may be needed by 'THE SECOND PARTY', from time to time for an effective and efficient implementation of the Project.
- supervise the Project in the Centrally Funded Institutions.
- take corrective actions with regard to the non-performing Centrally Funded Institutions.
- review the findings of audits and maintain the policy reforms and conduct evaluation studies.

## **SECTION C:**

- 'THE FIRST PARTY' will release funds towards the approved project cost of the Centrally Funded Institutions in four instalments during each Project year in a timely manner for the anticipated expenditures for implementation of eligible activities. Disbursement of Grant to the CFIs will be based on Quarterly Financial Monitoring Reports (FMRs).
- 'THE FIRST PARTY' and 'THE SECOND PARTY' agree to accept the following Key Performance Indicators (KPIs):
  - Percentage of UG and PG programmes that are accredited
  - Percentage of faculty with a Masters or a PhD degree
  - Number of Masters and PhD students enrolled
  - Percentage revenue from externally funded R&D projects and consultancies in total revenue
  - Increase in the number of publications in refereed journals
  - Transition rate for students from disadvantaged background and by gender

## **SECTION D:**

- 'THE FIRST PARTY' will provide all necessary support to 'THE SECOND PARTY' in particular, through a National Project Implementation Unit (hereinafter called 'THE NPIU'). The functions of 'THE NPIU' are indicated in Section-5 of 'THE PIP'.

## **SECTION E:**

The Project implementation schedule:

- The Project became effective on \_\_\_\_\_ 2010.
- The Project is expected to proceed at uniform rate over four years commencing on \_\_\_\_\_ 2010 and expected to be completed in 2014. Preparatory activities carried out after signing of MoUs will be financed retroactively.

## **SECTION F:**

- By this Memorandum of Understanding both parties affirm their commitment to carry out the activities and achieve the objectives mutually agreed upon.
- Any dispute between the parties shall always be resolved by mutual consultation without any resort to arbitration or other form of legal remedy including resort to Court of Law.

- This Memorandum of Understanding will continue to be effective up to the closure of the Project.
- Adherence to the implementation of the MoU will be monitored bi-annually.
- Amendment to this MoU, if required, shall be carried out in writing duly authenticated and executed by both the parties.

Signed at New Delhi on -----this day of -----2010.

FOR AND ON BEHALF OF  
Chairman, Board of Governors  
(Name of the Centrally Funded Institution)

FOR AND ON BEHALF OF  
The President of India

(Prof -----)  
Director  
(Name of the Centrally Funded Institution)

(Shri -----)  
Education Secretary/Additional Secretary  
Department of Higher Education  
Ministry of Human Resource Development  
Government of India

Witness 1 \_\_\_\_\_

Witness2 \_\_\_\_\_

**MEMORANDUM OF UNDERSTANDING  
BETWEEN  
(THE STATE OF \_\_\_\_\_ )  
AND  
(NAME OF THE GOVERNMENT FUNDED/ GOVERNMENT AIDED INSTITUTION UNDER  
SUB-COMPONENT 1.1 and 1.2 / PRIVATE UNAIDED INSTITUTION UNDER  
SUB-COMPONENT 1.2) FOR IMPLEMENTATION OF PROJECT (TEQIP-II) UNDER  
TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME**

THIS MEMORANDUM OF UNDERSTANDING is made on this \_\_\_\_ day of \_\_\_\_\_ 2010 between the Governor/ Administrator of the State/UT of (name of the State) through Shri \_\_\_\_\_, Secretary, State of \_\_\_\_\_ (hereinafter called the 'THE FIRST PARTY') and (name of institution) through Prof \_\_\_\_\_, the Director \_\_\_\_\_ (hereinafter called the 'THE SECOND PARTY') owned and supervised by (Name of Society) \_\_\_\_\_ under Act \_\_\_\_\_ Name of the place, Registration Number \_\_\_\_\_.

WHEREAS it has been the concern of the Government of India to scale-up and support ongoing efforts to improve quality of Technical Education and enhance existing capacities of the institutions to become dynamic, demand-driven, quality conscious, efficient and forward looking, responsive to rapid economic and technological developments occurring both at National and International levels. Accordingly, the Government of India launched a Technical Education Quality Improvement Programme (TEQIP) as a long-term Programme of 10-12 years duration to be implemented in three phases. The first phase of the Technical Education Quality Improvement Programme (TEQIP) commenced in March 2003 and ended in March 2009. In continuation, the second phase of the TEQIP is now planned as Project TEQIP-II.

AND WHEREAS in pursuance of this concern, the Project objectives are:

- Strengthening institutions to produce high quality Engineers for better employability
- Scaling-up PG Education and Demand-Driven Research & Development and Innovation
- Establishing Centers of Excellence for focused applicable research
- Training of faculty for effective Teaching
- Enhancing institutional and System Management effectiveness

AND WHEREAS the comprehensive description and operating conditions for the Project are contained in the Document entitled the "Project Implementation Plan" (hereinafter called 'THE PIP').

THE PARTIES AGREE AS FOLLOWS:

**SECTION A:**

As conditions for participation in 'THE PROJECT', 'THE SECOND PARTY' agrees to:

- follow the Project guidelines and procedures prescribed in the PIP and as may be prescribed from time to time by the Government of India for implementation of the Project in pursuance of the obligations set forth or referred to in the Financing Agreement dated ----- between IDA and Government of India.

- follow the procedures for Procurement of all Goods, Works and Services in accordance with the World Bank Guidelines: Procurement under IBRD Loans and IDA Credits May 2004 and revised October 2006 (Procurement Guidelines); and Guidelines: Selection and Employment of Consultants by World Bank Borrowers May 2004 and revised October 2006 (Consultancy Guidelines) and the agreed procedures and limits described in the Financing Agreement.
- obtain Autonomous Institution status within a period of two years from the start of the Project (applicable for institutions selected under Sub-component 1.1).
- achieve targets given in the Institutional Development Plan (IDP).
- implement all academic and non-academic reforms as committed under the Project and contained in Project Implementation Plan, 'THE PIP'.
- comply with Environment Management Framework (EMF).
- adhere to Equity Action Plan (EAP).
- constitute an Institutional Project Unit with senior faculty experienced in their respective functional areas and sustain it with continuity throughout the period of the Project.
- implement the Disclosure Management Framework under the Project to ensure high level of transparency and accountability.
- secure pedagogical training for all the institution's faculty.
- comply with the terms and conditions for the release of first and subsequent Grants by 'THE FIRST PARTY' as described at Section C.
- to seek allocation of funds under Innovation Fund and Pedagogical Training as per the provisions made.
- to support and participate in the support systems developed for the Project like MIS, PMSS, etc.
- to follow the Guidelines as per the various manuals developed for the Project like Procurement Manual, Civil Works Manual, Financial Management Manual, etc.
- submit to 'THE FIRST PARTY' all reports and documents relating to progress of the Project, Accounts, Audit, Procurement, Disbursement and Annual Work Plan, as specified in the PIP and at such frequency as may be required by 'THE FIRST PARTY'.
- maintain a separate Account and record of the Project Grant received from 'THE FIRST PARTY' through State Treasury and render Annual Accounts and Utilization Certificates.
- furnish to 'THE FIRST PARTY' quarterly the Financial Monitoring Reports (FMRs) in the prescribed format in accordance with the procedures as mentioned in the Financial Management Manual.
- get the accounts of the (Name of the project institution) audited as indicated in the PIP. The audited accounts along with a copy of the Audit Report shall be furnished to 'THE FIRST PARTY' every year as per the schedule indicated in the PIP.
- submit necessary Utilization Certificates to SPFU/State for release of subsequent Grants.
- meet all necessary and incidental expenses for the performance of responsibilities like expenses for meetings, travel, professional fees, cost for pre-project activities etc. which will not be the liability of 'THE FIRST PARTY', unless specifically mentioned under this MoU or otherwise agreed in writing.

## **SECTION B:**

'THE FIRST PARTY' agrees to:

- release the Grant as described at Section C.
- render or arrange to render such technical assistance and guidance as may be needed by 'THE SECOND PARTY', from time to time for an effective and efficient implementation of the Project.
- take corrective actions with regard to the non-performing institutions.
- review the findings of audits and maintain the policy reforms and conduct evaluation studies.

## **SECTION C:**

- The MHRD will release the Grant to 'THE FIRST PARTY' in four instalments based on Quarterly Financial Monitoring Reports (FMRs) during each project year in a timely manner for the anticipated expenditures of 'THE FIRST PARTY' for implementation of eligible activities, provided 'THE FIRST PARTY' releases its matching share as required to be provided by 'THE FIRST PARTY' as the case may be under intimation to the MHRD. 'THE FIRST PARTY' in each project year will release funds to 'THE SECOND PARTY' towards the approved project cost of 'THE SECOND PARTY' in four instalments, in the ratio of 75:25 between MHRD and 'THE FIRST PARTY' for all States except in the Special Category States, for which the ratio will be 90:10.
- 'THE FIRST PARTY' and 'THE SECOND PARTY' agree to accept the following Key Performance Indicators (KPIs):
  - Percentage of UG and PG programmes that are accredited
  - Percentage of faculty with a Masters or a PhD degree
  - Number of Masters and PhD students enrolled
  - Percentage revenue from externally funded R&D projects and consultancies in total revenue
  - Increase in the number of publications in refereed journals
  - Transition rate for students from disadvantaged background and by gender
- Institutions found to be charging capitation fee or indulging in any other malpractice will face punitive action amounting to either their exclusion from the Project and recovery of Central and State funds provided to them till the date of their exclusion or curtailment of Project funding.

## **SECTION D:**

- 'THE FIRST PARTY' will provide all necessary support to 'THE SECOND PARTY' in particular, through a State Project Facilitation Unit (hereinafter called 'THE SPFU'). The functions of 'THE SPFU' are indicated in Section-5 of 'THE PIP'.

## **SECTION E:**

The Project implementation schedule:

- The Project became effective on \_\_\_\_\_ 2010.
- The Project is expected to proceed at uniform rate over four years commencing in \_\_\_\_\_ 2010 and is expected to be completed in 2014. Preparatory activities carried out after signing of MoUs will be financed retroactively.



**SECTION F:**

- By this Memorandum of Understanding both parties affirm their commitment to carry out the activities and achieve the objectives mutually agreed upon.
- Any dispute between the parties shall always be resolved by mutual consultation without any resort to arbitration or other form of legal remedy including resort to Court of Law.
- This Memorandum of Understanding will continue to be effective up to the closure of the Project.
- Adherence to the implementation of the MoU will be monitored bi-annually.
- Amendment to this MoU, if required, shall be carried out in writing duly authenticated and executed by both the parties.

Signed at New Delhi on -----this day of -----2010.

FOR AND ON BEHALF OF  
Chairman, Board of Governors  
(Name of the Institution)

FOR AND ON BEHALF OF  
Governor of State

Prof-----  
Director  
(Name of the Institution)  
(Name of the project State/UT)

Shri -----  
Principal Secretary/-----Secretary  
(Name of the project State/UT)

Witness 1 \_\_\_\_\_

Witness 2 \_\_\_\_\_

**MEMORANDUM OF UNDERSTANDING**  
**BETWEEN**  
**(THE STATE OF \_\_\_\_\_)**  
**AND**  
**(NAME OF THE PRIVATE UNAIDED INSTITUTION UNDER SUB-COMPONENT 1.1)**  
**FOR IMPLEMENTATION OF PROJECT (TEQIP-II) UNDER**  
**TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME**

THIS MEMORANDUM OF UNDERSTANDING is made on this \_\_\_\_\_ day of \_\_\_\_\_ 2010 between the Governor/ Administrator of the State/UT of (name of the State) through Shri \_\_\_\_\_, Secretary, State of \_\_\_\_\_ (hereinafter called the 'THE FIRST PARTY') and (name of institution) through Prof \_\_\_\_\_, the Director \_\_\_\_\_ (hereinafter called the 'THE SECOND PARTY') owned and supervised by (Name of Society) \_\_\_\_\_ under Act \_\_\_\_\_ Name of the place, Registration Number \_\_\_\_\_.

WHEREAS it has been the concern of the Government of India to scale-up and support ongoing efforts to improve quality of Technical Education and enhance existing capacities of the institutions to become dynamic, demand-driven, quality conscious, efficient and forward looking, responsive to rapid economic and technological developments occurring both at National and International levels. Accordingly, the Government of India launched a Technical Education Quality Improvement Programme (TEQIP) as a long-term Programme of 10-12 years duration to be implemented in three phases. The first phase of the Technical Education Quality Improvement Programme (TEQIP) commenced in March 2003 and ended in March 2009. In continuation, the second phase of the TEQIP is now planned as Project TEQIP-II.

AND WHEREAS in pursuance of this concern, the Project objectives are:

- Strengthening institutions to produce high quality Engineers for better employability
- Scaling-up PG education and Demand-Driven Research & Development and Innovation
- Establishing Centers of Excellence for focused applicable research
- Training of faculty for effective teaching
- Enhancing institutional and System Management effectiveness

AND WHEREAS the comprehensive description and operating conditions for the Project are contained in the Document entitled the "Project Implementation Plan" (hereinafter called 'THE PIP').

THE PARTIES AGREE AS FOLLOWS:

**SECTION A:**

As conditions for participation in 'THE PROJECT', 'THE SECOND PARTY' agrees to:

- follow the Project guidelines and procedures prescribed in the PIP and as may be prescribed from time to time by the Government of India for implementation of the Project in pursuance of the obligations set forth or referred to in the Financing Agreement dated ----- between IDA and Government of India.
- follow the procedures for procurement of all Goods, Works and Services in accordance with the World Bank Guidelines: Procurement under IBRD Loans and IDA Credits May 2004 and revised October 2006 (Procurement Guidelines); and Guidelines: Selection and Employment of Consultants by the World Bank Borrowers May 2004 and revised October 2006 (Consultancy Guidelines) and the agreed procedures and limits described in the Financing Agreement.

- obtain autonomous institutional status within a period of two years from the start of the Project.
- achieve targets given in Institutional Development Plan (IDP).
- implement all academic and non-academic reforms as committed under the Project and contained in Project Implementation Plan, 'THE PIP'.
- comply with Environment Management Framework (EMF).
- adhere to Equity Action Plan (EAP).
- constitute an Institutional Project Unit with senior faculty experienced in their respective functional areas and sustain it with continuity throughout the period of the Project.
- contribute 20% of the project cost for the implementation of project activities as per Project Implementation Plan (PIP).
- implement the Disclosure Management Framework under the Project to ensure high level of transparency and accountability.
- secure pedagogical training for all the institution's faculty.
- comply with the terms and conditions for the release of first and subsequent Grants by 'THE FIRST PARTY' as described at Section C.
- to seek allocation of funds under Pedagogical Training as per the provisions made.
- to support and participate in the support systems developed for the Project like MIS, PMSS, etc.
- to follow the guidelines as per the various manuals developed for the Project like Procurement Manual, Civil Works Manual, Financial Management Manual, etc.
- submit to 'THE FIRST PARTY' all reports and documents relating to progress of the Project, Accounts, Audit, Procurement, Disbursement and Annual Work Plan, as specified in the PIP and at such frequency as may be required by 'THE FIRST PARTY'.
- maintain a separate Account and record of the Project Grant received from 'THE FIRST PARTY' through State Treasury and render annual accounts and Utilization Certificates.
- furnish to 'THE FIRST PARTY' quarterly the Financial Monitoring Reports (FMRs) in the prescribed format in accordance with the procedures as mentioned in the Financial Management Manual.
- get the Accounts of the (Name of the project institution) audited as indicated in the PIP. The audited Accounts along with a copy of the Audit Report shall be furnished to 'THE FIRST PARTY' every year as per the schedule indicated in the PIP.
- submit necessary Utilization Certificates to SPFU/State for release of subsequent Grants.
- meet all necessary and incidental expenses for the performance of responsibilities like expenses for meetings, travel, professional fees, cost for pre-project activities etc. which will not be the liability of 'THE FIRST PARTY', unless specifically mentioned under this MoU or otherwise agreed in writing.

#### **SECTION B:**

'THE FIRST PARTY' agrees to:

- release the Grant as described at Section C.
- render or arrange to render such technical assistance and guidance as may be needed by 'THE SECOND PARTY', from time to time for an effective and efficient implementation of the Project.
- take corrective actions with regard to the non-performing institutions.
- review the findings of audits and maintain the policy reforms and conduct evaluation studies.

### SECTION C:

- The MHRD will release the Grant to 'THE FIRST PARTY' in four instalments based on Quarterly Financial Monitoring Reports (FMRs) during each project year in a timely manner for the anticipated expenditures of 'THE FIRST PARTY' for implementation of eligible activities, provided 'THE FIRST PARTY' releases its matching share as required to be provided by 'THE FIRST PARTY' under intimation to the MHRD. 'THE FIRST PARTY' in each project year will release funds to 'THE SECOND PARTY' towards the approved project cost of 'THE SECOND PARTY' in four instalments in the ratio of 20:20:60 i.e. 20% funding from 'THE SECOND PARTY', 20% funding as Grant from 'THE FIRST PARTY' and 60% funding as Grant from the MHRD.

The private unaided institutions selected under sub-component 1.1 will be funded for carrying out the following activities:

- Procurement of Learning Resources
  - Starting new PG programmes
  - Curricular reforms
  - Faculty and Staff Development for improved competence including pedagogical training of faculty
  - Enhanced interaction with industry
  - Institutional management capacity enhancement
  - Implementation of institutional reforms
  - Academic support for weak students
- 'THE FIRST PARTY' and 'THE SECOND PARTY' agree to accept the following Key Performance Indicators (KPIs):
    - Percentage of UG and PG programmes that are accredited
    - Percentage of faculty with a Masters or a PhD degree
    - Number of Masters and PhD students enrolled
    - Percentage revenue from externally funded R&D projects and consultancies in total revenue
    - Increase in the number of publications in refereed journals
    - Transition rate for students from disadvantaged background and by gender
  - Institutions found to be charging capitation fee or indulging in any other malpractice will face punitive action amounting to either their exclusion from the Project and recovery of Central and State funds provided to them till the date of their exclusion or curtailment of project funding.

### SECTION D:

- 'THE FIRST PARTY' will provide all necessary support to 'THE SECOND PARTY' in particular, through a State Project Facilitation Unit (hereinafter called 'THE SPFU'). The functions of 'THE SPFU' are indicated in Section-5 of 'THE PIP'.

### SECTION E:

The Project implementation schedule:

- The Project became effective on \_\_\_\_\_ 2010.
- The Project is expected to proceed at uniform rate over four years commencing in \_\_\_\_\_ 2010 and expected to be completed in 2014. Preparatory activities carried out after signing of MoUs will be financed retroactively.

**SECTION F:**

- By this Memorandum of Understanding both parties affirm their commitment to carry out the activities and achieve the objectives mutually agreed upon.
- Any dispute between the parties shall always be resolved by mutual consultation without any resort to arbitration or other form of legal remedy including resort to Court of Law.
- This Memorandum of Understanding will continue to be effective up to the closure of the Project.
- Adherence to the implementation of the MoU will be monitored bi-annually.
- Amendment to this MoU, if required, shall be carried out in writing duly authenticated and executed by both the parties.

Signed at New Delhi on -----this day of -----2010.

FOR AND ON BEHALF OF  
Chairman, Board of Governors

FOR AND ON BEHALF OF  
Governor of State

(Name of the Institution)

Prof-----  
Director  
(Name of the Institution)  
(Name of the project State/UT)

Shri -----  
Principal Secretary/-----Secretary  
(Name of the project State/UT)

Witness 1\_\_\_\_\_

Witness 2\_\_\_\_\_

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

**PHASE – II**

**PROPOSAL FORMAT FOR  
SELECTION OF STATES AND UTs**

## Eligibility Criteria for Selection of State

The States<sup>2</sup> will be selected based on merit of their proposal and their commitment to the following eligibility criteria:

S. N.	Attainment Parameters
1.	<p><b>Autonomous Status:</b> The States need to encourage the project institutions participating in sub-component 1.1 to obtain <u>Autonomous Institution status</u> as per UGC norms to enable them to improve quality and relevance of the knowledge and skills of the Graduates through betterment in curriculum and assessment methods. The States need to issue orders to project institutions before signing of MoU with MHRD [refer Annex-III (a)] to seek and obtain autonomous status as per UGC norms and procedures (refer Annex-II).</p> <p><b>Continuation of funding to any project institution beyond the second year of the Project will be subject to its obtaining Autonomous Institution status.</b></p>
2.	<p><b>Decentralization of financing framework:</b> The States need to create an Enabling Financing Framework that decentralizes a reasonable share of financial discretion to the institution's leadership, incentivizes the institution to increase its internally generated revenue, and establish funds to allow for mid-term financial planning. The State needs to:</p> <ul style="list-style-type: none"> <li>▪ <b>Adopt a Block Grant pattern:</b> (as described in Annex-I) for fund release of, <u>at least, the non-salary non-Plan component of grants</u> to the funded (and aided as the case may be) project institutions. The funds' utilization is to be left to the decision of the project institution as it deems fit during each financial year to achieve its mission, respecting regular Government purchasing and accounting guidelines</li> <li>▪ <b>Allow Retention of IRG:</b> Permit project institutions to retain and utilize the revenue generated, including 100% of tuition and other fee and charges from students without adjusting the revenue retained in their non-Plan grants.</li> <li>▪ <b>Allow Establishment of four funds:</b> Permit the funded and aided project institutions to establish 4 funds (as recommended in Annex-I), each in a separate Bank account, namely the Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund (for maintenance of buildings and equipment). The States to: <ul style="list-style-type: none"> <li>➢ Direct project institutions to build these funds with annual contribution into each fund equal to at least 0.5% (total 2%) of annual recurring expenditure of the institution, and direct each project institution to additionally contribute from savings into the Corpus Fund;</li> <li>➢ Issue guidelines for proper management of four funds after closure of this Project.</li> </ul> </li> </ul>
3.	<p><b>Filling-up the faculty vacancies:</b> The benchmark value for the faculty positions on regular full time basis for institutions under sub-component 1.1 and 1.2 are mentioned in Sections 4.3.1 and 4.3.2 respectively. The States need to authorize each project institution to fill-up all faculty vacancies on a regular basis (over and above the benchmark value). Till such time that these vacancies are filled-up on a regular basis, the appointments on 11 month or longer contract may be permitted by the State.</p>
4.	<p><b>Establishment of SPFU:</b> Establish an SPFU, located in the Department of the State Government responsible for Technical Education. The Head of SPFU shall be the Director or the equivalent officer responsible for Technical Education in that Department and will be designated as the State Project Advisor (SPA). The SPA will be assisted by a Project Coordinator who will be an academician. State should be willing to take a decision not to transfer / change the SPFU officials for the duration of the Project.</p>
5.	<p><b>Constitution of BoG in each Project Institution:</b> Establish a governance model that will hold each government funded and government aided institution accountable towards government, civil society, and industry. In particular, the States need to constitute/ensure formation of a Board of Governors in each project institution as suggested in Section-5 and ensure that the Board of Governors meets at least 4 times in a year.</p>
6.	<p><b>Reforms Implementation:</b> Each State is to implement the Project according to the Project Implementation Plan. This includes support and facilitation to implement both academic and non-academic reforms prescribed for implementation by all project institutions. (Refer Annex-I)</p>
7.	<p><b>Conduct of Pedagogical Training:</b> Each State has to ensure that each project institution imparts pedagogical training to all its faculty members. The benefit of pedagogical training is also to be extended to faculty of non-project institutions on cost sharing basis.</p>

Note: Release of the first instalment of Central Project funds to a State for its institutions will be subject to receipt by the NPIU of the necessary documentation in respect of compliance with the Eligibility Criteria 1-5.

<sup>2</sup> Throughout the PIP, the word "State" implies both the State Governments and the Union Territory Governments.

**SELECTION OF STATES**  
**PART – I**

- 1.1 Name of the State/UT: \_\_\_\_\_
- 1.2 Name of Secretary/Principal Secretary dealing with tertiary level Engineering Education: \_\_\_\_\_  
\_\_\_\_\_
- 1.3 Location of Directorate of Technical Education (DTE)/Department of State Government responsible for tertiary level Engineering Education: \_\_\_\_\_  
  
Name of the Director of Technical Education (DTE) / Officer responsible in the Department of State Government for tertiary level Engineering Education: \_\_\_\_\_
- 1.4 Furnish the baseline data in Table-27.
- 1.5 Briefly explain the key policy objectives and challenges for Technical Education in the State and how the participation in the Project will help in enhancing quality of Technical Education as whole in the State? [Maximum 2 pages]
- 1.6 Summarize the main steps and challenges to implement increased academic autonomy in the institutions participating in Sub-component 1.1. [Eligibility Criteria 1] and establishing a Board of Governors [Eligibility Criteria 5]. Has the State consulted with affiliating Universities regarding this aspect? [Maximum 1 page]
- 1.7 Summarize the main steps and challenges to implement the enabling financing framework [Eligibility Criteria 2 and 3]. Has the State Financing Department been consulted and has it agreed to this framework? [Maximum 1 page]
- 1.8 Briefly explain the State Plan for sustaining the gains from the Project after its closing. [Maximum ½ page]



**Table-27**  
**State/UT Level Academic Data for Academic Year 2009-10**

Note: Please give totals for the respective type of institutions in the State/UT and the gross total for the academic year 2009-2010)

Level of Program in Engineering Disciplines	State/UT Government Funded Institutions including Universities/ Deemed Universities				State/UT Government Aided Institutions including Universities/ Deemed Universities				Private Unaided Institutions including Universities/ Deemed Universities				Gross Total (totals in the State/UT excluding those in the Centrally- Funded Institutions/ Universities and Deemed Universities)			
	No. of Institutions	No. of Programs	Total Sanctioned Seats	Total No. of Students Admitted	No. of Institutions	No. of Programs	Total Sanctioned Seats	Total No. of Students Admitted	No. of Institutions	No. of Programs	Total Sanctioned Seats	Total No. of Students Admitted	No. of Institutions	No. of Programs	Total Sanctioned Seats	Total No. of Students Admitted
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Bachelors Degree																
Masters Degree																
Doctoral Degree <sup>3</sup>		X	X			X	X			X	X			X	X	

(X indicates that the information not required)

<sup>3</sup> For Doctoral programs, please give the total number of PhD registrants during 2009-2010 in columns 4, 8, 12 and 16.

## PART – II

### Essential commitments from the State:

S. No.	Item	State's Commitment (Yes/No)
1	<b>Does the State agree to:</b> share the project cost of the Government funded and aided institutions with MHRD in the ratio of 25:75 (10:90 in case of special category States)?	
2	Sponsor proposals from private unaided institutions and provide grant to those selected on cost sharing basis as recommended in PIP?	
3	conduct the pedagogy training for faculty of non-project institutions?	
4	consider applying for Innovation Fund?	
5	implement the Project according to the Project Implementation Plan?	
6	ensure implementation of both academic and non-academic reforms by all project institutions?	
7	encourage the project institutions participating in sub-component 1.1 to obtain Autonomous Institution status within two years, and accordingly issue orders to project institutions to seek and obtain Autonomous Institution status as per UGC norms and procedures?	
8	discontinue funding to any project institution beyond the second year of the Project, if the institution fails in obtaining the Autonomous Institution status or neglects project Implementation?	
9	adopt a Block Grant pattern for fund release of at least the non-salary non-Plan component of grants to the project institutions?	
10	permit project institutions to retain and utilize the revenue generated, including 100% of tuition and other fee and charges from students without adjusting the revenue retained in their non-Plan grants?	
11	permit the project institutions to establish 4 funds each in a separate Bank account, namely the Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund (for maintenance of buildings and equipment) as recommended in PIP?	
12	authorize each project institution to fill up the faculty vacancies (over and above the benchmark value) to 100% on 11 month period or longer contracts till such time that these vacancies are filled on regular basis?	
13	establish "State Project Facilitation Unit" (SPFU) located in State Directorate of Technical Education / the department responsible for Technical Education with adequate staff and maintain the staffing with stability?	
14	constitute Board of Governors at each project institution as suggested in Annex-II of PIP and ensure that the Board of Governors meets at least 4 times in a year and ensure that the main proceedings of the meetings are made available on the internet?	
15	comply with Financial Management Guidelines as described in Section-6?	
16	follow Procurement Guidelines as described in Section-8 of PIP?	
17	comply with the Equity Action Plan as described in Section-9 of PIP?	
18	comply with the Environment Management Framework as described in Section-10 of PIP?	
19	comply with the Disclosure Management Framework as described in Section-11 of PIP?	

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

**PHASE-II**

**FORMAT FOR  
INSTITUTIONAL ELIGIBILITY PROPOSAL  
for**

**Sub-component 1.1: Strengthening Institutions to improve Learning  
Outcomes and employability of Graduates**

## 1. INSTITUTIONAL BASIC INFORMATION

(Note: Please insert the name of applicant institution and the Sub-component number in the footer on each page of the proposal.)

### 1.1 Institutional Identity

- Name of the Institution : \_\_\_\_\_
- Is the Institution AICTE approved? : Yes/No
- Furnish AICTE approval No. : \_\_\_\_\_
- Type of Institution : Govt. funded/ Govt. aided/ Private unaided/Other
- Status of Institution : Autonomous Institute as declared by University / Non Autonomous / Deemed University / Constituent College
- Name of Head of the Institution : \_\_\_\_\_  
(Full time appointee)

### 1.2 Academic Information:

- **Engineering UG and PG programmes offered in Academic year 2009-10**

S. No	Title of programmes	Level (UG, PG, PhD)	Duration (Years)	Year of starting	AICTE sanctioned annual intake	Total student strength

- **Accreditation Status of UG programmes:**

Title of UG programmes being offered	Whether eligible for accreditation or not?	Whether accredited as on 31st March. 2010?	Whether "Applied for" as on 31st March 2010?

- **Accreditation Status of PG programmes:**

Title of PG programmes being offered	Whether eligible for accreditation or not?	Whether accredited as on 31st March 2010?	Whether "Applied for" as on 31st March 2010?

### 1.3 Faculty Status (Regular/On-Contract Faculty as on March 31<sup>st</sup>, 2010)

Faculty Rank	No. of Sanctioned Regular Posts	Present Status : Number in Position by Highest Qualification												Total Number of regular faculty in Position	Total Vacancies	Total Number of contract faculty in Position
		Doctoral Degree				Masters Degree				Bachelor Degree						
		Engineering Disciplines		Other Disciplines		Engineering Disciplines		Other Disciplines		Engineering Disciplines		Other Disciplines				
		R	C	R	C	R	C	R	C	R	C	R	C			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15= (3+5+7+9+11+13)	16= (2-15)	17= (4+6+8+10+12+14)
Prof																
Asso Prof																
Asst Prof																
Lec																
<b>Total</b>																

Prof = Professor, Asso Prof = Associate Professor, Asst Prof = Assistant Professor, Lec=Lecturer, R=Regular, C=Contract

## 2. ELIGIBILITY PROPOSAL

The Eligibility Proposals will be evaluated in meeting the “Eligibility Criteria” and capacity for implementation of key reforms.

### 2.1 Eligibility Criteria:

Institutions to be eligible under the Sub-component 1.1 should fulfill the following benchmarks:

**Table-28**  
**Benchmarks for Institutions to Qualify for Sub-component-1.1**

S. No.	Attainment Parameters	Bench-mark values	Institution's response
1	Does the institution agree to implement all academic and non-academic reforms given below : <ul style="list-style-type: none"> <li>• Implementation of Curricular Reforms</li> <li>• Exercise of autonomies</li> <li>• Establishment of Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund</li> <li>• Generation, retention and utilization of revenue generated through variety of activities</li> <li>• Filling up all existing teaching and staff vacancies</li> <li>• Delegation of decision making powers to senior functionaries with accountability</li> <li>• Improve Student Performance Evaluation</li> <li>• Implement performance appraisal of faculty by students</li> <li>• Provide faculty incentive for Continuing Education (CE), consultancy and R&amp;D</li> <li>• Obtaining accreditation</li> </ul>	Yes	
2	Age of the institution from the start of its first academic session (in years) <ul style="list-style-type: none"> <li>a) Regular States</li> <li>b) New States lagging in Technical Education</li> </ul>	6 4	
3	Total number of UG and PG programmes currently conducted	4	
4	Faculty positions filled on regular full time basis as percentage of the total faculty positions sanctioned in accordance with the AICTE prescribed student-to-faculty ratio	50%	
5	Presence of Board of Governors (as per recommended structure given in Section-5) with an eminent Academician or Industrialist as the Chairperson	Yes	

- 2.2 Provide summary of SWOT analysis [Maximum 2 pages]
- 2.3 State the general objectives of your proposal and elaborate the specific objectives and expected results in terms of institutional strengthening and improvements in employability and learning outcomes of graduates. These objective and results should be linked to the SWOT analysis [maximum 2 pages]
- 2.4 Provide an action plan to achieve the desired results and implement the institutional project. [maximum 2 pages]

- 2.5 Describe the capacity and steps for Implementation of the following key reforms: [maximum 2 pages]
- a. How will the institution obtain autonomous status in two years and what are the main challenges?
  - b. How will the institution obtain accreditation for its programmes and what are the main challenges?
  - c. How will the institution plan utilization of Block Grant effectively and efficiently?
  - d. How will the institution be able to increase its non-tuition revenue?
- 2.6 Provide information related to special academic achievements of the institution that will add to the qualification of institution to join the Project. [maximum ½ page]
- (Enclose supporting document: AICTE Mandatory Disclosure for 2009-2010)

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

**PHASE-II**

**FORMAT FOR  
INSTITUTIONAL DEVELOPMENT PROPOSAL**

**for**

**Sub-Component 1.1: Strengthening Institutions to improve Learning  
Outcomes and employability of Graduates**

**(To be submitted after obtaining the clearance for the Eligibility Proposal)**

## 1. INSTITUTIONAL BASIC INFORMATION

*(Note: Please insert the name of applicant institution and the Sub-component number in the footer on each page of the proposal.)*

### 1.1 Institutional Identity:

- Name of the Institution : \_\_\_\_\_
- Is the Institution AICTE approved? : Yes/No
- Furnish AICTE approval no. :
- Type of Institution : Govt. funded/Govt. aided/Private unaided/Autonomous/Other
- Status of Institution : Autonomous Institute as declared by University / Non-autonomous / Deemed University / Constituent Institution
- Name of Head of Institution and Project Nodal Officers

Head and Nodal Officer	Name	Phone Number	Mobile Number	Fax Number	E-mail Address
Head of the Institution (Full time appointee)					
TEQIP Coordinator					
Project Nodal Officers for:					
Academic Activities					
Civil Works including Environment Management					
Procurement					
Financial aspects					
Equity Assurance Plan Implementation					

### 1.2 Academic Information:

- **Engineering programmes offered in Academic year 2009-10**

S. No	Title of programmes	Level (UG, PG, PhD)	Duration (Years)	Year of starting	AICTE sanctioned annual Intake	Total student strength

- **Accreditation Status of UG programmes:**

Title of UG programmes being offered	Whether eligible for accreditation or not?	Whether accredited as on 31st March 2010?	Whether "Applied for" as on 31st March 2010?

- **Accreditation Status of PG programmes:**

Title of PG programmes being offered	Whether eligible for accreditation or not?	Whether accredited as on 31st March 2010?	Whether "Applied for" as on 31st March 2010?



**1.3 Faculty Status (Regular/On-Contract Faculty as on March 31<sup>st</sup>, 2010)**

Faculty Rank	No. of Sanctioned Regular Posts	Present Status : Number in Position by Highest Qualification												Total Number of regular faculty in Position	Total Vacancies	Total Number of contract faculty in Position
		Doctoral Degree				Masters Degree				Bachelor Degree						
		Engineering Disciplines		Other Disciplines		Engineering Disciplines		Other Disciplines		Engineering Disciplines		Other Disciplines				
		R	C	R	C	R	C	R	C	R	C	R	C			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15= (3+5+7+9+11+13)	16= (2-15)	17= (4+6+8+10+12+14)
Prof																
Asso Prof																
Asst Prof																
Lec																
<b>Total</b>																

Prof = Professor, Asso Prof = Associate Professor, Asst Prof = Assistant Professor, Lec=Lecturer, R=Regular, C=Contract

**1.4 Baseline Data (all data given for the following parameters must be restricted to engineering disciplines/fields only)**

S. No	Parameters
1	Total strength of students in all programmes and all years of study in the year 2009-10
2	Total women students in all programmes and all years of study in the year 2009-10
3	Total SC students in all programmes and all years of study in the year 2009-10
4	Total ST students in all programmes and all years of study in the year 2009-10
5	Total OBC students in all programmes and all years of study in the year 2009-10
6	Number of fully functional P-4 and above level computers available for students in the year 2009-10
7	Total number of text books and reference books available in library for UG and PG students in the year 2009-10
8	% of UG students placed through campus interviews in the year 2009-10
9	% of PG students placed through campus interviews in the year 2009-10
10	% of high quality undergraduates (>75% marks) passed out in the year 2009-10
11	% of high quality postgraduates (>75% marks) passed out in the year 2009-10
12	Number of research publications in Indian refereed journals in the year 2009-10
13	Number of research publications in International refereed journals in the year 2009-10
14	Number of patents obtained in the year 2009-10
15	Number of patents filed in the year 2009-10
16	Number of sponsored research projects completed in the year 2009-10
17	The transition rate of students in percentage from 1 <sup>st</sup> year to 2 <sup>nd</sup> year in the year 2009-10 for : (i) all students (ii) SC (iii) ST (iv) OBC
18	IRG from students' fee and other charges in the year 2009-10 (Rs. In lakh)
19	IRG from externally funded R&D projects, consultancies in the year 2009-10 (Rs. in lakh)
20	Total IRG in the year 2009-10 (Rs. in lakh)
21	Total annual recurring expenditure of the applicant entity in the year 2009-10 (Rs. in lakh)

## 2. INSTITUTIONAL DEVELOPMENT PROPOSAL (IDP)

- 2.1 Give the Executive Summary of the IDP.
- 2.2
  - Provide the details of SWOT analysis (see Annex-V to PIP) carried out (in terms of methodology used, analysis and information and data as collected and inferences derived with respect to strengths, weaknesses, opportunities and threats).
  - Based on SWOT analysis, provide the “strategic plan” developed for institutional development.
  - How the key activities proposed in the Institutional Development Proposal are linked with the results of SWOT Analysis.
- 2.3 State the specific objectives and expected results of your proposal in terms of, “Institutional strengthening and improvements in employability and learning outcomes of graduates”. These objective and results should be linked to the SWOT analysis.
- 2.4 Provide an action plan for : (max 1 page each)
  - a) Improving employability of graduates
  - b) Increased learning outcomes of the students
  - c) Obtaining autonomous institution status within 2 years
  - d) Achieving the targets of 60% of the eligible UG and PG programmes accredited within two years of joining the Project and 100% accreditation obtained and applied for by the end of the Project of the eligible UG and PG programmes
  - e) Implementation of academic and non academic reforms (details given in Annex-I to PIP)
  - f) Improving interaction with industry
  - g) Enhancement of research and consultancy activities
- 2.5 Provide an action plan for organising a Finishing School and for improving the academic performance of SC/ST/OBC/academically weak students through innovative methods, such as remedial and skill development classes for increasing the transition rate and pass rate with the objective of improving their employability.
- 2.6 Provide an action plan for strengthening of PG programmes and starting of new PG programmes.
- 2.7 Attach a summary of Training Needs Analysis carried out. Also, provide Faculty Development Plan for the first 18 months for improving their teaching, subject area and research competence based on Training Needs Analysis (TNA) (see Annex-VI to PIP) in the following areas.
  - Basic and advanced pedagogy
  - Subject / domain knowledge enhancement
  - Attendance in activities such as workshops, seminars
  - Improvement in faculty qualifications
  - Improving research capabilities
- 2.8 Provide an action plan for training technical and other staff in functional areas.
- 2.9 Describe the relevance and coherence of Institutional Development Proposal with State’s/National (in case of CFIs) Industrial/Economic Development Plan.
- 2.10 Describe briefly the participation of departments/faculty in the IDP preparation.
- 2.11 Describe the Institutional project implementation arrangements with participation of faculty and staff.
- 2.12 Provide an Institutional project budget in Table-29.

Table-29

## Institutional Project Budget for Sub-Component 1.1

[Note: For details of permissible and non-permissible expenditures, please see Table-18 (for Government funded and aided institutions) and Table-19 (for private unaided institutions)]

(Rs. in Crore)

S. No	Activities	Project Life Allocation	Financial year				
			2010-11	2011-12	2012-13	2013-14	2014-15
1	Infrastructure improvements for teaching, training and learning through:						
	(i) Modernization and strengthening of laboratories						
	(ii) Establishment of new laboratories for existing UG and PG programmes and for new PG programmes						
	(iii) Modernization of classrooms*						
	(iv) Updation of Learning Resources						
	(v) Procurement of furniture						
	(vi) Establishment/Upgradation of Central and Departmental Computer Centers*						
	(vii) Modernization/improvements of supporting departments*						
	(viii) Modernization and strengthening of libraries and increasing access to knowledge resources						
	(ix) Refurbishment (Minor Civil Works)*						
2	Providing Teaching and Research Assistantships to increase enrolment in existing and new PG programmes in Engineering disciplines						
3	Enhancement of R&D and institutional consultancy activities*						
4	Faculty and Staff Development (including faculty qualification upgradation, pedagogical training, and organising/participation of faculty in workshops, seminars and conferences) for improved competence based on TNA						
5	Enhanced Interaction with Industry						
6	Institutional management capacity enhancement						
7	Implementation of institutional reforms						
8	Academic support for weak students under the aegis of Finishing School						
9	Technical assistance for procurement and academic activities						
10	Incremental Operating Cost						
<b>TOTAL</b>							

\* Not applicable for private unaided institutions.

2.13 Provide the targets against the deliverables listed in Table-30.

**Table-30**  
**Project Targets<sup>4</sup> for Institutions under Sub-Component 1.1**

S. No	Deliverables	Base-line	Targets to be achieved	
			At the end of 2 years of joining the Project	By project closing
1	Number of students registered for (a) Masters in Engineering programme (b) Doctoral programme in Engineering			
2	Revenue from externally funded R&D projects and consultancies in total revenue (Rs. in lakh)			
3	Number of publications in refereed journals (a) National (b) International			
4	IRG as % of total annual recurring expenditure			
5	Number of co-authored publications in refereed journals (a) National (b) International			
6	Student credentials (a) campus placement rate of • UG students • PG students (b) average salary of placement package for (Rs. in lakh) • UG students • PG students			
7	Number of collaborative programmes with Industry			
8	Accreditation status (obtained and applied for)		Minimum 60% of UG + PG	100% of eligible UG + PG programmes
9	Vacancy position for faculty and staff		Vacancy reduced to 10% or less	Zero
10	Percentage of regular faculty having a Masters Degree or a Doctorate Degree in Engineering disciplines		Increased by 20% and 10% respectively over base line	Increased by 40% and 20% respectively over base line
11	Transit rate from 1 <sup>st</sup> to 2 <sup>nd</sup> year for the following: • All Students • SC and ST Students • OBC Students • Women Students			
12	Autonomy status		Required to be obtained	
13	Enrolment of faculty with only Bachelor Degree for qualification upgradation		At least 50% at the parent institution or 25% at other institution	
14	Any other academic deliverables (maximum 3)			
(i)				
(ii)				
(iii)				

**Note :** The accreditation targets for Undergraduate and Postgraduate programme are for **NBA accreditation of programmes.**

2.14 Give an action plan for ensuring that the project activities would be sustained after the end of the Project.

2.15 Provide a Procurement Plan for the first 18 months for Goods and Civil Works in Table-31 and Consultant Services in Table-32 with budget and timeframe.

<sup>4</sup> These pertain to the entity participating in the Project which may either be the whole stand alone institution or the Faculty / Department / constituent institution of a University or Faculty/Department of a Technical Deemed University.

**Table-31**  
**18-month Procurement Plan for Works and Goods\* for Sub-Component 1.1**

Name of the institution with location: \_\_\_\_\_

Package No.	SI No.	Activities	Description of Works/ Goods	Estimated Cost (Rs)	Method of Procurement	Design/ Investigation Completion/ Specification Finalization (Date)	Estimate Sanctioned (Date and Value)	Preparation of Bid Document (Date)	Receipt of Bank's No Objection to Bidding Document (Date)**	Bids		Contract Award (Date/ Value)	Date of Completion of Contract
										Invitation (Date)	Opening (Date)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1													
2													
3													

\* Goods cover Equipment, Furniture and Books and Learning Resources

\*\* Applicable in case of 'Prior Review' by the World Bank.

Note: For Column 6, state ICB/NCB/Direct Contracting/Shopping method as appropriate

**Table-32**

**18-month Procurement Plan for Consultant Services for Sub-Component 1.1**

Name of the institution with location: \_\_\_\_\_

SL No.	Activities	Description of Services	Estimated Cost (Rs)	Methods of Selection @	TOR Finalization (Date)	Advertisement (Date)	◆ RFP Final Draft to be Forwarded to the Bank (Date)**	No Objection from the Bank for RFP (Date)**	RFP Issued (Date)	Proposals Received (Date)	Evaluation (Date)	No Objection by the Bank (Date)**	Contract Value and Date of Award	Contract Completion (Date)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

◆ RFP (Request for Proposal): Same as 'Bid Document' #Technical and Financial

\*\* Applicable in case of 'Prior Review' by the World Bank

@ State whether (i) Single firm or individual; or (ii) Competitive procedure. If Competitive, then state whether Quality & Cost Based Selection (QCBS) or Quality Based Selection (QBS) procedure.

2.16 Provide any other information related to special academic achievements as given in Eligibility proposal of the institution.

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

**(PHASE-II)**

**FORMAT FOR  
INSTITUTIONAL DEVELOPMENT PROPOSAL  
for**

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



## 1. INSTITUTIONAL BASIC INFORMATION

*(Note: Please insert the name of applicant institution and the Sub-component number in the footer on each page of the proposal.)*

### 1.1 Institutional Identity:

- Name of the Institution : \_\_\_\_\_
- Is the Institution AICTE approved? : Yes/No
- Furnish AICTE approval no. :
- Type of Institution : Govt. funded/ Govt. aided/Private unaided / Autonomous / Other
- Status of Institution : Autonomous Institute as declared by University / Non-autonomous / Deemed University / Constituent Institution
- Names of Heads of Institution and Project Nodal Officers

Heads and Nodal Officers	Names	Phone Numbers	Mobile Numbers	Fax Numbers	E-mail Addresses
Head of the Institution (Full time appointee)					
TEQIP Coordinator					
Project Nodal Officers for:					
Academic Activities					
Civil Works including Environment Management					
Procurement					
Financial Aspects					
Equity Assurance Plan Implementation					

### 1.2 Academic Information

- **Engineering programmes offered in Academic year 2009-10**

S. No	Title of programmes	Level (UG, PG, PhD)	Duration (Years)	Year of starting	AICTE sanctioned annual intake	Total student strength

- **Accreditation Status of UG programmes:**

Title of UG programmes being offered	Whether eligible for accreditation or not?	Whether accredited as on 31st March 2010?	Whether "Applied for" as on 31st March 2010?

- **Accreditation Status of PG programmes:**

Title of PG programmes being offered	Whether eligible for accreditation or not?	Whether accredited as on 31st March 2010?	Whether "Applied for" as on 31st March 2010?

1.3 Faculty Status (Regular/On-Contract Faculty as on March 31<sup>st</sup>, 2010)

Faculty Rank	No. of Sanctioned Regular Posts	Present Status : Number in Position by Highest Qualification												Total Number of regular faculty in Position	Total Vacancies	Total Number of contract faculty in Position
		Doctoral Degree				Masters Degree				Bachelor Degree						
		Engineering Disciplines		Other Disciplines		Engineering Disciplines		Other Disciplines		Engineering Disciplines		Other Disciplines				
		R	C	R	C	R	C	R	C	R	C	R	C			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15= (3+5+7+9+11+13)	16= (2-15)	17= (4+6+8+10+12+14)
Prof																
Asso Prof																
Asst Prof																
Lec																
Total																

Prof = Professor, Asso Prof = Associate Professor, Asst Prof = Assistant Professor, Lec =Lecturer, R= Regular, C=Contract

1.4 Baseline Data(all data given for the following parameters must be restricted to engineering disciplines/fields only)

S. No.	Parameters	
1	Total strength of students in all programmes and all years of study in the year 2009-10	
2	Total women students in all programmes and all years of study in the year 2009-10	
3	Total SC students in all programmes and all years of study in the year 2009-10	
4	Total ST students in all programmes and all years of study in the year 2009-10	
5	Total OBC students in all programmes and all years of study in the year 2009-10	
6	Number of fully functional P-4 and above level computers available for students in the year 2009-10	
7	Total number of text books and reference books available in library for UG and PG students in the year 2009-10	
8	% of UG students placed through campus interviews in the year 2009-10	
9	% of PG students placed through campus interviews in the year 2009-10	
10	% of high quality under Graduates (>75% marks) in the year 2009-10	
11	% of high quality postgraduates (>75% marks) in the year 2009-10	
12	Number of research publications in Indian refereed journals in the year 2009-10	
13	Number of research publications in International refereed journals in the year 2009-10	
14	Number of patents obtained in the year 2009-10	
15	Number of patents filed in the year 2009-10	
16	Number of sponsored research projects completed in the year 2009-10	
17	The transition rate of students in percentage from 1 <sup>st</sup> year to 2 <sup>nd</sup> year in the year 2009-10 for : (i) all students (ii) SC (iii) ST (iv) OBC	
18	IRG from students fee and other charges in the year 2009-10 (Rs. in lakh)	
19	IRG from externally funded R&D projects, Consultancies in the year 2009-10 (Rs. in lakh)	
20	Total IRG in the year 2009-10 (Rs. in lakh)	
21	Total annual recurring expenditure of the applicant entity in the year 2009-10 (Rs. in lakh)	
22	Number of Joint publications with National authors in the year 2009-10	
23	Number of Joint publications with International authors in the year 2009-10	
24	Number of R&D products commercialized in the year 2009-10	
25	Number of joint MTech programmes with institutions undertaken in the year 2009-10	
26	Number of joint MTech programmes with Industry undertaken in the year 2009-10	
27	Number of joint PhD with institutions undertaken in the year 2009-10	
28	Number of joint PhD with Industry undertaken in the year 2009-10	
29	Number of joint consultancies undertaken with institutions in the year 2009-10	
30	Number of joint consultancies undertaken with Industry in the year 2009-10	

1.5 Institutions to be eligible for participation in the Project under the Sub-component 1.2 must fulfill the following benchmarks:

**Table-33**  
**Benchmarks for Institutions to Qualify for Sub-component-1.2**

S. No.	Attainment Parameters	Benchmark values	Institution's response (Yes/No)
1.	Does the institution agree to implement all academic and non-academic reforms given as below: <ul style="list-style-type: none"> <li>• Implementation of curricular reforms</li> <li>• Exercise of autonomies</li> <li>• Establishment of Corpus Fund, Faculty Development Fund, Equipment Replacement Fund and Maintenance Fund</li> <li>• Generation, retention and utilization of revenue generated through variety of activities</li> <li>• Institutions to fill-up all existing teaching and staff vacancies</li> <li>• Delegation of decision making powers to senior functionaries with accountability</li> <li>• Improve student performance evaluation</li> <li>• Improvement performance appraisal of faculty by students</li> <li>• Provide faculty incentive for Continuing Education (CE), consultancy and R&amp;D</li> <li>• Obtaining accreditation</li> </ul>	Yes	
2.	Availability of academic autonomy as recognized by UGC for both UG and PG programmes	Yes	
3.	Presence of Board of Governors with an eminent academician or industrialist as the Chairperson	Yes	
4.	Percentage of eligible UG programmes accredited or applied for	60%	
5.	Percentage of eligible PG programmes accredited or applied for	40%	
6.	Cumulative number of PhDs produced in the last three academic years (2007-08, 2008-09 and 2009-10) or Cumulative number of MTech produced in the last three academic years (2007-08, 2008-09 and 2009-10)	5  50	
7.	Faculty positions filled on regular full time basis as percentage of total faculty positions sanctioned in accordance with the AICTE prescribed student to faculty ratio	65%	
8.	Percentage of regular faculty with PhD in engineering* as percentage of total faculty	15%	

**Note :** In respect of accreditation benchmarks for Undergraduate and Postgraduate programmes in Universities, Deemed Universities, University Constituted Colleges/Faculties/Departments, NAAC accreditation is acceptable at the entry point. However, all such project entities will have essentially to achieve the Undergraduate and Postgraduate programmes targets of **NBA accreditation** as given in Table-30 for Sub-component 1.1 & Table-35 for Sub-component 1.2.

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\* For Special Category States, the desired levels is faculty with PhD in Engineering and Sciences disciplines as percentage of total faculty

## 2. INSTITUTIONAL DEVELOPMENT PROPOSAL (IDP)

- 2.1 Give the executive summary of the IDP.
- 2.2
  - Provide the details (in terms of methodology used, analysis carried out of the data and information collected and inferences derived with respect to strengths, weaknesses, opportunities and threats) of SWOT analysis (see Annex-V of the PIP) carried out.
  - Based on SWOT analysis, provide the strategic plan developed for institutional development.
  - Show how the results of SWOT analysis are linked to the key activities proposed in the proposal.
- 2.3 State the specific objectives and expected results of your proposal in terms of, “Scaling-up Postgraduate Education and demand-driven Research & Development and Innovation”. These objective and results should be linked to the SWOT analysis.
- 2.4 Provide an action plan for scaling-up enrollment into Masters and Doctoral programmes (include measures to attract qualified students and maintain high quality standards)
- 2.5 Provide an action plan for improving collaboration with Industry.
- 2.6 Provide an action plan for:
  - quantitatively increasing and qualitatively improving research by their faculty individually, jointly and collaboratively,
  - developing research interest among undergraduate students, and
  - collaborating with Indian and foreign institutions in academic and research area through MoUs
- 2.7 Attach the summary of Training Needs Analysis carried out. Also, provide Faculty Development Plan from the first 18 months to achieve improved competence based on Training Needs Analysis (TNA) in the following areas.
  - Basic and advanced pedagogy training
  - Subject / domain knowledge enhancement
  - Attendance in activities such as workshops, seminars, etc.
  - Improvement in faculty qualifications.
  - Improving research capabilities
- 2.8 Provide an action plan for training technical and other staff in functional areas.
- 2.9 Describe the relevance and coherence of Institutional Development Proposal with State’s/National (in case of CFIs) Industrial / Economic Development Plan.
- 2.10 Describe briefly the participation of departments/faculty in the proposal preparation and implementation.
- 2.11 Describe the institutional project implementation arrangements.
- 2.12 Provide an institutional project budget in Table No.34.

**Table-34:  
Institutional Project Budget for Sub-Component 1.2**

**Note: For details of permissible and non-permissible expenditures, please see Table-18 (for Government funded and aided institutions) and Table-19 (for private unaided institutions)**

(Rs. In Crore)

S. No	Activities	Project Life Allocation	Financial year				
			2010-11	2011-12	2012-13	2013-14	2014-15
1	Infrastructure improvements for teaching, training and learning through:						
	(i) Establishment of new laboratories for new and existing PG programmes, faculty research, etc.						
	(ii) Updation of learning resources						
	(iii) Procurement of furniture						
	(iv) Modernization and strengthening of libraries and increasing access to knowledge resources						
	(v) Refurbishment (Minor Civil Works)						
2	Providing Teaching and Research Assistantships for significantly increasing enrolment in existing and new Masters and Doctoral programmes in Engineering disciplines						
3	Enhancement of R&D and institutional consultancy activities						
4	Faculty and Staff development for improved competence based on TNA						
5	Enhanced interaction with Industry						
6	Institutional Management Capacity enhancement						
7	Implementation of institutional reforms						
8	Academic support for weak students						
9	Incremental Operating Cost						
<b>TOTAL</b>							

2.13 (a) Provide the targets against the deliverables given in Table 35.

**Table-35 : Project Targets<sup>5</sup> for Institutions under Sub-Component 1.2**

S. No.	Deliverables	Base-line	Targets to be achieved	
			At the end of 2 years of joining the Project	By Project closing
1	Number of students registered for (a) Masters in Engineering programme (b) Doctoral Programme in Engineering			
2	Revenue from externally funded R&D projects and Consultancies in total revenue (Rs. in lakh)			
3	Number of (a) Research publications in refereed journals • National journals • International journals (b) Citations (c) Patents obtained / filed (d) Books (e) No. of R&D projects commercialized			
4	IRG as % of total recurring expenditure			
5	Number of co-authored publications in refereed journals (a) National (b) International			
6	Student credentials (a) Campus placement rate of • UG students • PG students (b) Average salary of placement package for (Rs. in lakh) • UG students • PG students			
7	Number of collaborative programmes with Industry		At least 2	
8	Accreditation Status (obtained and applied for)		At least 75% of eligible UG programmes and 60% of eligible PG programmes	100% for UG and PG programmes
9	Vacancy position for faculty and staff		Vacancy reduced to 5% or less	Zero vacancy
10	Percentage of regular faculty with PhD in Engineering disciplines		At least 20%	At least 25%
11	Any other (maximum three)			
	(i)			
	(ii)			
	(iii)			

**(Note : The accreditation targets for Undergraduate and Postgraduate programme are for NBA accreditation of programmes.)**

(b) Describe the Plan in detail for achievement of the above targets enumerated in Table-35.

- 2.14 Give an action plan to ensure that the project activities would be sustained after the end of the Project.
- 2.15 Provide Procurement Plan for the first 18 months for Goods and Civil Works in Table-36 and Consultant Services in Table-37 with budget and timeframe.
- 2.16 Provide any other information related to special academic achievements of the institution.
- 2.17 Provide an action plan for organising a Finishing School and for improving the academic performance of SC/ST/OBC/academically weak students through innovative methods, such as remedial and skill development classes for increasing the transition rate and pass rate with the objective of improving their employability.

<sup>5</sup> These pertain to the entity participating in the Project which may either be the whole stand alone institution or the Faculty / Department / constituent institution of a University or Faculty / Department of a Technical Deemed University.

**Table-36**  
**18-month Procurement Plan for Works and Goods\* for Sub-Component 1.2**

Name of the institution with location: \_\_\_\_\_

Package No.	SI No.	Activities	Description of Works/ Goods	Estimated Cost (Rs)	Method of Procurement	Design/ Investigation Completion/ Specification Finalization (Date)	Estimate Sanctioned (Date and Value)	Preparation of Bid Document (Date)	Receipt of Bank's No Objection to Bidding Document (Date)**	Bids		Contract Award (Date/ Value)	Date of Completion of Contract
										Invitation (Date)	Opening (Date)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1													
2													
3													

\* Goods cover Equipment, Furniture and Books and Learning Resources

\*\* Applicable in case of 'Prior Review' by the World Bank.

Note: For Column 6, state ICB/NCB/Direct Contracting/Shopping method as appropriate

**Table-37**  
**18-month Procurement Plan for Consultant Services for Sub-Component 1.2**

Name of the institution with location: \_\_\_\_\_

Sl. No.	Activities	Description of Services	Estimated Cost (Rs)	Methods of Selection @	TOR Finalization (Date)	Advertisement (Date)	◆ RFP Final Draft to be Forwarded to the Bank (Date)**	No Objection from the Bank for RFP (Date)**	RFP Issued (Date)	Proposals Received (Date)	Evaluation (Date)	No Objection by the Bank (Date)**	Contract Value and Date of Award	Contract Completion (Date)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

◆ RFP (Request for Proposal): Same as 'Bid Document' #Technical and Financial

\*\* Applicable in case of 'Prior Review' by the World Bank

@ State whether (i) Single firm or individual; or (ii) Competitive procedure. If Competitive, then state whether Quality & Cost Based Selection (QCBS) or Quality Based Selection (QBS) procedure.



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

**FORMAT FOR  
DEVELOPMENT PROPOSAL FOR  
Sub-Sub-Component 1.2.1 : Establishing Centers of Excellence (CoE)  
(Applicable for Institutions selected under sub-component 1.2)**

Name of the Institution : \_\_\_\_\_

Name of the Center of Excellence to be established : \_\_\_\_\_

Specific Area(s) of excellence : \_\_\_\_\_

**Note:** Institutions desirous for establishing more than one Center of Excellence should submit the separate proposals accordingly.

## PROPOSAL FOR ESTABLISHING A CENTER OF EXCELLENCE

### 1. Institutional Identity

- 1.1 Name of the Institution : \_\_\_\_\_
- 1.2 Type of Institution : Govt. funded/Govt. aided/Private unaided/Other
- 1.3 Status of Institution : Autonomous Institute as declared by University/  
Non-autonomous/Deemed University/  
Constituent College
- 1.4 Does the Institution have any CoE? : Yes/No  
If Yes, write the name of the Department and specific areas of excellence \_\_\_\_\_  
\_\_\_\_\_
- 1.5 Name of the CoE to be established : \_\_\_\_\_
- 1.6 Specific Area of excellence : \_\_\_\_\_
- 1.7 Names of Heads of Institutions and CoE Coordinators

Head and Coordinator	Name	Phone Number	Mobile Number	Fax Number	Email Address
Head of the Institution (Full time appointee)					
CoE Coordinator					

### 2. Eligibility Criteria

Institutions to be eligible under the Sub-sub-component 1.2.1 must fulfill the following benchmarks:

**Table-38**  
**Benchmarks for Institutions to Qualify for Sub-Sub-Component-1.2.1**

S. No.	Attainment Parameters	Benchmark values	Institutional Response (Yes / No)
1	Availability of Academic Autonomy	Yes	
2	Percentage of eligible UG programmes accredited or applied for	75%	
3	Percentage of eligible PG programmes accredited or applied for	60%	
4	Cumulative number of PhDs produced in the last three academic years (2007-08, 2008-09, 2009-10) in the departments participating for establishing CoEs	12	
5	Faculty positions filled on regular full time basis as percentage of total faculty positions sanctioned in accordance with the AICTE prescribed student-to-faculty ratio in the departments participating for establishing CoEs	70%	
6	Percentage of regular faculty with PhD in Engineering as percentage of total faculty in engineering	20	
7	Number of sponsored research projects in engineering completed in the last three academic years (2007-08, 2008-09, 2009-10)	07	

**Note :** In respect of accreditation benchmarks for Undergraduate and Postgraduate programmes in Universities, Deemed Universities, University Constituted Colleges/Faculties/Departments, NAAC accreditation is acceptable at the entry point. However, all such project entities will have essentially to achieve the Undergraduate and Postgraduate programmes targets of **NBA accreditation** as given in Table-30 for Sub-component 1.1 & Table-35 for Sub-component 1.2.

### 3. Institutional plan for establishing CoE

- 3.1 Give an Executive Summary of the proposal for establishing CoE.
- 3.2 Provide the details (in terms of methodology used, analysis carried out of the data and information collected and inferences derived with respect to strengths, weaknesses, opportunities and threats) of SWOT analysis carried out.
- 3.3 Give the thematic and specific areas selected for CoE alongwith a brief review of literature.
- 3.4 State the specific objectives of the Center of Excellence.
- 3.5 Give an action plan for establishment of CoE.
- 3.6 Give the details on engagement of various departments in the institution for CoE activities.
- 3.7 Describe academic and research achievements / credentials of faculty to be involved in CoE activities.
- 3.8 Give an action plan for the proposed research areas and the results to be achieved. These objectives should be linked to the SWOT analysis.
- 3.9 Indicate the collaborative arrangements made/under discussion with industries and research institutions / organizations within India and abroad. **Attach MoUs as already signed.**
- 3.10 Give an action plan for communication to policy makers and potential users of research findings and use of CoE facilities for solving real life problems.
- 3.11 Give an action plan for commercialization of research results that may lead to innovation.
- 3.12 Give an action plan for scaling-up PhD & Masters enrolment in the thematic area.
- 3.13 Give a procurement plan for Goods and Consultant Services as per Tables-36 and 37.
- 3.14 Provide budget for establishing Center of Excellence in Table-39.
- 3.15 Provide the incremental institutional project targets against the deliverables indicated in Table-40 in addition to the targets under Sub-component 1.2 with plan for achieving the same.
- 3.16 Give an action plan on how the institution will ensure that the CoE research activities would be sustained after the end of the Project.

**Table-39**

**Project Budget for Sub-Sub-Component 1.2.1**

**Note: For details of permissible and non-permissible expenditures, please see Table-18 (for Government funded and aided institutions) and Table-19 (for private unaided institutions)**

S No	Activities	Project Life Allocation	Financial year(Rs.In Crore)				
			2010-11	2011-12	2012-13	2013-14	2014-15
1	Infrastructure Improvement for applicable thematic research and development						
	(i) Establishment of new laboratories for thematic research						
	(ii) Establishment of knowledge resource center (Library) in the thematic area						
	(iii) Procurement of furniture						
	(iv) Refurbishment (Minor Civil Works)						
2	Providing additional Teaching and Research Assistantships for enrolment in Masters and Doctoral programmes in topics linked to economic or societal needs in the thematic areas						
3	National/International collaboration for Research and Development activities with academic institutions and R&D organizations						
4	Faculty training for enhancing research competence in thematic areas, both within India and abroad						
5	Collaboration with Industry for applicable research and product development						
6	Incremental Operating Cost						
<b>TOTAL</b>							

**Table-40**

**Incremental Project Targets for Center of Excellence**

**Note: These targets are specific to COE and are thus over and above those for Sub-component 1.2 of the Project.**

S. No.	Deliverables	Baseline	Targets to be achieved	
			At the end of 2 years	By Project closing
1	Number of International Exchange programmes			
2	Number of individual publications in peer-reviewed journals: (a) National (b) International			
3	Number of co-authored publications in peer-reviewed journals with names of authors: (a) National (b) International			
4	Number of exchange of research students with collaborating institutions: (a) National (b) International			
5	Number of exchange of research faculty with collaborating institutions: (a) National (b) International			
6	Number of patents obtained			
7	Number of patents filed			
8	Number of external R&D projects			
9	Number of Industry Chairs secured			
10	Number of MoUs with academia: (a) National (b) International			
11	Number of MoUs with industry: (a) National (b) International			
12	Number of products, research and services commercialized			
13	Any other (maximum three)			
(i)				
(ii)				
(iii)				

## **GUIDELINES ON STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS (SWOT) ANALYSIS**

### **1. Introduction:**

SWOT, is an analysis method, which is used in strategic planning for the institutions and consists of the initial letters of concepts of Strengths, Weaknesses, Opportunities and Threats.

Strategic planning is a process in which future aims are determined together with the stakeholders and responsibilities and resources are allocated in accordance with these future aims. It is a process between the points an institution stands presently and the points it tries to reach in a certain period of time. The concept of strategic planning is closely related with the concept of foresight. In this regard, strategic planning can be considered as the collection of systematic efforts of experts for the best choice of the future.

The aim of strategic planning is to produce planned facilities, embody the appointed policies, follow the application efficiently and take the initiative and provide for effective participation. In the process of strategic planning, some of the fundamental questions are needed to be answered. Those are “Where are we?”, “How can we reach our desired goal? And “How can we evaluate our success?

Institutions are expected to make a Strategic Plan to gain a better perception of ongoing quest for quality education and fulfilling its mission and realizing its vision.

### **2. Salient Points:**

- As a medium of administration, SWOT analysis is used in making a plan, defining a problem and also identifying a solution for it, making a strategy and giving an analytic decision. It is a tool for auditing an institution and its environment. It is a first stage of planning which helps to focus on key issues.
- The role of SWOT analysis is to take the information from the environmental scan and separate it into internal and external issues. SWOT analysis determines if the information indicates something that will assist the institution in accomplishing its objectives or if it indicates an obstacle that must be removed or minimized to achieve desired results.
- SWOT analysis is scalable, collaborative, integrateable, simple and cost efficient.

### **3. Steps to conduct a SWOT Analysis:**

#### **i) Teamwork and Stakeholder Participation:**

The first step involves setting up a team of the key stakeholders of the institution to carry out the consultations/brainstorming. The team essentially has to be participatory and should encourage all participants to be candid and constructive. Involving maximum students, faculty and staff in the brainstorming will help to bring out information, determine the most important Strengths, Weaknesses, Opportunities and Threats, and prioritize the actions.

The brainstorming may be carried out in separate groups of students, using an appropriate facilitator for each group. Alternatively, the internal Strengths and Weaknesses could be identified separately by each group and brought together to discuss the external Opportunities and Threats, and the Strategic Planning. For a very large institution, the SWOT analysis may be done department-wise to reveal the Strengths, Weaknesses, Opportunities and Threats.

ii) Data Analysis:

Collect all the participants in a room with a blackboard/flip charts/computer projection. Explain the objective and process of the exercise to them. Encourage a congenial atmosphere for a free flow of information, insisting on focus, specificity and brevity. The facilitator should keep the discussion going and a rapporteur should be writing the points on the board/charts/computer for all to see.

Collectively list all strengths that exist. Then list all weaknesses by avoiding modesty and over-estimation. Be realistic.

List all opportunities that exist for the future. Then list all threats that exist in the future.

Data, which is gained through either formal or informal information, can be used in the process of strategic planning. By this way, with the help of SWOT analysis, it is easy to determine an institution's present situation and whether that institution functions properly or not.

The institution needs to review the SWOT analysis and do the strategic planning to meet the objectives, addressing each of the four areas.

iii) Strategic Planning:

a) Strengths: The Strengths can be identified by thinking in terms of capabilities, recognition, competitive advantages, resources, assets, people (experience, knowledge, their culture, values, attitudes and behaviors), innovative aspects, marketing, quality of programmes, location, accreditations, qualifications, certifications, and processes/systems through the following:

- Resources and capabilities that can be used as a basis for developing a competitive advantage
- Strengths should be realistic and not modest
- Strengths should answer:
  - Advantages of the institution
  - The activities the institution can plan to do better
  - The relevant resources on which the institution has access to.
  - Vision of others about institution's strengths.
  - Unique Selling Points (USPs)
  - Financial reserves of the institutions along with returns from fees and other sources

Method to use each strength: The strengths would normally support the achievement of the objective, may be useful to leverage other benefits.

b) Weaknesses: The Weaknesses can be identified by thinking in terms of disadvantages, gaps in capabilities; lack of competitive strength, reputation, financial, timescales/deadlines, weak core activities, distractions, morale, leadership, accreditations, continuity, robustness and processes/systems through the following:

- Internal forces that could serve as a barrier to maintain or achieve a competitive advantage, a limitation, fault or defect of the institution.
- Weaknesses should be truthful so that they may be overcome as quickly as possible.

- Weaknesses should answer:
  - The possibility of improvements
  - Weak processes and systems and inadequate facilities
  - Lack of competitive strengths
  - Lack of Industry/network partners
  - Plan predictability
  - Financial situation, cash flow and cash-drain of the institution
  - Means to perform in a more effectively and efficient manner, changes in the institutions to help them function more efficiently

Method to stop each Weakness: The institutions need to identify the Weaknesses and take remedial measures to overcome them.

- c) Opportunities: The Opportunities can be identified by thinking in terms of market developments, competitor vulnerabilities, industry trends, and geographical partnerships through the following:

- The good opportunities facing us
- The interesting trends we are aware of
- Technology development and innovation
- Growing student demand
- Increased attraction for qualified future faculty
- Research in niche areas
- Geographical expansion
- Employment and industry trends
- Unique Selling Points (USPs)
- Industry Institution partnership
- Innovations, product development, patent, business development
- Global influences, opportunities

Method to exploit each opportunity: These are attractive external factors that can help the institution develop and improve. They need to be prioritized on the basis of their benefits to the institution in the short (1-2 years), medium (4-5 years) and long-term (8-10 years).

- d) Threats: The Threats can be identified by thinking in terms of external forces that could inhibit the maintenance or attainment of a competitive advantage or any unfavorable situation in the external or internal environment that is potentially damaging at the present and in future through the following:

- Obstacles faced by the institution - social, political and managerial
- Doings of the competitors
- Change in the required specifications for services of the institution
- Threats of changing technology
- Declining supply of qualified faculty
- Loss of key faculty and staff
- Declining quality of students
- Difficulty of sustaining internal capabilities
- Lack of new ideas and access to fast-changing technology
- Lack of industry-Institution partnership
- Financial status and sustainable financial backing of the institution

Method to defend against threats: These are external factors beyond the institution's control, but the institution must have a 'Plan' to address the ones that have a high probability of occurring and present a serious risk to the achievement of the objective. If there are sufficient Strengths and Opportunities in the institution, all the risks need not be addressed.

**4. SWOT Analysis limitations:**

The classification of some factors as Strengths or Weaknesses, or as Opportunities or Threats is somewhat arbitrary. For example, a particular institution's culture can be either Strength or a Weakness. A technological change can be either a Threat or an Opportunity. Perhaps what is more important than the superficial classification of these factors is the institution's awareness of them and its development of a strategic plan to use them to its advantage.



## GUIDELINES ON TRAINING NEEDS ANALYSIS (TNA)

### 1. Introduction:

Training Needs Analysis (TNA) is a series of activities to define the gap between the current and the desired individual and organizational performances. It identifies the areas where both individuals and an organization would benefit from training in order to become more effective at achieving the individuals' own objectives and the objectives of the Organization.

TNA is a systematic process based on specific information converging techniques. It proceeds in stages, with the findings of one stage helping to shape the next one. Each particular stage requires its own mix of observations and analysis. It is not a one-time event. Organizations need to carry it out every year and the training/development plan resulting from it is to be implemented in the following year. TNA gives performance improvement, introduction of new system, task or technology and organizational benefits.

### 2. Scope:

- All class IV staff
- All support staff and technical staff
- All faculty (including contractual and ad-hoc)
- All Heads of the Departments and Deans
- All administrative staff (including finance personnel)
- Principal/Director

### 3. Suggested training domains:

**Table-41**

**Suggested Training Domains for Faculty and Various Categories of Staff**

S. No	Staff/Faculty Category	Suggested Areas of Training/Development
1	Class IV Staff	Attitudinal and mind-set change, personality development, motivation, qualification upgradation
2	Support Staff	Attitudinal and mind-set change, personality development, communication skills, motivation, office modernization, qualification upgradation, advance learning in their relevant occupational areas, other felt-needs
3	Technical Staff	Attitudinal and mind-set change, Personality development, Communication skills, Motivation, Qualification upgradation, Operation and Maintenance of modern laboratory and advanced equipment, Advance learning in their relevant occupational areas, other felt-needs
4	Faculty (including contractual and ad-hoc)	Attitudinal and mind-set change, Personality development, Communication skills, Motivation, Qualification upgradation, Effective teaching – learning (pedagogy) processes, Advanced subject knowledge, Advanced R&D activities, lab/workshop development, Quality management, Standard conferences, consultancy, other felt-needs
5	HoD's and Deans	Attitudinal and mind-set change, Personality development, Communication skills, Motivation, Qualification upgradation, Effective teaching – learning (pedagogy) processes, Advanced subject knowledge, Advanced R&D activities, Lab / workshop development, Quality Management, Attachment to industry and premiere R&D organizations, consultancy, Planning and Implementation, Budgeting Financial Management, Management Capacity Development, Departmental / Institutional Management, other felt-needs
6	Administrative Staff (including finance personnel)	Attitudinal and mind-set change, Personality development, Communication skills, Motivation, Qualification upgradation, Institutional Development Management, Quality Management, Management Information System, Planning and Implementation, Budgeting and Financial Management, Systems Automation, Management Capacity Development, Human Resource Management, other felt-needs
7	Principal/Director	Institutional Development and Management, Quality Management, Management Capacity Development, Planning and Implementation, Budgeting and Financial Management, Extension of services, Exposure to premiere institutions/Centres of Excellence (National and International), Sustainability strategy, other felt-needs

#### 4. Procedure:

- 4.1 All staff, faculty, Heads of Department/ Sections and Institutional Project Coordinator of the institution are required to fill-up a relevant TNA proforma as indicated below:

**Table-42**  
**List of TNA Proforma for Faculty and Various Categories of Staff**

S. No.	Staff/Faculty Category	Applicable TNA Proforma
1	Class IV Staff	Proforma - I
2	Support Staff	Proforma - II
3	Technical Staff	Proforma - III
4	Faculty (including contractual and ad-hoc)	Proforma - IV
5	HoD's and Deans	Proforma - V
6	Administrative Staff (including finance personnel)	Proforma - VI
7	Principal/Director	Proforma - VII
8	Consolidated Departmental Training/Development Plan	Proforma - VIII
9	Consolidated Institutional Training/Development Plan	Proforma - IX

- 4.2 Following information may be used by the individuals for exercising TNA:

- Institution's Strategic Development Plan
- Institution's (recent) SWOT analysis
- Previous years' Development/Training plans
- Seniors' and/or Peers' feedback
- Students' feedback
- Feedback on previously attended training programmes
- Any other relevant feedback

- 4.3 Each staff member and faculty should analyze his/her current knowledge and skills, and the desired knowledge and skills for effective performance of his/her current job profile as well as perceived future/prospective job profile. To take-up the exercise of TNA, staff and faculty are suggested to use the information/feedback as mentioned at Sub-head 4.2 (in case such information/feedback is not available they should have discussions with their students/peers/seniors/HoD/Principal/Director). While analyzing the training needs, a staff member should align his/her personal development objectives with those of the department.

In cases of training in specialized subject areas and R&D skills, faculty are expected to have communication with the organization(s) where such trainings are available in order to furnish information pertaining to the duration, period (tentative date) and trainer organization, in the TNA proforma (this will essentially be helpful to HoD and Principal/Director in finalizing a Plan for deputing staff and faculty in a phased manner).

All staff members and faculty will need to submit the duly filled-in TNA proforma indicating training needs along with their development objectives, to the HoD within three weeks.

- 4.4 HoDs should review the department's individual filled-in TNA proforma, make an attempt to align the individual development aspirations with the department's objectives/priorities, and consolidate into a Departmental Training/Development Plan (Proforma-VIII), including HoD's own training/development needs.

HoDs should submit within two weeks, the Departmental Training/Development Plan (Proforma-VIII) along with an Undertaking that the same is resulted from an actual needs analysis of the Department, for Principal's/Director's approval.

- 4.5 Principal/Director will review all Departments'/Sections' Training/Development Plans, make an attempt to align it with the institution's objectives/priorities, and consolidate into an Institutional Training/Development Plan (Proforma-IX), including Principal's/Director's own training/development needs.
- 4.6 Principal/Director will recommend the Institutional Training/Development Plan (Proforma-IX) along with an Undertaking that the same is resulted from an actual Training Needs Analysis of the institution, for BoG's approval.

**5. Convergence of TNA:**

The exercise of TNA at various levels finally converges into an Institutional Training/Development Plan, comprising a short-term (up to three months) training/development plan and a long-term (above three months) Training/Development Plan.

**6. Proforma for TNA:**

Various proforma are as follows:

## TRAINING NEEDS ANALYSIS PROFORMA - I: FOR CLASS IV STAFF

Name of Department : .....

Name of the Staff Member : .....

Designation : .....

Employed since : .....

Age : .....

Highest Qualification : .....

A. Jobs being currently performed:

- 1) .....
- 2) .....
- 3) .....

B. Previous trainings, if undergone:

S.No.	Areas of training/development	Duration (Days)	When (Date)
1			
2			
3			

C. Indicate your desire for training/development:

S.No.	Areas of training/development	Duration (Days)	Convenient (tentative) Date
1			
2			
3			

Signature with date  
(Name of the Staff Member)

## TRAINING NEEDS ANALYSIS PROFORMA - II: FOR SUPPORT STAFF

Name of Department : .....

Name of the Staff Member : .....

Designation : .....

Employed since : .....

Age : .....

Highest Qualification : .....

Area of expertise, if any : .....

**A. Jobs being currently performed:**

1 ..... 4 .....

2 ..... 5 .....

3 ..... 6 .....

**B. Previous trainings, if undergone during last two years:**

S.No	Areas of training/development	Duration (Days)	When (Date)
1			
2			
3			
4			

**C. Your career development objectives:**

1) .....

2) .....

3) .....

**D. Indicate your desire for training/development:**

S.No	Areas of training/development	Duration (Days)	Convenient (tentative) Dates
1			
2			
3			
4			

Signature with date  
(Name of the Support Staff Member)

### TRAINING NEEDS ANALYSIS PROFORMA – III: FOR TECHNICAL STAFF

Name of Department : .....

Name of the Staff Member : .....

Designation : .....

Employed since : .....

Age : .....

Highest Qualification : .....

Area of expertise, if any : .....

**A. Jobs being currently performed:**

- 1 ..... 4 .....
- 2 ..... 5 .....
- 3 ..... 6 .....

**B. Previous trainings, if undergone during last two years:**

S.No.	Areas of training/development	Duration (Days)	When (Date)
1			
2			
3			
4			

**C. Your career development objectives:**

- 1) .....
- 2) .....
- 3) .....

**D. Indicate your desire for training/development:**

S.No.	Areas of training/development	Duration (Days)	Convenient (tentative) Dates
1			
2			
3			
4			

Signature with date  
(Name of the Technical Staff Member)

**TRAINING NEEDS ANALYSIS PROFORMA - IV: FOR FACULTY  
(INCLUDING AD-HOC AND CONTRACTUAL)**

Name of the Department : .....

Name of the Faculty Member : .....

Designation : .....

Employed since : .....

Nature of Employment : Regular/Ad-hoc/Contractual/Other: .....

Age : .....

Highest Qualification : .....

Area of expertise, if any : .....

**A. Jobs being currently performed:**

1 ..... 5 .....

2 ..... 6 .....

3 ..... 7 .....

4 ..... 8 .....

**B. Previous trainings, if undergone during last two years (Use additional sheet if required):**

	Areas of training/development	Duration (Days)	When (Date)
1			
2			
3			
4			

**C. Objectives / priorities of the Department:**

1 ..... 4 .....

2 ..... 5 .....

3 ..... 6 .....

**D. Your career development objectives:**

1).....

2).....

3).....

E. Indicate your desire for training/development (Use additional sheet if required):

S.No	Areas of Training/ Development	Duration (Days)	Convenient (tentative) Dates	Trainer Organizations
1				
2				
3				
4				
5				

Signature with date  
(Name of the Faculty)



## TRAINING NEEDS ANALYSIS PROFORMA - V: FOR HoDS and DEANS

Name of the Department/School : .....

Name of the HoD/Dean : .....

Employed since : .....

Nature of Employment : Regular/Ad-hoc/Contractual/Other: .....

Age : .....

Highest Qualification : .....

Area of expertise, if any : .....

**A. Jobs being currently performed:**

- |         |         |
|---------|---------|
| 1 ..... | 5 ..... |
| 2 ..... | 6 ..... |
| 3 ..... | 7 ..... |
| 4 ..... | 8 ..... |

**B. Previous trainings, if undergone, during last two years (Use additional sheet if required):**

	Areas of training/development	Duration (Days)	When (Date)
1			
2			
3			
4			

**C. Objectives / Priorities of the Institution:**

- |         |         |
|---------|---------|
| 1 ..... | 4 ..... |
| 2 ..... | 5 ..... |
| 3 ..... | 6 ..... |

**D. Your career development objectives:**

- 1).....
- 2) .....
- 3) .....

E. Indicate your desire for training/development (Use additional sheet if required):

S.No	Areas of Training/ Development	Duration (Days)	Convenient (tentative) Dates	Trainer Organizations
1				
2				
3				
4				
5				

Signature with date  
(Name of the HoD/Dean)

**TRAINING NEEDS ANALYSIS PROFORMA - VI: FOR ADMINISTRATIVE STAFF  
(INCLUDING FINANCE PERSONNEL)**

Name of the Section : .....

Name of the Staff Member : .....

Designation : .....

Employed since : .....

Nature of Employment : Regular/Ad-hoc/Contractual/Other: .....

Age : .....

Highest Qualification : .....

Area of expertise, if any : .....

**A. Jobs being currently performed:**

1 ..... 4 .....

2 ..... 5 .....

3 ..... 6 .....

**B. Previous trainings, if undergone, during last two years (Use additional sheet if required):**

S.No	Areas of training/development	Duration (Days)	When (Date)
1			
2			
3			

**C. Objectives / Priorities of the Section:**

1 ..... 3 .....

2 ..... 4 .....

**D. Your career development objectives:**

1).....

2) .....

3) .....

E. Indicate your desire for training/development (Use additional sheet if required):

S. No	Areas of Training/ Development	Duration (Days)	Convenient (tentative) Dates	Trainer Organizations
1				
2				
3				
4				
5				

Signature with date  
(Name of the Administrative/Finance Staff Member)

## TRAINING NEEDS ANALYSIS PROFORMA - VII: FOR PRINCIPAL/DIRECTOR

Name of the Principal/Director : .....

Employed since : .....

Nature of Employment : Regular/Ad-hoc/Contractual/Other: .....

Age : .....

Highest Qualification : .....

Area of expertise, if any : .....

**A. Jobs being currently performed:**

- |         |         |
|---------|---------|
| 1 ..... | 5 ..... |
| 2 ..... | 6 ..... |
| 3 ..... | 7 ..... |
| 4 ..... | 8 ..... |

**B. Previous trainings, if undergone, during last two years (Use additional sheet if required):**

	Areas of training/development	Duration (Days)	When (Date)
1			
2			
3			
4			

**C. Objectives / Priorities of the Institution:**

- |         |         |
|---------|---------|
| 1 ..... | 5 ..... |
| 2 ..... | 6 ..... |
| 3 ..... | 7 ..... |

**D. Your professional development objectives:**

- 1) .....
- 2) .....
- 3) .....

E. Indicate your desire for training/development (Use additional sheet if required):

	Areas of Training/ Development	Duration (Days)	Convenient (tentative) Dates	Trainer Organizations
1				
2				
3				
4				
5				

Signature with date  
(Name of the Principal/Director)

**TRAINING NEEDS ANALYSIS PROFORMA- VIII:  
DEPARTMENTAL TRAINING/DEVELOPMENT PLAN**

Name of the Department/Section : .....

Name of the Head of Department/Section : .....

*Note: i) Strike out whichever is not applicable. ii) Additional sheets may be used wherever required.*

**A. Details of previous training**

i) Previous trainings the support staff has undergone in last two years:

	Names of support staff members	Areas of training/development	Duration (Days)	When (Date)
1				
2				
3				

ii) Previous trainings the technical staff has undergone in last two years:

	Names of technical staff members	Areas of training/development	Duration (Days)	When (Date)
1				
2				
3				

iii) Previous trainings the administrative and finance staff has undergone in last two years:

	Names of administrative/ finance staff members	Areas of training/development	Duration (Days)	When (Date)
1				
2				
3				

iv) Previous trainings the faculty has undergone in last two years:

	Names of support staff members	Areas of training/development	Duration (Days)	When (Date)
1				
2				
3				

v) Previous trainings the HoD/Dean has undergone in last two years:

Name of the HoD/Dean	Areas of training/development	Duration (Days)	When (Date)

B. Objectives / Priorities of the Institution:

- 1 ..... 4 .....
- 2 ..... 5 .....
- 3 ..... 6 .....

C. Objectives / Priorities of the Department/Section:

- 1 ..... 4 .....
- 2 ..... 5 .....
- 3 ..... 6 .....

D. Aligning the objectives/priorities of your Department/Section and Institution with those of the individual staff and faculty, identify the areas of training/development and suitable staff and faculty to be trained/developed.

i) Class IV Staff:

	Names of staff members	Areas of training/development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1					
2					
3					

ii) Support Staff:

	Names of staff members	Areas of training/development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1					
2					
3					

iii) Technical Staff:

	Names of staff members	Areas of training/development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1					
2					
3					

iv) Administrative and Finance Staff:

	Names of staff members	Areas of training/development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1					
2					
3					



v) Faculty:

	Names of faculty	Areas of training/development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations
1					
2					
3					

vi) HoD/Dean:

Names of staff	Areas of training/development	Duration (Days)	Convenient (tentative) dates	Trainer Organizations

#### UNDERTAKING

This is to certify that an actual Training Needs Analysis has been taken by the department's staff and faculty, and that the Department's training/development plan as described above is based on the felt-needs of the staff and faculty aligned with the Department's objectives and priorities.

Signature with date  
(Name of the Head of the Department/Section)

## TRAINING NEEDS ANALYSIS PROFORMA- IX: INSTITUTIONAL TRAINING/DEVELOPMENT PLAN

Name of the Principal/Director : .....

**A. Department/Section wise details of previous trainings**

i) Previous trainings the support staff has undergone in last two years:

	Names of support staff members	Areas of training/ development	Duration (Days)	When (Date)
1				
2				
3				

ii) Previous trainings the technical staff has undergone in last two years:

	Names of technical staff members	Areas of training/ development	Duration (Days)	When (Date)
1				
2				
3				

iii) Previous trainings the administrative/finance staff has undergone in last two years:

	Names of administrative/ finance staff members	Areas of training/ development	Duration (Days)	When (Date)
1				
2				
3				

iv) Previous trainings the faculty has undergone in last two years:

	Names of faculty member	Areas of training/ development	Duration (Days)	When (Date)
1				
2				
3				

v) Previous trainings the HoD/Dean has undergone in last two years:

Name of the HoD/Dean	Areas of training/ development	Duration (Days)	When (Date)

**B. Objectives / Priorities of the Institution:**

- |         |         |
|---------|---------|
| 1 ..... | 4 ..... |
| 2 ..... | 5 ..... |
| 3 ..... | 6 ..... |

C. Aligning with the Institution's vision and mission, objectives and priorities, please list department/section-wise areas wherein staff and faculty need training/development (additional seats may be used wherever required).

i) Short-term (up to three months) training/development plan for Class-IV Staff, Support/ Technical/Administrative/ Finance Staff:

	Department / Section	Areas of training/ development	Names of suitable staff members for training/ development	Duration (Days)	Tentative dates of training/ development programme	Trainer Organizations
1						
2						
3						

D. Long-term (above three months) training/development plan for Class IV Staff, Support/ Technical / Administrative/Finance Staff:

	Department/ Section	Area of training/ development	Name of suitable staff member for training/ development	Duration (Days)	Tentative date of training/ development programme	Trainer Organizations
1						
2						
3						

E. Short-term (up to three months) training/development plan for faculty:

	Department/ Section	Area of training/ development	Name of suitable faculty for training/ development	Duration (Days)	Tentative date of training/ development programme	Trainer Organizations
1						
2						
3						

F. Long-term (above three months) training/development plan for faculty:

	Department/ Section	Area of training/ development	Name of suitable faculty for training/ development	Duration (Days)	Tentative date of training/ development programme	Trainer Organizations
1						
2						
3						

#### UNDERTAKING

This is to certify that an actual Training Needs Analysis has been taken by the institution, and that the Institution's training/Development Plan as described above is based on the felt-needs of the concerned Departments/Sections aligned with the Institution's objectives and priorities.

Signature with date  
(Name of the Principal/Director)

## GUIDELINES FOR INTERNATIONAL TRAVEL

### 1. Introduction:

These Guidelines are framed to ensure that all international travel related to the Project are undertaken as per the set procedures and after obtaining the necessary approvals.

Only the PhD students, faculty, Heads of the Departments and Heads of the project institutions, State officials handling the Project, Directors of Technical Education, SPFU officials, vice-chancellors of affiliating universities and MHRD/NPIU officials are eligible for international travel under the Project for the following:

- a) Presentation of Papers in International seminars, conferences, etc.
- b) Faculty training at International institutions
- c) Study and networking tour

### 2. Procedure:

- i) Institutions need to prepare a detailed proposal containing the following:
  - a) Clear objectives of the International travel linked with the Project,
  - b) Clear indication of the expected outcome of the tour and value addition,
  - c) Details of previous foreign tour attended by the prospective participants,
  - d) Daily schedule of activities to be covered,
  - e) Availability of budget and financial implications with break-up of fee charges, accommodation, other logistic arrangements and travel expenses,
  - f) Invitation letters from the institutions to be visited.
- ii) A complete proposal with BoG's approval is to be submitted to NPIU through the SPFU, well in advance of the actual date of travel.
- iii) CFIs are required to submit the proposal with BoG's approval directly to NPIU, well in advance of the actual date of travel.
- iv) The SPFU will forward the proposal after necessary scrutiny to NPIU for obtaining the Competent Authority's approval. NPIU will process received State and Centrally Funded Institutions proposals and forward to MHRD for obtaining the approval of the Competent Authority.
- v) NPIU will communicate to the SPFU/Centrally Funded Institutions the approval of the Competent Authority.
- vi) In case of SPFUs, a complete proposal giving all the details as mentioned in Sr. No. (i) along with list of participants with their affiliation and with State Government's approval is to be submitted to NPIU, well in advance of the actual date of travel for obtaining the approval of the Competent Authority.

### 3. Important points to be noted:

- Any international tour undertaken without Competent Authority's approval will not be considered a part of the Project and, therefore, expenditure incurred will not be eligible for reimbursement.
- Heads of Institutions should avoid travel during the end of the financial year.

- The period of Study and Networking tours should be limited to seven working days. This limit is not applicable to other activities.
- All austerity measures like discount on training fee, accommodation etc. should be availed. The travels should be undertaken only under the available cheapest restricted economic class airfare.
- The officials visiting abroad are required to prepare a detailed report of their visit, clearly specifying the gains and an action plan for implementing the feasible activities. A copy of the report of each participant should be sent to NPIU/SPFU and should also be hosted on the institution's, SPFU's website and also linked to NPIU's website.
- The experience should also be shared with fellow faculty of the institution.

**LIST OF CENTRALLY FUNDED INSTITUTIONS AND STATE INSTITUTIONS THAT PARTICIPATED  
IN TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP) PHASE – I**

<b>CENTRALLY FUNDED INSTITUTIONS (18)</b>	
1	<b>Motilal Nehru National Institute of Technology, Allahabad</b>
2	<b>Maulana Azad National Institute of Technology, Bhopal</b>
3	<b>National Institute of Technology, Calicut</b>
4	<b>National Institute of Technology, Durgapur</b>
5	National Institute of Technology, Hamirpur
6	<b>Malviya National Institute of Technology, Jaipur</b>
7	<b>Dr BR Ambedkar National Institute of Technology, Jalandhar</b>
8	<b>National Institute of Technology, Jamshedpur</b>
9	<b>National Institute of Technology, Kurukshetra</b>
10	<b>Visvesvaraya National Institute of Technology, Nagpur</b>
11	<b>National Institute of Foundry and Forge Technology, Ranchi</b>
12	<b>National Institute of Technology, Rourkela</b>
13	National Institute of Technology, Silchar
14	<b>National Institute of Technology, Srinagar</b>
15	<b>Sardar Vallabh Bhai National Institute of Technology, Surat</b>
16	<b>National Institute of Technology, Karnataka, Surathkal</b>
17	<b>National Institute of Technology, Tiruchirapalli</b>
18	<b>National Institute of Technology, Warangal</b>
<b>STATE INSTITUTIONS (109)</b>	
<b>ANDHRA PRADESH (12)</b>	
19	<b>AU College of Engineering, Vishakhapatnam</b>
20	Bapatla Engineering College, Bapatla
21	Govt Institute of Electronics, Secunderabad
22	<b>JNTU College of Engineering, Kukatpally, Hyderabad</b>
23	JNTU College of Engineering, Anantpur
24	JNTU College of Engineering, Kakinada
25	JNTU Institute of Science and Technology, Hyderabad
26	Osmania University College of Technology, Hyderabad
27	Rajiv Gandhi Memorial College of Engineering and Technology, Nandyal
28	Sreenidhi Institute of Science and Technology, Ghatkesar
29	<b>SVU College of Engineering, Tirupati</b>
30	<b>University College of Engineering, Osmania University, Hyderabad</b>
<b>GUJARAT (6)</b>	
31	DD Institute of Technology, Nadiad
32	Dr S&SS Gandhi College of Engineering and Technology, Surat
33	Government Engineering College, Gandhi Nagar
34	Government Engineering College, Modasa
35	Govt Polytechnic, Ahmedabad
36	<b>LD College of Engineering, Ahmedabad</b>
<b>HARYANA (5)</b>	
37	Deen Bandhu Chottu Ram University of Science and Technology, Murthal
38	Government Polytechnic, Nilokheri
39	Guru Jambheshwar University, Hisar
40	Kurukshetra University, Kurukshetra

41	YMCA Institute of Engineering, Faridabad
<b>HIMACHAL PRADESH (3)</b>	
42	Government Polytechnic for Women, Kandaghat
43	Government Polytechnic, Hamirpur
44	Government Polytechnic, Sundernagar
<b>JHARKHAND (4)</b>	
45	<b>Birla Institute of Technology, Mesra</b>
46	BIT, Sindri
47	Government Polytechnic, Dumka
48	Government Polytechnic, Ranchi
<b>KARNATAKA (14)</b>	
49	<b>Basaveswara College of Engineering, Vidyanagar Bagalkot</b>
50	BMS College of Engineering, Bangalore
51	Dr Ambedkar Institute of Technology, Bangalore
52	Malanad College of Engineering, Hassan
53	MS Ramaiah Institute of Technology, Bangalore
54	National Institute of Technology, Mysore
55	<b>NMAM Institute of Technology, NITTE, Udupi</b>
56	Poojya Doddappa College of Engineering, Gulbarga
57	Shri Dharmasthala Manjunatheshwara College of Engineering, Dharwad
58	<b>Shri Jayachamarajendra College of Engineering, Mysore</b>
59	Siddaganga Institute of Technology, Tumkur
60	Sri Siddhartha Institute of Technology, Tumkur
61	University BDT College of Engineering, Davangere
62	<b>University of Vishweshwaraiah College of Engineering, Bangalore</b>
<b>KERALA (5)</b>	
63	College of Engineering, Chengannur
64	<b>College of Engineering, Trivandrum</b>
65	LBS College of Engineering, Kasaragod
66	Model Engineering College, Kochi
67	Sree Chitra Thirunal College of Engineering, Trivandrum
<b>MADHYA PRADESH (7)</b>	
68	<b>Jabalpur Engineering College, Jabalpur</b>
69	Kalaniketan Polytechnic, Jabalpur
70	Rajiv Gandhi Proudhyogiki Vishwavidyalaya, Bhopal
71	Rewa Engineering College, Rewa
72	Sardar Vallabh Bhai Polytechnic College, Bhopal
73	<b>Shri GS Institute of Technology and Science, Indore</b>
74	Ujjain Engineering College, Ujjain
<b>MAHARASHTRA (17)</b>	
75	<b>College of Engineering, Pune</b>
76	DKTE Society's Textile and Engg. Institute, Ichalkaranji
77	Dr Babasaheb Ambedkar Technological University, Lonere
78	GH Rasoni College of Engineering, Nagpur
79	Government College of Engineering, Aurangabad
80	Government Polytechnic, Mumbai
81	Government Polytechnic, Nagpur
82	Government Polytechnic, Pune
83	Govt College of Engineering, Amravati

84	KES Rajarambapu Institute of Technology, Sakharale, Islampur, Distt. Sangli
85	<b>Mumbai University Institute of Chemical Technology, Mumbai</b>
86	Shri Guru Gobind Singhji Institute of Engineering and Technology, Vishnupuri, Nanded
87	Shri Sant Gajanan Maharaj College of Engineering, Shegaon
88	<b>Veermata Jijabai Technological Institute, Matunga, Mumbai</b>
89	Vishwakarma Institute of Technology, Pune
90	Walchand College of Engineering, Sangli
91	Yeshwantrao Chavan College of Engineering, Nagpur
<b>TAMIL NADU (11)</b>	
92	AC College of Technology, Chennai
93	<b>Alagappa Chettiar College of Engineering and Technology, Karaikudi</b>
94	Central Polytechnic College, Tharamani, Chennai
95	<b>College of Engineering, Guindy, Chennai</b>
96	DD Govt Polytechnic College for Women, Tharamani, Chennai
97	Government College of Engineering, Salem
98	Government College of Engineering, Tirunelveli
99	<b>Government College of Technology, Coimbatore</b>
100	Madras Institute of Technology, Chennai
101	Tamil Nadu Polytechnic College, Madurai
102	Thanthai Periyar Govt Institute of Technology, Vellore
<b>UTTAR PRADESH (10)</b>	
103	Bundelkhand Institute of Engineering and Technology, Jhansi
104	Dr Ambedkar Institute of Technology for Handicapped, Kanpur
105	<b>Harcourt Butler Technological Institute, Kanpur</b>
106	Institute of Engineering and Technology, Lucknow
107	Integral University, Lucknow
108	Kamla Nehru Institute of Technology, Sultanpur
109	Madan Mohan Malviya Engineering College, Gorakhpur
110	Shri Ram Murthi Smarak College of Engineering and Technology, Bareilly
111	United College of Engineering and Research, Allahabad
112	Uttar Pradesh Textile Technology Institute, Kanpur
<b>UTTARAKHAND (4)</b>	
113	Dehradun Institute of Technology, Dehradun
114	Government Polytechnic, Dehradun
115	Govind Ballabh Pant Engineering College, Paurigarhwal
116	<b>Govind Ballabh Pant University of Agriculture and Technology, Pantnagar</b>
<b>WEST BENGAL (11)</b>	
117	Asansol Engineering College, Asansol
118	<b>Bengal Engineering and Science University, Howrah</b>
119	Government College of Engineering and Ceramic Technology, Kolkata
120	Government College of Engineering and Textile Technology, Serampore
121	Haldia Institute of Technology, Haldia
122	Institute of Engineering and Management, Kolkata
123	<b>Jadavpur University, Jadavpur</b>
124	Jalpaiguri Govt Engineering College, Jalpaiguri
125	Kalyani Government Engineering College, Kalyani
126	Netaji Subhash Engineering College, Kolkata
127	<b>University College of Technology, Calcutta University, Kolkata</b>

**Legend :** Lead Institutions are shown in bold.



## GUIDELINES ON INDUSTRY-INSTITUTION-INTERACTION CELL (I-I-I-C)

### 1. Objective:

To explore and identify common avenues of interaction with Industry as per the requirements of the institution.

### 2. Scope:

All the institutions covered under the Project will form Industry-Institution-Interaction Cell (I-I-I-C) to establish purposeful interaction between Industry and institution.

For the Cell to function smoothly and to meet its objectives effectively, I-I-I-C must have some core staff. The core staff should include a Coordinator (not less than an Assistant Professor) from the institution who will be assisted by a Project Assistant and an Office Assistant. The Cell should meet at least twice per semester. The proposed composition of the Cell is as following:

- |   |   |          |
|---|---|----------|
| a) Director/ Principal of the institution                 | - | Chairman |
| b) HOD and one faculty from each department               | - | Member   |
| c) Two Members from Industry/ Entrepreneurs of the region | - | Member   |
| d) Training and Placement Officer                         | - | Member   |
| e) Coordinator of the Cell                                | - | Convener |

### 3. Strategy :

IIC will be responsible for designing the roadmap for interaction with Industry recognising the inherent strengths as well as the weaknesses of the institution. The Government organizations in the region also can participate in the Industry-Institution-Interaction-Cell.

### 4. Suggested Activities under IIC :

- a) To identify and facilitate Guest Lectures, Interactive workshops, conferences, seminars, Brain Storming Sessions, Technical Discussions etc. with Members of the Industry, outside Experts, eminent personalities at regular interval.
- b) To conduct Industrial Training, Orientation Courses, Industrial Visits etc for faculty and students at regular intervals.
- c) To facilitate joint research work, consultancy involving faculty and students.
- d) To conduct industrial exhibitions to highlight research facilities and expertise available with the institution.
- e) To facilitate professionals from Industry to work as visiting faculty in institutions and short or long periods deployment of faculty from institutions to Industry for gaining industrial experience and/or work on projects in Industry.
- f) To seek and associate Experts from Industry in Curriculum Development and review.
- g) To identify Continuing Education opportunities, short-term programmes and training needs of the Industry, which the institution can provide.
- h) To promote revenue generating activities for the institution like Lab Testing, Calibration, consultancy and R&D etc.
- i) To assess periodically the scientific and technological scenario/ happenings in India and abroad in order to translate it into action for taking up future R&D work.

## **5. Deliverables :**

I-I-I-C will be responsible for the following deliverables:

- Increase in collaboration with Industry
- Increased rate of campus placement of students
- Increase in industrial training for students arranged by institution
- Absorption of students by same industries providing industrial training
- Increase in IRG by collaborating with Industry
- Increase in utilization of institutional resources by Industry
- Increase in solving the real life problems of the region

## SCHEMES FOR PROPOSAL EVALUATION

**Table-43**  
**(A) Scheme for Evaluation of State Proposals**

<b>S. No.</b>	<b>Evaluation Parameters</b>	<b>Marks</b>
1	Evidence that the Directorate of Technical Education (DTE) located within the State structure is in a manner that facilitates on-going coordination with State policy related to other dimensions of Higher Education	10
2	Evidence that the State's participation in the Project is linked to its policy objectives for Technical Education	10
3	Understanding that potential contributions of project reflect an understanding of the objectives and suggested activities of Sub-components 1.1, 1.2, 1.2.1 and 1.3	10
4	Understanding of the underlying rationale for granting institutions increased autonomy as required in Eligibility Criterion 1	10
5	Commitment to meeting the requirement of Criterion 1 before signing MoU with MHRD to seek and obtain autonomous status and agree to continuous funding	10
6	Demonstration of intent to establish a governance model that will assure accountability towards Government, Civil Society, and Industry	10
7	Demonstration that the structure of the Board of Governors reflects the requirements set forth in Section-5	10
8	Evidence that the State has identified, understood and discussed with key stakeholders the main steps and challenges for implementation of the required reforms	10
9	Evidence of full understanding and commitment of the rationale for granting institutions increased Financing and Administrative Autonomy	10
10	Evidence that the State has a plan to sustain the gains of the Project after it has been closed	10
	<b>Total Marks</b>	<b>100</b>

**Table-44**  
**(B) Scheme for Evaluation of Eligibility Proposals under Sub-Component 1.1**

S No	Evaluation Parameters	Marks
<b>A</b>	<b>Institutional Information</b>	
1	Clarity and adequacy of institutional basic information	<b>10</b>
<b>B</b>	<b>Quality of SWOT Analysis</b>	
1	Appropriateness of the procedure adopted for the conduct of SWOT analysis and adequacy of participation of stakeholders	<b>10</b>
2	Clarity in the identification of strengths, weaknesses, opportunities and threats	<b>10</b>
<b>C</b>	<b>Clarity in identification of objectives and feasibility of the action plan to implement the institutional project</b>	
1	Clarity in the identification of general development objectives, related specific objectives, their expected results, and coherence with SWOT analysis	<b>10</b>
2	Have the key activities been identified clearly and adequately for each specific-objective	<b>10</b>
3	Are the schedules for activities realistic	<b>10</b>
<b>D</b>	<b>Implementation of reforms</b>	
1	Institution's capability to meet the key challenges for obtaining Autonomous Institution status and exercising of the granted autonomy	<b>10</b>
2	Institution's capability to meet the key challenges for obtaining accreditation of programmes	<b>10</b>
3	Quality of the action plan to utilize the block grant effectively and efficiently	<b>10</b>
4	Quality of the plan to increase the institution's non-tuition revenue	<b>10</b>
<b>Total Marks</b>		<b>100</b>

Table-45

## (C) Scheme for Evaluation of Institutional Development Proposals (IDP) under Sub-Component 1.1

S. No.	Evaluation Parameters	Marks		
I	<b>Institutional Preparedness and Implementation Feasibility</b>			
	A	Clarity of institutional basic information including baseline data	5	
	B	Quality of SWOT analysis		
		1	Appropriateness for the procedure adopted for the conduct of SWOT analysis and adequacy of participation of stakeholders	5
		2	Clarity in the identification of strengths, weaknesses, opportunities and threats	5
	C	Overall implementation feasibility of institutional project		
		1	Clarity in the identification of general development objectives, related specific objectives, their expected results, and its coherence with SWOT analysis	5
		2	Have the key activities been identified clearly and adequately for each specific-objective	5
		3	Adequacy of the Institutional Project Implementation arrangements	5
	D	Coherence of proposal with State's/regional development plan	5	
	E	Reasonability of proposed budget	5	
	<b>Sub-total (I)</b>		<b>40</b>	
	II	<b>Clarity and Quality of the Action Plans for :</b>		
F		implementation of reforms		
		1	quality and adequacy of proposed actions for obtaining autonomous institutional status and for exercising of the granted autonomy	5
		2	quality and adequacy of proposed actions for obtaining accreditation of UG & PG programmes	5
		3	quality and adequacy of action plan to implement all the academic and non-academic reforms	5
G		improving learning outcomes of students in terms of higher pass rates and higher academic achievements	10	
H		identification of weak students and for improvement in their learning outcomes through finishing school	5	
I		improving employability of graduates	5	
J		strengthening of existing PG programmes	5	
K		starting new PG programmes	5	
L		faculty development including pedagogical training to:		
		1	develop faculty/technical staff in subject domain	5
		2	improve pedagogical skills of faculty for better student learning	5
M	enhanced interaction with industry	5		
<b>Sub-total (II)</b>		<b>60</b>		
<b>TOTAL (I+II)</b>		<b>100</b>		

Table-46

## (D) Scheme for Evaluation of Institutional Development Proposals (IDP) under Sub-Component 1.2

S. No	Evaluation Parameters	Marks		
<b>I</b>	<b>Institutional Preparedness and Implementation Feasibility</b>			
	<b>A</b>	Clarity of institutional basic information including baseline data	5	
	<b>B</b>	Overall proposal implementation feasibility		
		1	Clarity in the identification of general development objectives, related specific objectives, their expected results, and its coherence with SWOT analysis	5
		2	Have the key activities been identified clearly and adequately for each specific-objective	5
		3	Adequacy of the Institutional Project Implementation arrangements	5
	<b>C</b>	Quality of SWOT analysis		
		1	Appropriateness for the procedure adopted for the conduct of SWOT analysis and adequacy of participation of stakeholders	5
		2	Clarity in the identification of strengths, weaknesses, opportunities and threats	5
	<b>D</b>	Coherence of proposal with State's/regional development plan	5	
	<b>E</b>	Reasonability of proposed budget	5	
	<b>Sub-total (I)</b>		<b>40</b>	
	<b>II</b>	<b>Clarity and Quality of the Action Plans for :</b>		
		<b>F</b>	scaling-up research and innovation	
1			quality of action plan for quantitatively increasing and qualitatively improving research activities	5
2			quality of action plan to transfer technology and for commercialization of R&D (the innovation agenda)	5
<b>G</b>		scaling-up PhD enrolment through existing and new programmes	10	
<b>H</b>		scaling-up enrolment into Masters programmes in existing and new programmes	10	
<b>I</b>		research collaborative activities with Institution at National and International level		
		1	identification of options to improve and increase research collaborations at National and International levels	5
		2	clarity in identification of expected quality enhancement in Masters and doctoral programmes and faculty research	5
<b>J</b>		potential impact and depth of proposed Industry collaboration	5	
<b>K</b>		faculty development including pedagogical training to:		
		1	develop faculty/technical staff in subject domain	5
		2	improve pedagogical skills of faculty for better student learning	5
<b>L</b>	identification of weak students and for improvement in their learning outcomes through finishing school	5		
<b>Sub-total (II)</b>		<b>60</b>		
<b>TOTAL ( I+II)</b>		<b>100</b>		

Table-47

## (E) Scheme for Evaluation of Institutional Development Proposals (IDP) under Sub-Sub-Component 1.2.1

S. No	Evaluation Parameters	Marks	
I	<b>Implementation Feasibility</b>		
	<b>A</b> Overall proposal implementation feasibility		
	1 Appropriateness of choice of the thematic and specific areas of CoE with respect to strengths and opportunities identified in SWOT analysis	5	
	2 Appropriateness of the specific objectives identified for CoE	5	
	<b>B</b> Institutional preparedness		
	1 Adequacy of involvement of various departments for CoE activities	5	
	2 Appropriateness of working arrangements with the involved departments	10	
	3 Quality of faculty in terms of credentials and achievements to be associated with CoE	10	
	4 Adequacy and quality of collaborative arrangements and clarity of responsibilities as given in MoUs with Industries / research institutions / organizations within India and abroad	10	
	<b>C</b> Reasonability of proposed budget	5	
	<b>Sub-total (I)</b>		<b>50</b>
	II	<b>Clarity and Quality of Action Plans for :</b>	
		<b>D</b> establishment of CoE in terms of physical arrangements and working arrangements	10
<b>E</b> conducting research and obtaining results in the identified thematic areas		10	
<b>F</b> communication of research findings to policy makers and potential users		5	
<b>G</b> commercialization of research results		5	
<b>H</b> scaling-up PhD and Masters enrolment in thematic areas		10	
<b>I</b> insuring sustenance of CoE after the end of the project		10	
<b>Sub-total (II)</b>		<b>50</b>	
<b>TOTAL ( I+II)</b>		<b>100</b>	