

**REVISED  
INSTITUTIONAL  
DEVELOPMENT  
PROPOSAL**

TECHNICAL EDUCATION QUALITY  
IMPROVEMENT PROGRAMME (TEQIP) II

REVISED

INSTITUTIONAL DEVELOPMENT PROPOSAL

Subcomponent 1.1

Strengthening Institution to Improve Learning  
Outcomes and Employability of Graduates



COLLEGE OF ENGINEERING TRIKARIPUR  
CHEEMENI  
KASARAGOD DISTRICT, KERALA STATE



*Abdullah*



## **About College of Engineering, Trikaripur**

College of Engineering Trikaripur (CET), Cheemeni was established in the year 2000 with a mission to produce high quality Engineers in the undergraduate degree programs in Civil Engineering, Electrical & Electronics, Electronics & Communication, Computer Science & Engineering and Information Technology. The college admits 270 students every year based on Common Entrance Examinations conducted by Government of Kerala. The college is poised for growth in the years to come.

The College is managed by Cooperative Academy for Professional Education, which is a Government of Kerala Undertaking. The College is situated in the extreme end of Kerala, in the Kasaragod District. For about 10 years since launching the College was in very bad shape with poor infrastructure, insufficient faculty, low pass percentage and no placements.

In 2010, in the behest of Kerala Government, College applied to participate in the Technical Education Quality Improvement Program – Phase II. As per the project implementation plan an Institutional Development proposal was prepared based on SWOT analysis conducted. Vision and Mission of the College were defined. Long term and short term goals were determined.

## **Implementation of TEQIP-II**

The College witnessed progress in all facets of Engineering Education during the last four years. There were remarkable improvements in teaching learning facilities, faculty strength, and faculty qualifications. Transition rate and employability of students increased considerably. The institution established good relationship with IIM Calicut, NIT Surathkal and GEC Kannur. To bring research culture to the campus, Senior Research Advisor, Mentor, Performance Auditor and Governing Body Chairman and Members provide immense support.

All class rooms, seminar halls, laboratories and faculty rooms have been provided internet connectivity through Wi-Fi and fiber optic links of 100Mbps. The institution also provides 10Mbps broadband connection. The online journals like Springer, IEEE, ASCE, e-learning content of National Program on Technology Enhanced Learning (NPTEL) etc. are made available to the students and faculty.





The 4th Review Mission by NPIU for assessing the institutions' performance, institutions was assessed based on 12 performance indicators. Out of 190 institutions, 64 institutions reaching all 12 indicators were rated as best performers. In the State of Kerala, 09 institutions met all 12 performance indicators including College of Engineering Trikaripur, Cheemeni.

Under TEQIP II, institution has spent Rs. 573 lakhs for the allotted amount of Rs. 900 lakhs up to March 2015.

There is a considerable improvement in academic performance of the students. The institute bagged 2 ranks (First rank in Civil Engineering and Third rank in Computer Science and Engineering.) in 2014 result. Research ambience of the institution improved. Equipment procured under the project is now being utilized properly, many laboratories have been modernized and new labs have been established. The institution also conducts orientation programs and remedial classes for the students from weaker section on a regular basis. The institute has conducted one National Conference last year. The institute conducted many short-term courses for faculty and supporting staff members under TEQIP-II. Faculty members attended pedagogical training programs, senior faculty members attended management training programs.

The IEEE chapter, College union, and National Service Scheme (NSS) unit has been organizing various team activities and this group dynamic culture is improving the leadership skills of the students. The physical education department is very active and has been organizing athletics meet and tournaments and promotes students for their participation in university competitions. The students of our institution won many prizes in university level.

The institution has been organizing invited talks on latest developments in science and technology by the faculty members of premier academic institutes and industries for the benefit of teachers and the students. As located in one of the socially and economically backward districts in Kerala state, the institute is very keen to its social commitment. The institute conducted a technical expo for nearby higher secondary students, technical students and public. The continuing education cell conducted a one month training programme for public in the area of basic office automation and internet.





## Goals set in the original IDP

As told earlier, SWOT analysis carried out in the College and the subsequent discussions with stake holders resulted in identifying strategies for the development. They are

1. Promotion of academic excellence
2. Improve faculty potential
3. Outstrips in research and consultancy
4. Ensure fitness of student community
5. Equity assurance
6. Rendering services to community and industry

Specific objectives based on strategies, their expected results, achievements and further action to be taken to fulfill them are enumerated below. Please note that actions required are indexed using alphabets.

### 1. Promotion of academic excellence

Specific objectives	Expected results	Achievement	Action required
<b>Modernization and strengthening of Labs and workshops</b>	Reduced batch size of students and enhanced learning	Batch size reduced to 3-4 in certain labs.	Reduce batch size to 3 students per one experimental set up (A)
<b>Modernization of class rooms and Seminar halls by using modern teaching aids</b>	Establish 20 smart class room and 5 seminar halls	Established 5 seminar halls and 5 class rooms.	Provide projectors in all class rooms (B)
<b>Enhancing computing facilities</b>	Student- computer ratio 1:1	4:1	Student computer ratio 1:1 (C)
<b>Enhancing library facilities and establishing digital library</b>	Sufficient increase in no of volumes including e-journals	Volumes Improved from 12583(11-12) to 18233(14-15)	Increase volumes of books to meet the AICTE requirement. (D)
<b>Improving campus wide electronic connectivity and high speed internet</b>	High speed internet wireless connectivity in whole campus	Established Campus Wi-Fi.	Secure internet access (E)
<b>Achieving Academic autonomy</b>	Fast adaptation of technological developments by the	Applied for Academic autonomy through CUSAT.	Try to get accreditation (Z) for

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	freedom to reform curriculum		all courses.
<b>Starting PG programmes to achieve and sustain accreditation at highest level</b>	PG programs in 2 branches	No PG programmes.	Accreditation is mandatory for starting a PG course. Hence go for accreditation (Z)
<b>Promote activities of professional bodies</b>	Increased knowledge in global technological advancements.	IEEE student chapter formed. Conducted 6 programmes.	Start branch specific student chapters of other professional societies (Q)
<b>Establish effective networking with alumni</b>	Dedicated service for the overall development of the college.	Alumni Association formed.	Prepare database of alumni and have a touch with them (AA).

## 2. Improve faculty potential

Specific objectives	Expected results	achievement	Action required
<b>Faculty training programmes in pedagogical methods as well as in latest technologies</b>	Improve knowledge level and teaching skill	33% of regular faculty attended pedagogical training. Different In-house and external training programmes has been attended	Send all faculty members for pedagogical training (R), Faculty Development programs (S) etc.
<b>Provide proper training to the faculty at different levels with focus on the managerial, administrative and interpersonal skills required at respective levels.</b>	Better working atmosphere and increased the efficiency of teaching learning process	11 Faculty members at different levels have been attended the training programmes at IIM Calicut.	Send more faculty members for Management Capacity Development (U) programmes.
<b>Improve faculty qualifications</b> <ul style="list-style-type: none"> <li>• Provide facility to acquire higher qualification by doing research under the qualified</li> </ul>	Increased no. of faculty with higher qualification and better recognition of institute at the national level	74% of the faculty members are having M. Tech. or higher degree. Established QIP scheme. Currently 8 faculty members doing qualification up gradation.	Send the remaining faculty members for qualification up gradation (T)

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<b>faculty in this institution</b> <ul style="list-style-type: none"> <li>• Encourage faculty to acquire higher qualification under QIP.</li> </ul>			
<b>Well furnished faculty rooms</b>	A serene work environment is to be created	Set up faculty cabins in all departments.	Provide faculty cabin with necessary furniture (F)
<b>Improving research capabilities</b>	Financial assistance for enrollment in professional bodies, Faculty exchange programmes with premier institutions, Provide financial assistance for publication in international conferences and referred journals, More exposure to recent developments in the respective fields, Interaction with peer groups within India and abroad, Financial assistance for assistance to research paper publications	Not much work done in this area	Encourage all faculty members to enroll in professional societies (P). Encourage faculty for Joint research programs with NIT Surathkal, NIT Kozhikode and GCE Kannur (R).

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### 3. Outstrip in research and consultancy

Specific objectives	Expected results	achievement	Action required
From research Promotion Cell <ul style="list-style-type: none"> <li>• Develop department level policies</li> <li>• Identification of key areas</li> <li>• Choice of appropriate research methodologies</li> <li>• Streamlined work-flow for conducting conferences</li> </ul>	Establish well equipped laboratories Interaction with global research forums / community	All labs renovated.	Each department to conduct National /International conferences in focused areas (G).
Easy one-window system for assistance for publishing papers, conference registration, filling patents	Encouragement of faculty for active involvement research	Not established.	Conduct training program on research methodology (H)
Promote interdisciplinary research & innovation <ul style="list-style-type: none"> <li>• Interdisciplinary elective courses</li> <li>• Fresh blood to mathematics &amp; science departments to promote interdisciplinary activities</li> </ul>	Diversity in specialization	Included interdisciplinary courses in curriculum.	Conduct national conference/ STTP in Applied Mathematics (I)
Implement mechanism to evaluate research initiatives within institute <ul style="list-style-type: none"> <li>• With the help of experts</li> <li>• on the basis of regularly updated guidelines</li> </ul>	Establish good research environment in the institute	Appointed Senior Research Adviser.	Invite project proposals from all faculty members for seed money (J).
Incentives for Innovations <ul style="list-style-type: none"> <li>• Award for best research proposal</li> <li>• Award for best paper</li> <li>• Award for best patent filed</li> </ul>	Encourage young researchers	Not established.	Establish an innovation center (L)
Setting up of research labs with external collaboration	Collaborating programmes with	Not established.	Establish a research lab

*R. S. Grewal*



<ul style="list-style-type: none"> <li>• Collaboration with industries on costly niche areas</li> <li>• Collaboration with research groups focusing on modeling complex systems</li> </ul>	industry and institute		(M)
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#### 4. Ensure fitness of student community

Specific objectives	Expected results	achievement	Action required
Conducting motivation and leadership training programs	Personality development programme for all students periodically.	Carried out personality development programme for all students yearly.	Personality development programs (CC) shall be continued.
Organizing training programmes for the development of soft skills and workshops on effective learning methods and time management	One Training programme for soft skill and workshop each class per semester.	Signed MoU with ICT academy.	Programs on soft skill training (DD) shall be continued.
Improving mind-body wellness of of campus community <ul style="list-style-type: none"> <li>• Conducting training programmes on stress management</li> <li>• Enhancing medical and counseling facilities</li> <li>• Increasing multi-gym facilities for physical fitness</li> <li>• Engaging professional coaches for sports and games</li> </ul>	Stress management training programme per year. Set up facility for medical assistance and counseling. Set up one multi-gym unit  Effective participation in sports and games	Visiting counselor has been appointed. Appointed a physical education trainer on contract.	Visiting Counselor (EE) shall be engaged.  Physical Education Trainer shall be engaged. (FF)
Enhancing the outreach of NSS and nature club activities	Eco-friendly and clean campus	Planted trees. Initiated organic farming and bagged third place in the district level.	Programs shall be continued for transforming the campus eco-friendly. (BB)

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## 5. Equity assurance

Specific objectives	Expected results	achievement	Action required
Ensuring Social Equity among Students	Mutually respected student community, Uplift of SC/ST, OBC and women students	Harmony exists among student community.	Shall be continued.
Ensuring Academic Equity among Students	Minimize the variations in pass percentage among different categories of students, Increase in the placement rate of SC/ST, OBC and women students.	Minimized variation in pass percentage compared to previous year. Overall: 33.59 to 40.81 OBC: 32.52 to 40.67 SC/ST: 0 to 7.69 Women: 38.78 to 50.38.	Identification of weakness and remedial classes (GG)
Ensuring Financial Equity among Students	Financial support to socially and economically backward students, Scholarship to academically well performing economically backward students.	Provided grant for SC/ST, OBC students as per State Govt. norms, Implemented tuition fee waiver scheme for meritorious students.	Scholarships Shall be continued
Ensuring Cultural Equity among Students	Increased participation of SC/ST, OBC and women students in cultural events.	A very good level of participation is achieved from all sections of students.	Efforts toward cultural equity shall be continued.
A counseling centre	A counseling centre with experts.	Established a Guidance and Counselling centre.	Effective Career Guidance (HH) shall be continued
Conducting remedial classes	Increased pass percentage of SC/ST, OBC and women students	Increased pass % OBC: 32.52 to 40.67 SC/ST: 0 to 7.69 Women: 38.78 to 50.38	Targets to pass percentage of weaker sections to 50%. (II)

*K. S. Prasad*



<ul style="list-style-type: none"> <li>• To promote indigenous technologies</li> <li>• Continuing Education</li> <li>• Women empowerment.</li> </ul>	development/ up gradation, Training programmes for women.		only from the College, but also for unemployed engineering graduates from the locality (JJ)
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Revised IDP activities spans from April 2015 to October 2016. The institution development aims at bringing major changes in the existing teaching-learning atmosphere, for improving the quality and employability of the students. In order to achieve the specific objectives, the institution has identified key activities and an action plan has been chalked out and revised budget estimate has been prepared which are enumerated as below.

No	Activity	Index	Specific activity	Estimated cost	Total
1	Infrastructure improvement for teaching, training & learning	A	Reduce batch size to 3 students per one experimental set up.		47
		B	Provide projectors in all class rooms		
		C	Student computer ratio 1:1		
		D	Increase volumes of books to meet the AICTE requirements		
		E	Secure internet access		
		F	Provide faculty cabin with necessary furniture		
2	Providing teaching & research assistantships			0	0
3	Enhancement of R&D and institutional consultancy Activities	G	Each department to conduct National/International conferences in focused areas	20	65
		H	Conduct training program on research methodology	1	
		I	Conduct a national conference/STTP in Applied Mathematics	4	

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		J	Invite project proposals from all faculty members for seed money	20	
		K	Encourage faculty for Joint research programs with NIT Surathkal, NIT Kozhikode and GCE Kannur	10	
		L	Establish an innovation center	5	
		M	Establish research lab	0	
		N	Formation of Energy Audit Cell	1	
		O	Environment Audit Cell	1	
		P	Encourage all faculty members to enroll in professional societies	1	
		Q	Start branch specific student chapters of other professional societies	2	
4	Faculty & Staff development	R	Send all faculty members for pedagogical training	5	95
		S	Faculty Development Program	75	
		T	Send the remaining faculty members for qualification up gradation	10	
		U	Send more faculty members for Management Capacity Development	5	
5	Enhanced interaction with industry	V	Visiting Expert Program to be continued	20	35
		W	MoU with industries to rise to 10	2	
		X	Training for small scale industries	10	
		Y	Conduct entrepreneurial development workshop	2	
6	Implementation of Institutional reforms	Z	Go for accreditation	5	10
		AA	Prepare database of alumni	0	
		BB	Programs shall be carried out for transforming the campus eco-friendly	5	
7	Academic support for weak students	CC	Personality development programs shall be continued	20	103
		DD	Programs on soft skill training shall be continued.	10	

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		EE	Visiting Counselor shall be engaged.	2	
		FF	Physical Education Trainer shall be engaged	1	
		GG	Identification of weakness and remedial classes	5	
		HH	Effective Career Guidance shall be continued	5	
		II	Targets to pass percentage of weaker sections to 50%.		
		JJ	Conduct high intensity training program for passed out students, not only from the College, but also for unemployed engineering graduates from the locality	60	
8	Incremental Operating costs			70	70
<b>Grand Total</b>				<b>425</b>	<b>425</b>

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