

**REVISED
INSTITUTIONAL DEVELOPMENT
PROPOSAL**

For

Sub Component 1.1

Under

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



GOVERNMENT ENGINEERING COLLEGE

KOZHIKODE – 673 005

APRIL 2015



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Certified that all information provided are factually correct

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Executive summary of revised Institutional Development Proposal (Revised IDP)

Government Engineering College, Kozhikode (GECK) was established in the year 1999, under the Directorate of Technical Education, Government of Kerala. Being a fully Government owned institution; GECK is committed to the Government of India policy of uplifting the society by imparting professional education to the students. Currently the Institution offers **five undergraduate courses**, namely Applied Electronics and Instrumentation, Electronics and Communication Engineering, Mechanical Engineering, Chemical Engineering and Civil Engineering and **three post graduate programs** under Electronics department, Mechanical Engineering department and Chemical Engineering department. The admission to GECK is based on Common Entrance Examinations conducted by the Commissioner of Entrance Examinations, Government of Kerala for UG programs and based on GATE score for PG programs. Eligible four UG programs were applied for NBA accreditation.

The Institution has well qualified faculty and more than 90 % of faculty positions are filled by regular fulltime faculty members. The institution encourages up gradation of qualification by faculty by QIP. GECK has good gender equity (nearly 50% of the faculty are women and 50% of students are girls) and social equity.

The institution maintains good rapport with premier academic institutions such as IISc Bangalore, IIM Calicut, and NIT Calicut (Also our Board of Governors from IISc, IIM and NIT). The institution has signed MoUs with industries to strengthen the Industry-Institution interaction. To promote the research ambience, we are associating with Centre for Engineering Research and Development (CERD), Government of Kerala and promoting research by granting seed money from TEQIP II under research guidance committee. We have appointed **Prof. L. M. Patnaik as Senior Research Advisor**. The institute has now 30 seed money research projects. We have constituted an external screening to scrutinize the proposals for international travel support scheme.

GECK implemented Information and Communication Technology (ICT) initiatives in the State. All class rooms, seminar halls, laboratories and faculty rooms have been provided internet connectivity with fibre optic links. The institutional academic activities are managed by campus automation software, purchased under TEQIP II. The institution is offering QEEE programs. The online journals like Springer, IEEE, Science Direct, ASME, 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 were 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 **Govt. Engineering College Kozhikode**. Also, the **Confederation of Indian Industries (CII)** in association with **AICTE (AICTE-CII)** has published a report on “**Survey of Industry linked Technical Institutes 2014**”. According to this publication, **Govt. Engineering College Kozhikode** (with all departments) meeting performance standards as per their evaluation parameters.

Under TEQIP II, GECK has spent Rs. 717 lakhs for the allotted amount of Rs. 800 lakhs up to March 2015. There is a considerable improvement in academic performance of the students. The first year transition rate improved from **59% (2010) to 81% (2014)**. Research ambience of the institution improved considerably. Equipment procured under the project is now utilizing 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 under TEQIP II and other government schemes. 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. All faculty members attended quality training programs, senior faculty members attended management training programs and six faculty members availed international travel support scheme (ITSS).

The ISTE chapter, IEEE, 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 inter collegiate and inter university competitions. A fitness club established with necessary and sufficient equipments. Under Visiting Executive Program (VEP), the institution has been organizing invited talks on latest developments in science and technology from the faculties of IITs, NITs and from industries for the benefit of teachers and the students.

The revised IDP has been prepared based on the current strength and weakness of the institution. Some of the **strengths** identified are:

- ✓ Strong, student oriented, qualified and experienced faculty
- ✓ Highly motivated, good students from the State at entry level
- ✓ Government institution with low fee structure and admissions based on common entrance examinations of the State/GATE ensuring social equity.
- ✓ Faculty development programs
- ✓ Cluster academic autonomy for PG programs

The major **weaknesses** identified are

- ✓ Inadequate land space.
- ✓ Low placement statistics.
- ✓ Inadequate residential facilities for students and staff.

The proposed revised plan for the institution development aims at bringing major changes in the existing teaching-learning atmosphere, for improving the quality and employability of the students. The enhancements brought out by updated learning resources and their increased access, improved laboratory facilities, modern digital class rooms, and extensive faculty and staff training. The proposed action plan will ensure that **all students and staff members have equal opportunity to avail of the benefits of the project.** 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. The fund requirement over the project period is given in Table A. The revised project plan spans from **April 2015 to October 2016.** At the end of the project period, it is envisaged that the college will be able to achieve the expected outcome so as to meet the objective of **strengthening the institution to improve learning outcomes and employability of the graduates.**

Table A

Fund allocated for remaining Project Period (Rs. in Lakhs)

Balance Amount 250 lakhs	Time period	April 2015- September 2015	October 2015- March 2016	April 2016- October 2016
	Amount in lakhs	80	85	85

Current Data

Govt. Engineering College Kozhikode Kerala

Sl. No.	Parameters	2014-15
1	Total strength of students in all programs and all years of study	1327
2	Total women students in all programs and all years of study	563
3	Total SC students in all programs and all years of study	121
4	Total ST students in all programs and all years of study in the year	9
5	Total OBC students in all programs and all years of study	929
6	Number of fully functional P-4 and above level computers available for students	420
7	Total number of syllabus Text books and Reference books available in library for UG & PG students	17028
8	% of UG students placed through campus interviews	14.39%
9	% of PG students placed through campus interviews	0
10	% of High quality under graduates (>75% marks) passed out	40.87%
11	% of High quality post graduates (>75% marks) passed out	26%
12	Number of research publications in Indian refereed Journals	6
13	Number of research publications in International refereed Journals	15
14	Number of Patents obtained	1
15	Number of Patents filed	1
16	Number of sponsored research projects completed	1

17	<p>a. The pass rate of students in percentage from 1st year to 2nd year</p> <p>(i) All students</p> <p>(ii) SC</p> <p>(iii) ST</p> <p>(iv) OBC</p> <p>(v) Women</p>	<p>81.47%</p> <p>48.27%</p> <p>33.33%</p> <p>86.85%</p> <p>88.52%</p>
18	IRG from studentsø fee and other charges (Rupees)	58,45,203
19	IRG from commercialization of R & D products, consultancy & other sources (Rupees)	5,99,694
20	Total IRG in the year (Rupees)	64,44,897
21	Total recurring expenditure in the year (Rupees)	1,08,66,449
22	% IRG of the recurring expenditure	5.93%

Original Institution Development Proposal (IDP) and current Status		
Specific Objectives	Expected result	Current Status
Setting up new labs, modernization and strengthening of existing labs	Improvement in teaching, learning and training facilities	Established <ul style="list-style-type: none"> ✓ Research lab ✓ Central Computing facility ✓ New seminar hall ✓ PG computational lab ✓ Modernized many laboratories with equipment and software
Starting of new PG programs	More R&D projects, and publications and Beneficial for UG students	<ul style="list-style-type: none"> ✓ Commenced 3 new PG programs with total intake of 54 ✓ Organized national conference ✓ Substantial improvement in faculty publications (10 to 55) ✓ Significant improvement in research projects under the review of RGC chaired by Prof. L.M. Patnaik (0 to 30)
Faculty and staff development	Better teaching ó learning environment.	<ul style="list-style-type: none"> ✓ All faculty members attended quality training programs ✓ Five faculty members presented papers in international conference at abroad and another 4 faculty members got BOG approval
Collaborative programs with industry	Industry exposure to faculty and students	<ul style="list-style-type: none"> ✓ UG elective associating with industry expert ✓ Live projects in association with MILMA, Datri Impex, Malabar Cements, IndElec
Up grading faculty qualification	Improvement in teaching ó learning environment.	<ul style="list-style-type: none"> ✓ 12 faculty members with Ph.D. qualification (Engg. Discipline) ✓ By August 2015, 11 faculty members expecting Ph.D. degree ✓ 5 faculty members doing part time Ph.D. at NIT Calicut (TEQIP Assistance)
Academic support for the students	Better transition rate and employability	<ul style="list-style-type: none"> ✓ First year transition rate improved from 59.68 % to 81.47% ✓ Current placement rate is 14.39%, no significant improvement.

Specific objectives and action plan of revised IDP

1. Quality and Employability of the Students	
Specific Objectives	<ul style="list-style-type: none"> ❖ Improving the pass rate of first year students from 81% to 100% ❖ Improving the pass rate of SC/ST students from 40% to 80% ❖ Improving the placement rate from 14 % to 60% ❖ Improving the number of students admitted to premier higher learning institutions from 5% to 20%
Action Plan	<ul style="list-style-type: none"> ➤ Arrange remedial classes for weak students in the weekends, holidays Extended use of Language lab for Communication Skill improvement ➤ Arrange more number of industrial visits ➤ Arrange learning groups for group study purpose ➤ Arrange training programs for higher studies, employability and expert talks on career options. ➤ Support the activities of NSS, ISTE, IEEE and College union. ➤ Conduct more number of programs under visiting faculty scheme
Expected activities	<ul style="list-style-type: none"> ➤ 6 Placement oriented training programs ➤ Two orientation programs ➤ GATE coaching programs ➤ 5 expert talks ➤ One high intensity programs ➤ 5 Counseling classes
Revised IDP Budget	29.88 lakhs

2. Staff Development

Specific Objectives	<ul style="list-style-type: none"> ❖ Better teaching learning ambience ❖ Creation of Technical Experts ❖ Creation of Training and Consultancy Centre ❖ Improve Team spirit & Organization Culture ❖ Healthy work environment ❖ Improvement in staff satisfaction level
Action Plan	<ul style="list-style-type: none"> ➤ Faculty and supporting staff to attend quality training programs Arrange in house training programs and workshops ➤ Depute faculty members for pedagogy training ➤ Encourage faculty members to attend international conferences at abroad ➤ Arrange invited talks ➤ Organize national conferences
Expected activities	<ul style="list-style-type: none"> ➤ 5 in house training programs for faculty ➤ 5 workshops for faculty ➤ 3 in house training programs for supporting staff ➤ 30 faculty members for outstation pedagogy training ➤ 30 faculty members for out station FSD programs ➤ 2 National conferences ➤ 10 faculty members for International Travel Support Scheme ➤ 20 Supporting staff members for out station training programs
Revised IDP Budget	86.68 lakhs

3. R&D and Consultancy	
Specific Objectives	<ul style="list-style-type: none"> ❖ Faculty development for effective teaching and research competence ❖ More number of publications
Action Plan	<ul style="list-style-type: none"> ➤ Enhance seed money projects ➤ Invited talks from research organizations ➤ Establishing research centers ➤ Obtain Sponsored projects
Expected activities	<ul style="list-style-type: none"> ➤ 30 seed money projects ➤ 2 DST/Sponsored projects ➤ 15 invited talks
Revised IDP Budget	30.54 lakhs

4. Enhanced interaction to Industry	
Specific Objectives	<ul style="list-style-type: none"> ❖ Collaborative work with industries ❖ Solutions to industries ❖ Exposure to real life problems
Action Plan	<ul style="list-style-type: none"> ➤ Under take industrial problem solving projects ➤ Industrial training to faculty and supporting staff ➤ Collaborative work with industries ➤ In house workshops
Expected activities	<ul style="list-style-type: none"> ➤ 10 faculty and Technical staff training with industries ➤ 2 In house workshops ➤ 10 Invited talks from industry experts
Revised IDP Budget	10.51 lakhs

5. Management Capacity Enhancement	
Specific Objectives	<ul style="list-style-type: none"> ❖ Improve the internal and external effectiveness of the institution ❖ Effective implementation of reforms ❖ Improve planning, development and monitoring
Action Plan	<ul style="list-style-type: none"> ➤ Training programs at leading management institutions ➤ In house workshops ➤ Orientation programs for BoG members
Expected activities	<ul style="list-style-type: none"> ➤ 20 senior faculty members for out station management training ➤ 4 in house training programs
Revised IDP Budget	24.77 lakhs

6. Institutional reforms	
Specific Objectives	<ul style="list-style-type: none"> ❖ Curriculum reforms ❖ Performance evaluation of faculty ❖ Accreditation of eligible programs ❖ Delegation of decision making powers
Action Plan	<ul style="list-style-type: none"> ➤ Workshops in connection with accreditation ➤ ISO certification ➤ Workshops for curriculum revision
Expected activities	<ul style="list-style-type: none"> ➤ ISO certification process ➤ 2 workshops curriculum revision ➤ 5 workshops on accreditation
Revised IDP Budget	6.64 lakhs

Budget of Revised IDP

S.No	Activities	Amount as per initial IDP (Lakhs)	Revised allocation (Lakhs)	Amount spent as on 31/03/15 (Lakhs)	Balance amount to be utilized (Lakhs)
1	Infrastructure improvement for teaching, Training & Learning	550	550.00	530.69	19.31
2	Providing Teaching and Research Assistantships	100	85.00	51.85	33.15
3	Enhancement of R&D and institutional consultancy Activities	20	40.00	9.46	30.54
4	Faculty and Staff Development	100	145.00	58.32	86.68
5	Enhanced Interaction with Industry	40	20.00	9.49	10.51
6	Institutional Management Capacity Enhancement	30	30.00	5.23	24.77
7	Implementation of Institutional Reforms	20	20.00	13.36	6.64
8	Academic Support for Weak Students	40	40.00	10.12	29.88
9	Incremental Operating Cost	100	70.00	28.55	41.45
Total		1000	1000	717.07	282.93