

Agenda of the Seventh
BoG Meeting on November 16, 2015



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Seventh Meeting of the Board of Governors College of Engineering Karunagappally

Agenda for November 16, 2015

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Part I

Procedural Items

1 Silent Prayer

2 Confirmation of the Minutes of the 6th BoG Meeting

The minutes of the sixth BoG was sent to the Chairman for approval. The approved minutes are sent to the members. The detailed minutes are attached as Appendix A in page 50.

Action Sought: BoG may consider the minutes for approval.

3 Report on the Action Taken/Pending on the Decisions in the 6th BoG

There were 24 decisions in the sixth BoG, the details of execution of which are presented in Table 1.

Table 1: Report of Action Taken

Sl. No.	Decision Taken	Action taken
1	The BoG Decided to approve the minutes of the meeting held on December 14, 2014, with the modifications	The agenda notes were also attached with the minutes to highlight the facts and figures.
2	Approved the action taken report pertaining to the previous BoG	No action needed.
3	BoG ratified the purchase of the three packages worth Rs. 4454827.00 and their price revisions and payment	Nothing to be done
4	BoG approved the three packages worth Rs. 1499167.00 and their price revisions	The purchase of these packages with numbers 170, 48 and 169 is effected and payment is done

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| 5 | BoG decided to cancel the first six initiated packages in Table 2.3 in the minutes of the 6 th BoG and approved the purchase of the remaining four packages initiated worth Rs. 1142000.00 with their price revisions | The first six packages are canceled and the procurement of the remaining packages are progressing. There is temporary difficulty with the PMSS software. |
| 6 | It is also decided to buy national journals from publishers | Sufficient number of quotations have not been received. So procurement could not be done. So efforts are made to purchase national journals, locally, using institutional resources or plan funds. |
| 7 | BoG approved the payments (including part payment) and the initiation of the package Electrical work in Library and Office with package no. TEQIP II/KLG18/180 | The Administrative sanction is issued. Further processing is blocked by the issues in PMSS. |
| 8 | Decided to limit to one outstation course per faculty member | The practice is followed ¹ . |
| 9 | Decided to depute guest faculty to academic programmes outside Kerala, with the condition that air fare is not permissible | 10 Guest faculty are deputed now. |
| 10 | It is decided to approve the refund of Rs.23000.00 and Rs. 2886.00 to Mr. Raju M, Assistant Professor in Electrical and Electronics towards the refund of PhD tuition fee and the fee towards membership in IEEE respectively | The said amounts are paid. |

¹There is a feeling among the faculty that this point needs further discussion on the pros and cons

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| 11 | Decided to approve ten IIIC programmes | Four internship programmes, proposed by the Department of Electrical and Electronics have been attended. The expert lecture with the help of <i>ANERT</i> could not be conducted. None of the 5 programmes, proposed by the Department of EC could be conducted due to the nonavailability of resource persons. However, the Dept. of EC conducted various other IIIC programmes, as detailed in Table 20 in page 39. |
| 12 | Decided that faculty members can also attend training at any industry, provided they have project and MOU. The training fee can be paid from TEQIP. | No staff member requested for such training in industry. |
| 13 | Decided to approve the eight in house training programmes | Three in-house programmes were conducted. |
| 14 | Decided to activate the entrepreneurship club in the institution | An orientation programme has been conducted in the institution by the Department of Industries, jointly with the firm <i>Operations C 360 Marketing Solutions Pte. Ltd.</i> |
| 15 | BoG approved the extensions granted to the eight proposals by the RGC and instructed to finish all the proposals and to submit them at the earliest | Seven proposals are prepared and got approved by the Chairman, RGC. All settlements are made. |
| 16 | To activate the EAP sessions | Faculty advisors and members took steps to identify the weak students with the help of periodic short quizzes, series tests etc. Many remedial sessions are conducted, as detailed in Table 17 in page 35. But the consistent participation by weak students is yet to be achieved. |

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| 17 | Decided to have lessons on Saturday for weak students and also to conduct special sessions for papers like computer programming for which not enough hours are allocated in the syllabus | 10 Hours of such classes were conducted by Mrs. Jyothi R L. |
| 18 | Decided to depute faculty, especially those who take for the first year, to Pedagogy training obligatorily. | Seventeen faculty members were deputed for pedagogy training of which five took classes for the first year. More faculty, handling first year classes, will be deputed in the next month as shown in Table 16 in page 34. |
| 19 | Decided to conduct bridge courses, contiguously, at the beginning of the first year classes | Done in tune with the KTU schedule |
| 20 | Decided to approve the payment of Rs. 60600.00 towards payment of EAP sessions | Rs. 60600.00 has been paid. |
| 21 | Decided to approve the EAP action plan | The EAP activities conducted are detailed in Table 17 in page 35. |
| 22 | BoG decided to approve the payment of Rs 203400.00 towards payment of salaries to TEQIP staff | Already effected the payment. |
| 23 | BoG decided to approve the payment of Rs. 67659.00, paid towards consumables | Payment made already |
| 24 | BoG examined expenditure under various heads and approved the statement of expenditure | No action |

Part II

Discussion, Ratification and Approval

4 Procurement Activities

The details of completed, cancelled, initiated and in progress packages are given below.

4.1 Completed Packages

The details of payment made for various goods to the firms are listed in the Table 2.

Action Sought The matter is placed before the BoG for the ratification for the payment of Rs. 40,14,965.00.

Table 2: The details of completed packages

Sl. No.	Package No.	Name	Type	Firm	Amt. Paid
1	TEQIP-II/KL/KLIG18/170	DreamSpark	Shopping	Technology Excellence Group, Kochi	139106.00
2	TEQIP-II/KL/KLIG18/168	Water cooler	Shopping	ABM Cooling Solutions, Kochi	70500.00
3	TEQIP-II/KL/KLIG18/169	DC Machines and Servomotors	Shopping	Scientific Enterprises, Kochi	815557.00
4	TEQIP-II/KL/KLIG18/48	Microprocessors and microcontrollers	Shopping	Scientific Enterprises, Kochi	544504.00
5	TEQIP-II/KL/KLIG18/125	Unitized sub-station	NCB	V S Associates, Karunagappally	2445298.00
Total					40,14,965.00

4.2 Cancelled Packages

Besides the six packages that were consigned for cancellation in in the sixth BoG meeting, the packages listed in Table 3 in page 8 are also cancelled. The reasons for cancellation are also indicated.

Action Sought: The matter is placed before the BoG for approval.

Table 3: The details of cancelled packages

Sl. No.	Package No	Package Name	Mode	Reason
1	...II/KL/KL1G18/70	Digital meters Electrical	Shopping	The supplier is unable to supply the items as one of the items with the given specification is not available with them
2	...I/KL/KL1G18/167	EPBAX	Shopping	Supplier is unable to supply as the item is not available in the market
3	...I/KL/KL1G18/171	APFC	Shopping	None of the quotations satisfy the warranty condition
4	...I/KL/KL1G18/172	IEEE journal	Direct Contract	The validity of quotation is not as per our invitation. and Due to lack of funds
5	...I/KL/KL1G18/173	Science Direct journal	Direct Contract	The validity of quotation is not as per our invitation. and Due to lack of funds
6	...I/KL/KL1G18/181	Tools for Foundry Shop	Shopping	No quotation has been received
7	...II/KL/KL1G18/58	Spectrum analyzer	Shopping	L1 supplier has given more than one options in the quotation. So the quotation is invalid. The prices quoted in all other quotations were more than 25% of the estimated cost

8	...I/KL/KL1G18/177	HF PCB Shopping Manu- facturing Facility	one of the item in the pack- age was not quoted by any of the firms
9	...I/KL/KL1G18/138	Furniture Shopping for Lab and class- room	No quotations has been re- ceived

4.3 Packages to be Initiated

The list of packages to be initiated are listed in Table 4.

Action Sought: The details are placed before the BoG for information and approval.

Table 4: The details of packages to be initiated

Sl. No.	Package No	Package Name	Mode	Estimated Cost
1	...I/KL/KL1G18/182	Satellite Receiver set	Direct Contract	6,000.00
2	...I/KL/KL1G18/188	currency counter	Direct Contract	10,000.00
3	...I/KL/KL1G18/178	Analog meters	Shopping	25,000.00
4	...I/KL/KL1G18/176	Portable Hardware Device	Direct Contract	42,000.00
5	...I/KL/KL1G18/144	Public Address System	Shopping	1,00,000.00
6	...I/KL/KL1G18/189	corridor surveillance system	Shopping	1,00,000.00

7	...I/KL/KL1G18/113	Library EC2	Shopping	1,73,880.00
8	...I/KL/KL1G18/191	Electronic Private Automatic Branch Exchange	Shopping	2,00,000.00
9	...I/KL/KL1G18/174	Springer E journal	Direct Contract	2,07,000.00
Total				8,63,880.00

4.4 Details of Packages in progress

Table 5 details the progress in procurement. The procurement activities are now stalled by the problems in the PMSS software.

Action Sought: The matter is placed before the BoG for information.

Table 5: The details of packages in progress

Sl. No.	Package no	Package name	Mode	Estimated cost	Status
1	...I/KL/KL1G18/166	Display Board	Shopping	56,000.00	PO to be issued
2	...I/KL/KL1G18/175	Furniture Library	Shopping	62,000.00	PO to be issued
3	...I/KL/KL1G18/108	Books for Competitive Exams	Shopping	1,09,810.00	Payment
4	...I/KL/KL1G18/184	Moderna Chair	Shopping	1,22,000.00	PO issued
5	...I/KL/KL1G18/186	Computer table	Shopping	1,27,400.00	PO issued

6	...I/KL/KL1G18/190	Keil de- velopment tools	Shopping	1,40,000.00	PO to be issued
7	...I/KL/KL1G18/187	3D Printer	Shopping	1,50,000.00	PO to be issued
8	...I/KL/KL1G18/183	PLC Trainer	Shopping	1,60,000.00	PO to be issued
9	...I/KL/KL1G18/179	Microwave Test Benches	Shopping	1,95,000.00	PO to be issued
10	...I/KL/KL1G18/116	Library Applied science	Shopping	2,59,204.00	Payment
11	...I/KL/KL1G18/137	Furniture Desk Bench Stool	Shopping	5,62,000.00	PO to be issued
12	...I/KL/KL1G18/185	Furniture Chair Table Almirah	Shopping	8,51,200.00	PO to be issued
Total				27,94,614.00	

4.5 Completed Civil Works

The details of completed civil works are listed in Table 6.

Action Sought: The matter is placed before the BoG for ratification for the payment of Rs. 19,74,113.00.

In the case of the civil works package Teqip-II/KL/KL1G18/130 Extension of Generator room, last BoG has given extension of one month from the date of fresh agreement to the contractor for completing the work. But he could not complete it in time. The work was delayed by 62 days. So a liquidated damages of Rs 1032 per day has been deducted from the total bill amount. The ratification of the deduction of Rs. 63,984.00 towards damages from the payment to contractor Mr. Sreekumar V N is also requested.

Table 6: The details of completed civil work packages

Sl. No.	Package No.	Name	Type	Amt. Paid (inc Tax)
1	TEQIP-II/KL/KLIG18/160	College Electrical work	Shopping	11,16,074.00
2	TEQIP-II/KL/KLIG18/130	Extension of Generator Room	Shopping	8,58,039.00 (Including the earlier part payment)
Total				19,74,113.00

4.6 Procurement Plan for the Next Three Months

Due to the cancellation of some packages, some more funds became available for procurement. Table 7 details the plan for this new procurement for the next three months for an estimated amount of Rs. 53,76,000.00.

Action Sought BoG is requested to approve the packages with estimated value of Rs. 53,76,000.00.

Table 7: The plan of procurement for the next three months

Sl. No.	Name of package	Mode	Estimated cost (in lakhs)
1	Automatic Power factor correction unit	Shopping	3
2	Chemistry Lab Equipment	Shopping	3
3	Physics lab equipment	Shopping	2.1
4	E-journal subscription IEEE	Direct Contract	4
5	E-journal subscription Science Direct	Direct Contract	5
6	Smithy and foundry	Shopping	1
7	TV demo kit	Shopping	0.6

8	Teachers PA System	Direct Contract	0.4
9	Teaching aids in class rooms	Shopping	5.16
10	Minor civil works	Shopping	9
11	Extension of computer network	Shopping	3.75
12	Electrical meters	Direct Contract	0.5
13	Machines lab Equipment	Shopping	3.25
14	Optical Lab Equipment	Shopping	3
15	Embedded Development Board	Shopping	1
16	Solar Driven inverter w/o battery	Shopping	4
17	HPCC	Shopping	5
Total			Rs. 53,76,000.00

5 Academic Activities

The details of academic activities conducted post the 6th BoG are detailed below.

5.1 In house programmes post the 6th BoG Meeting

The details of inhouse programmes conducted are detailed in the Table 8 in page 15. The bill settlement of two courses are yet to be done. The total amount spent is Rs. 53426.00.

Action Sought: The matter is placed before the BoG to ratify the courses and the payment of Rs. 53426.00.

Table 8: The details of in house programmes conducted by the faculty

Sl. No.	Title	Coordinator	Dept.	No. of Ext. Participants	Date	Amt. Spent
1	Workshop on PCB design and Fabrication Techniques	Mr.Kuryachan T D	EC	11	16.09.15 – 18.09.2015	not settled
2	Linear Algebra and Application	Mr.Binu V P	CS	3	28 – 30 Oct.2015	not settled
3	Recent Issues In Biomedical Re-search	Ms.Remya R S	CS	3	29 July 2015 – 31 July 2015	53426.00
Total						53426.00

5.2 Outstation Programmes and the Expenditure Incurred

The details of outstation programmes attended by faculty and staff and the expenditure incurred are listed in Table 9 in page 17.

Action Sought The details are placed before the BoG for the sanction of programmes and the ratification of payment of Rs. 387719.00.

Table 9: The details of outstation programmes attended by the faculty and the expenditure

Sl. No.	Name	Title	Course	Institution	Date	Amt spent
1	Ms.Mili Mathews	Asst. In ECE	Prof. Pedagogical Training	IIT Madras	23 to 25 feb 2015	10023
2	Ms.Deepa T R	Asst. In ECE	Prof. Pedagogical Training	IIT Madras	23 to 25 feb 2015	10023
3	Ms.Jyothi R L	Asst. In CSE	Prof. Pedagogical Training	IIT Madras	23 to 25 feb 2015	10023
4	Dr.Ajikumar A	Asso. In ME	Prof. Pedagogical Training	IIT Madras	26 to 28 feb 2015	5175
5	Mr.Revikumarthampi V R	Asst. In ME	Prof. Pedagogical Training	IIT Madras	26 to 28 feb 2015	5175
6	Mr.Raju M	Asst. In EEE	Prof. Pedagogical Training	IIT Madras	26 to 28 feb 2015	5175
7	Mr.Premnath G	Asst. In ME	Prof. Pedagogical Training	IIT Madras	May 21 to 23 2015	5000
8	Mr.Jayadeepkumar J	Asst. In ME	Prof. Pedagogical Training	IIT Madras	May 21 to 23 2015	5000
9	Mr.Reji Thankachan	Asst. In ECE	Prof. Pedagogical Training	IIT Madras	May 21 to 23 2015	5000
10	Ms.Renu K K	Asso. In Maths	Prof. Pedagogical Training	IIT Madras	25 to 27 may 2015	14175

11	Ms.Deepa A K	Asst.Prof .in ECE	Pedagogical Training	IIT Madras	20 to 22 2015	aug	5032
12	Ms Haseena PY	Asst.prof.in EEE	Pedagogical Training	IIT Madras	20 to 22 2015	aug	4678
13	Ms .Libi A	Asst.prof.in EEE	Pedagogical Training	IIT Madras	20 to 22 2015	aug	4678
14	Dr. C Gopakumar	Asst.Prof .in ECE	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2015		40050
15	Anuja V Nair,	Asst.Prof .in ECE	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2016		37554
16	Jyothi R L	Asst. Prof. In CSE	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2017		30838
17	Remya R S	Asst. Prof. In CSE	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2018		37554
18	Mr.Anilkumar A	System Ana- lyst	Summer School On Image Processing	NIT Ku- rushetra	8/6/2015 to 12/6/2019		20085
19	C V Anil Kumar,	Asso. Prof. In ECE	Sttp On Antennas and Microwave Pas- sive Components to Designand Measure- ments	IIT Kharag- pur	22/6/2015 to28/6/2015		44404
20	Dr. C Gopakumar	Asst.Prof .in ECE	Sttp On Antennas and Microwave Pas- sive Components to Designand Measure- ments	IIT Kharag- pur	22/6/2015 to28/6/2015		44404

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5.3 Outstation Programmes Attended by Faculty with Bill Settlement Pending

The details of the outstation programmes, attended by the faculty and staff, whose bill settlement is pending are listed in Table 10 in page 21.

Action Sought The BoG is requested to approve these courses.

Table 10: The details of outstation programmes attended by the faculty whole settlement is pending

SL.No	Name	Designation	Course	Date
1	Ms.Jyothi R L	Asst. Prof. In CSE	Workshop on Cyber Security to Fundamentals and Advancements at IIT, Delhi	Nov. 4 to 6, 2015
2	Mr.Binu V P	Asso. Prof. In CSE	Workshop on Cyber Security to Fundamentals and Advancements at IIT, Delhi	Nov. 4 to 6, 2015
3	Ms.Geetha S	Asst. Prof. In CSE	Workshop on Cyber Security to Fundamentals and Advancements at IIT, Delhi	Nov. 4 to 6, 2015
4	Ms.Remya R S	Asst.Prof. In CSE	Workshop on Cyber Security to Fundamentals and Advancements at IIT, Delhi	Nov. 4 to 6, 2015
5	Mr.Sylish S V	Asst. Prof. In ECE	Pedagogical Training IIT Madras	21 to 23 Sept. 2015
6	Ms.Deepa V S	Asso. Prof. In ECE	Pedagogical Training IIT Madras	21 to 23 Sept. 2015
7	Ms.Anuja V Nair	Asst. Prof. In ECE	Pedagogical Training IIT Madras	21 to 23 Sept. 2015
8	Ms.Preema R Chandran	Asst. Prof. In EEE	Pedagogical Training IIT Madras	29 to 31 Oct. 2015
9	Ms.Aswathy S S	Asst. Prof. In ECE	Pedagogical Training IIT Madras	29 to 31 Oct. 2015

10	Ms.Chippy Vijayan	Asst. Prof. In ECE	Pedagogical Training IIT Madras	29 to 31 Oct. 2015
11	Ms.Renjini SS	Asst. Prof. In ECE	Pedagogical Training IIT Madras	29 to 31 Oct. 2015
12	Ms.Jissy Raju	Asst. Prof. In CSE	Pedagogical Training IIT Madras	3 to 5 Nov. 2015
13	Ms.Sree S Bhagya	Asst. Prof. In CSE	Pedagogical Training IIT Madras	3 to 5 Nov. 2015
14	Ms.Alkha Mohan	Asst. Prof. In CSE	Pedagogical Training IIT Madras	3 to 5 Nov. 2015
15	Ms.Meera Murali	Asst. Prof. In EEE	National Level FDP on Electrical System Design and Electrical CAD at College of Engineering Vadakara	16 to 21 Nov. 2015
16	Ms.Preema R Chandran	Asst. Prof. In EEE	National Level FDP on Electrical System Design and Electrical CAD at College of Engineering Vadakara	16 to 21 Nov. 2015
17	Ms.Arya A P	Asst. Prof. In EEE	Power System Simulation using ETAP Govt. College of Engineering Barton Hill	12 to 13 Nov. 2015
18	Ms.Sujitha Surendran	Asst. Prof. In EEE	Power System Simulation using ETAP Govt. College of Engineering Barton Hill	12 to 13 Nov. 2015

19	Ms.Prasanthi P S	Asst. Prof. In EEE	Power System Simulation using ETAP Govt. College of Engineering Barton Hill	12 to 13 Nov. 2015
20	Mr.Revikumar Thampi V R	Asst. Prof. In ME	Workshop on Design Engi- neering Govt. College of Engineering, TVM	31 Oct. 2015

5.4 Conferences Attended

The details of conferences attended by the faculty and staff and the expenditure incurred are listed in Table [11](#).

Action Sought: The BoG is requested to approve these conference and ratify the payment of Rs. 1,40,428.00.

Table 11: The details of conferences attended post the sixth BoG and the expenditure incurred

Sl. No.	Participant	Title	Conference	Institution	Date(s)	Amt. Paid
1	Mr.Manoj Ray D	Asso. Prof. In CSE	3rd Ieee International Conference On Moocs, Innovation And Technology In Education At	Amritsar Cet, Amritsar	1 OCT 2015 to 2 OCT 2015-	39893
2	Jayadeepkumar J	Asst. Prof. In ME	International Conference on Energy, Environment, Materials and safety(ICEEMS' 14)	School of Engineering CUSAT	10-12 Dec,2014	7803
3	Ms.Smitha P	Asst. Prof. In CSE	2014 IEEE International Conference on Computational intelligence and Computing Research IEEE	Park College of Engineering and Technology, Coimbatore, Tamilnadu	18-20 Dece,2014	11328
4	Mr.Shajy L	System Analyst	2014 IEEE International Conference on Computational intelligence and Computing Research IEEE	Park College of Engineering and Technology, Coimbatore, Tamilnadu	18-20 Dece,2014	12328
5	Ms.Remya R S	Asst. Prof. In CSE	International Conference on Engineering and Technology(ICETECH 15), IEEE	Rathinam Technological unsettled Campus, Coimbatore	20/03/15	6330

6	Mr.Shajy L	System Analyst	International Conference on Engineering and Technology(ICE'15), IEEE	Rathinam Technological Campus, Coimbatore	20/03/15	6772
7	Mr.Reji Thankachan	Asst. Prof. In ECE	4th International Conference on Communication and Signal Processing(ICCSP 15), IEEE	Adhiparasakthi Engineering College, Melmaruvathur, Tamilnadu	2-4 Aprl.2015	15674
8	Mr.Shajy L	System Analyst	International Conference on Recent advances in Engineering, Science and Technology(icon 15), ISTE, New Delhi	Noorul Islam university, Kumaracoil, Kanyakumary	17 Aprl.2015	4900
9	Ms.Smitha P	Asst. Prof. In CSE	International Conference on Recent advances in Engineering, Science and Technology(icon 15), ISTE, New Delhi	Noorul Islam university, Kumaracoil, Kanyakumary	17 Aprl.2015	7400
10	Ms.Smitha P	Asst. Prof. In CSE	International Conference on Advances in Engineering and Applied Science (ICAEAS 15) IEEE	Noorul Islam university, Kumaracoil, Kanyakumary	29 Aprl.2015	10250

5.5 Management Capacity Development Programme

Table 12 details the management capacity enhancement programmes, attended by the faculty. All bills are pending settlement.

Action Sought The details are placed before the BoG for information and the approval of the programmes.

Table 12: The details of management capacity development programmes attended post the sixth BoG

Sl. No	Participant	Title			Programme	Date		
1	Mr.Revikumar Thampi V R	Asst.	Prof.	In	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th	to	10th Oct
2	Ms.Remya R S	Asst.Prof.		In	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th	to	10th Oct
3	Mr.Baju V	Asst.	Prof.	In	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th	to	10th Oct
4	Ms.Geetha S	Asst.	Prof.	In	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th	to	10th Oct
5	Mr. C V Anilku- mar	Asso.	Prof.	In	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiru- vananthapuram	8th	to	10th Oct

6	Ms.Deepa T R	Asst. Prof. In CSE	Hi Impact Leadership Blueprint For Success at Govt.Eng.College, Bartonhill, Thiruvananthapuram	8th to 10th Oct
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5.6 Soft Skill Training Conducted

Table 13 presents the details of soft skill training given to students post the sixth BoG.

Action Sought The details are placed before the BoG for approval.

Table 13: The details of soft skill training conducted for students post the sixth BoG

Sl. No.	Year	Branch	Programme	No. of Days	Trainer	Date
1	Final Batch Batch Batch Batch 4	yr 1 2 3	CS- EC- EE- IT- Aptitude training Final students	Test for Year	5 CL Educate, Tvm	6,7,11,12 13 /9/2015
2	First Year EC EE	CS	Student Orientation Program Explore	1	ICT Academy	5 /10/15

5.7 Training fee Paid To KTU

A P J Abdul Kalam Kerala Technological University is conducting many subject domain courses for the sake of faculty members, towards which the institution has to pay Rs.100,000.00 online in two equal installments. Accordingly an amount of Rs. 50023.00 (inclusive of transaction charges) has been paid.

Action Sought: The BoG is requested to ratify the payment of Rs. 50023.00 to KTU.

5.8 Refund of Fees towards Membership in Professional Societies

Dr. Hari V S, Mrs. Deepa V S, Mrs. Deepa A K and Prof C V Anilkumar have placed requests for the refund of half the annual membership fee of IEEE viz. Rs. 2550.00, Rs. 2577.00, Rs. 2574.00 and Rs. 2592.00 respectively.

Action Sought: The BoG is requested to sanction the payment of Rs. 2550.00, Rs. 2577.00, Rs. 2574 and Rs. 2592.00 to Dr. Hari V S, Mrs. Deepa V S, Mrs. Deepa A K and Prof C V Anilkumar respectively.

5.9 Refund of Fee for Journal Publication

- Dr. Gopakumar C requested for the refund of an Amount of Rs. 6000.00 towards fee for publication of the paper titled *Wavelet based analysis of ECG Signal for the Detection of Miocardial Infarction using SVM Classifier* in the *International Journal of General Engineering and Technology*.
- Mr. Shajy L requested for the refund of an Amount of Rs. 10500.00 towards fee for publication of the paper titled *Analysis of Textures of Sputum Cytology Images for Lung Cancer Diagnosis Using Discrete Wavelets Transform* in the *Research India Publications*.
- Mrs. Smitha P requested for the refund of an Amount of Rs. 8550.00 towards fee for publication of the paper titled *Feature Extraction from Immunohistochemistry Images to classify ERPR Score* in the *Indian Journal of Science and Technology*.

The review comments for these three papers are attached in the Appendix B in page 85.

Action Sought: The BoG is requested to sanction these amounts, subject to merit, to the above authors.

Point of Discussion The point whether the fee for *open access publication* to reputed journals such as IEEE, Elsevier, Springer etc. can be paid from TEQIP. need to be considered. This is with the view that the readership is increased with open access publications.

5.10 Refund of Fee for Qualificatin Upgradation

- Mr. Raju M, AP, Department of EE, placed a request for the refund of the doctoral committee fee of Rs. 6000.00.
- Mr. Shajy L and Mrs. Smitha P submitted requests for the refund of tuition fee of Rs. 15,100.00 each paid in the eleventh semester of their PhD programme.

Action Sought: The BoG is requested to sanction the payment of Rs. 6000.00 to Mr. Raju M and Rs.15,100.00 to Mr. Shajy L and Mrs. Smitha P each.

5.11 PG Scholarship

- Fathima Zulfiquer of M. Tech CS [IP] rejoined in second year and submitted a request for PG Non-Gate scholarship continuation (Due to medical reasons she has discontinued in the academic year 2014 - 2015).

- First semester results of M. Tech CS [IP] 2013 admission has been modified by the university and all the six students are passed in that semester. Now they are eligible for the scholarship for the remaining period. They have done the work load allotted to them willingly in that period.

Actions Sought BoG is requested to consider these requests and to take suitable decision, subject to merit.

5.12 Interaction with ICT, Academy

College of Engineering Karunagappally signed Memorandum of Understanding (MoU) with Information and Communication Technology Academy of Kerala (ICTAK) on 28.09.2015 for improving employability skills of the trainees (both Faculty and Students). Academic membership fee of Rs. 68400.00 (including service tax) was paid to ICTAK. The copy of MoU is attached as Appendix D in page 97.

Action Sought The BoG is requested to sanction the payment of Rs. 68400.00 paid to ICT Academy.

5.13 International Conference on Computing, Communication and Signal Processing

The Departments of Electronics and Communication and Computer Engineering have decided to conduct an International Conference on Computing, Communication and Signal Processing on 8 and 9 July 2016. The estimate is listed in Table 14.

Table 14: The estimate for international conference

Sl. No.	Item	Amount
1	Venue	4,50,000
2	Printing of Brochures and Posters	50,000
3	TA for resource persons	4,50,000
4	Remuneration to resource persons	1,00,000
5	Publication of Conference Proceedings	2,50,000
6	Printing of Certificates	5,000
7	Conference Kit	70,000
8	Accommodation	90,000

9	Publicity	40,000
10	Transportation	50,000
11	Other Miscellaneous expenses	70,000
Total Amount		Rs. 16,25,000

Action Sought The BoG is requested to sanction this conference and approve the estimate of Rs. 16,25,000.00.

5.14 ITSS for TENCON Attended by Mr.C V Anilkumar at Macau, China

Mr. C V Anilkumar attended the IEEE conference TENCON at Macau, China from November 2, 2015 to November 4, 2015. The approval of the Chairman, BoG was obtained. The Govt. also sanctioned the travel and presentation in the conference. The bills are yet be submitted.

Action Sought The BoG is requested to approve this conference.

5.15 Plan for the In House Training for the Next Three Months

The Table 15 details the plan for conducting in house training for the next three months.

Action Sought: The plan is placed before the BoG for the approval of the courses

Table 15: The plan for the In House Training for the next Three Months

Sl. No.	Title	Coordinator	Dept.	Tentative Date	Estimate Amt.
1	Tools for Biomedical Research	Remya R S, Geetha S	CS	11/15	100000.00
2	Machine learning Applications in Image Processing	Jyothi R L, Remya R S	CS	12/15	100000.00
3	Number Theory and Cryptography	Binu VP, Jyothi R L	CS	01/16	100000.00

4	Human Com-puter Interac-tion	Remya R S,Geetha S	CS	02/16	100000.00
5	Image and Video Security	Binu V P,Geetha S	CS	03/16	100000.00
6	Networking and Simulation using NS2	Binu V P ,Remya R S	CS	01/16	60000.00
7	Network Admin-istration	Geetha S,Jyothi R L	CS	02/16	60000.00
8	Advanced Python Pro-gramming	Binu V P, Jyothi R L	CS	03/16	60000.00
9	Labview and USRP	Deepa T R Libi A	EC	11/2015	52000.00
10	Research Methodology	Deepa AK	EC	23-25 Nov. 2015	75000.00
11	Technology incubation	CV Anil Kumar	EC	12/2015	25000.00
12	Digital Signal Processing	Reji Thankachan	EC	02/2016	120000.00
13	Raju M	Mechtronics, Robotics and MEMS	EE	03 to 05 Dec 2015	60,000.00
Total					10,12,000.00

5.16 Plan for Outstation Programmes for the Next Three Months

The Table 16 details the plan for conducting in house training for the next three months.

Action Sought: The plan is placed before the BoG for the approval of the courses.

Table 16: The plan for the outstation training for the next three months

Sl. No.	Title	Participant(s)	Institution	Tentative Date	Estimate Amt.
1	Pedagogy	Smitha P, Binu V P, Remya R S, Geetha S, Sabeena K, Suni S	IIT Madras,	Jan., Feb. 15	225000
2	Gradient based numerical optimization algorithms	Binu V P	IIT kharagpur	12/15	80000
3	Short term course on application of logic	Remya R S, Geetha S, Jyothi R L	IIT kharagpur	12/15	80000
4	Pedagogy Training	C V Anil Kumar Dr. Gopakumar Shyni C	IIT Madras	Dec. 2015 Jan. 2016	25000
5	Workshop on TCAD	Renjini Anu Mohan	CE, Chengannur	28 Dec. 2015-1 Jan	4000
6	MATLAB- A tool in research	Deepa A K Dr. Gopakumar	MNIT, Jaipur	2015-12-01	45000
7	Pedagogy	Mrs. Retheekumary, Mrs. Premakumari R, Mrs. Sheela R	IIT, Madras	Dec. 15	25000
8	FDP on Signal Processing for Biomedical Applications	Ms.Haseena PY Asst. Prof. In EEE	MES College of Engineering Kuttipuram	Nov.11 to 20, 2015	5000
Total					4,89,000

5.17 EAP Sessions

Remedial classes were conducted for 181 hours, whose details are listed in Table 17 in page 35. An amount of Rs. 108600.00 has been paid.

Action Sought: The matter is placed before the BoG to ratify the payment of Rs. 108600.00.

Table 17: The details of remedial classes taken and expenditure incurred

Sl.No	Name	Class	Paper	Hrs	Amt. Paid
1	Ms.Deepa A K, A P in ECE	B Tech EC 3rd Sem	ECE 1303	15	9000.00
2	Dr.C.Gopakumar, A P in ECE	S5 EC, S7 EC, S7EE, S5EC,S3EC,S7EC	EC1306	22	13200.00
3	Ms.Jisy Raju, A P in CSE	S5 CS	CS 1503	2	1200.00
4	Ms.Remya R S, A P in CSE	S3 CSIT, S6, S8 CSIT	1303,1404	14	8400.00
5	Ms.Renu K K, Asso. Prof. In Maths	S7 EC	401	4	2400.00
6	Ms.Renjini S, A P in ECE	S3 EC	EC/EC1 303	7	4200.00
7	Ms.Meera Murali, A P in EE	S7EEE	702	11	6600.00
8	Ms.Ambili Mathew, AP in EEE	S5EEE	1504	16	9600.00
9	Ms.Prema R Chandran, A P in EEE	S5EEE	1502	7	4200.00
10	Ms.Mary M S, A P in EEE	S3 EE	304	4	2400.00
11	Mr.Jayakrishnan A, A P in CSE	S3 IT	1305	11	6600.00
12	Mr.Deepak Kumar G K, former faculty(CEK)	ECE3	ECI306	4	2400.00

13	Ms.Divya Raj, AP in EEE	S6 EE	603	5	3000.00
14	Ms.Ambili Mathew, A P in EEE	S4 EEE	1406	4	2400.00
15	Ms.Meera Murali, A P in EEE	S1, S2 EEE	1107	6	3600.00
16	Ms.Libin Muslih	S4 EEE,ECE, CS	1109	3	1800.00
17	Ms.Mili Rosline Math- ews, A P in ECE	S8 ECE	EC 804A	4	2400.00
18	Ms.Asathy S S, A P in ECE	S8 ECE	EC 801	5	3000.00
19	Ms.Alkha Mohan, A P in CSE	S1, S2 EEE	EE 1108	11	6600.00
20	Ms.Jisy Raju, A P in CSE	S1, S2 ECE	1108	13	7800.00
21	Ms.Alkha Mohan, A P in CSE	S1, S2 CS/IT	1108	13	7800.00
Total				181	108600.00

5.18 Bridge Courses

The details of bridge courses conducted and the payments are listed in Table 18 in 36. A total of 39 hours of bridge courses are conducted by three external resource persons for whom a payment of Rs. 23400.00 is made.

Action Sought: The matter is placed before the BoG to ratify the payment of Rs. 23400.00.

Table 18: The details of bridge courses and the expenditure incurred

Sl.no.	Faculty	Date	Total Hours	Amt. Paid
1	Mr.Jayaram D S, Prof. In Maths	29.07.15– 31.07.15	12	7200.00
2	Ms.Neethu A S, Fac- ulty in Physics	28.07.15– 31.07.15	21	12600.00

3	Ms.Sheena A, Faculty in Maths	30.07.2015	6	3600.00
Total			39	23400.00

5.19 Plan for the Remedial Courses for the Next Three Months

The plan for remedial teaching is listed in Table 19.

Action Sought The plan is placed before the BoG for approval.

Table 19: The plan for remedial classes for the next three months

Sl.No.	Class	Subject	No of Hrs	Amount
1	S4EE	Engg Mathematics III	10	6000
2	S4EE	Digital Electronics	8	4800
3	S4EE	Circuits, Signals and Systems II	10	6000
4	S4EE	Analog Communica- tion	5	3000
5	S4EE	Power Electronics	8	4800
6	S6EE	Modern Communica- tion Engg	8	4800
7	S6EE	DSP	10	6000
8	S6EE	Control System I	6	3600
9	S6EE	Optimization Tech- nique	6	3600
10	S6EE	Electrical Drawing	6	3600
11	S8EE	Electrical Machine Design	6	3600
12	S8EE	Power System III	6	3600
13	S8EE	Electronic Instrumen- tation	8	4800

14	S8EE	Mechatronics	5	3000
15	S2EE	Differential Equations	6	3600
16	S2EE	Engineering Mechan- ics	10	6000
17	S2EE	Basics of Electronics Engg	6	3600
18	S2EE	Engg Physics	5	3000
19	S4EC	Electronic circuits	4	2400
20	S4EC	Signals and Systems	4	2400
21	S4EC	DSD	4	2400
22	S6EC	Microwave Theory	4	2400
23	S6EC	VLSI Design	4	2400
24	S8EC	Computer Communi- cation and Network- ing	4	2400
25	S2EC	Differential Equations	8	4800
26	S2CS	Differential Equations	8	4800
27	S1CS	Calculus	5	3000
28	S1CS	Basic Electrical Engi- neering	5	3000
29	S1CS	Python programming	5	3000
30	S1CS	Engg Mechanics	5	3000
31	S1CS	Chemistry	5	3000
32	S4CS	Data structures and Algorithms	15	9000
33	S4CS	Computer Architec- ture and Organization	15	9000
34	S6CS	Compiler Construc- tion	15	9000
35	S6CS	Control System	15	9000
36	S6CS	Digital Signal Pro- cessing	15	9000

37	S8CS	Advanced Architecture and Parallel Processing	15	9000
38	S8CS	Object Oriented Modelling	15	9000
39	S8CS	Data Mining	15	9000
40	S8CS	Mobile Computing	15	9000
41	S1EC	Calculus	5	3000
42	S1EE	Calculus	5	3000
Total			339	203400.00

5.20 High Intensity Training Programme

The department of Electronics and Communication intends to conduct a high intensity training programme in *Embedded Syatem Design and Programming* to enhance the employability of passed out students. It is scheduled as programme of four weeks in the months of January and February 2016. The Terms of Reference are attached as Appendix C in page 89. The estimated expenditure is Rs. 6,00,000.00.

Action Sought: The matter is placed before the BoG for the approval of the course and the estimate.

5.21 IIIC Programmes

The Department of Electrical and Electronics Engineering conducted all the internship programmes, presented before the sixth BoG. No expense has been incurred under that. The IIIC activities conducted by the Department of EC and CS post the sixth BoG is presented in Table 20.

Action Sought: The BoG is requested to approve the conducted IIIC programmes and to ratify the payment of Rs. 22,500.00.

Table 20: The details of industry interaction and the expenditure incurred

Sl. No.	Programme	Dept.	Industry	Amt. Paid	Date
1	internship ternship	in- ECE	BSNL, KMML, KELTRON	NA	May, Jun 15

2	Talk on electronic Product Design Industrial talk	ECE	SFO Technologies	Unsettled 09/15
3	Talk on internet of things Industrial talk	ECE	e bird	Unsettled 09/15
4	Industrial talk on Antenna Types Industrial talk	ECE	Doordarsan	Unsettled 10/15
5	Industrial talk on embedded System Development using Keil and Proteus Industrial talk		Tata Elxsi	Unsettled 10/15
6	Industrial workshop on workshop on Raspberry Pi	ECE	Beginow	Unsettled 10/15
7	Industrial Tutoring on Java Projects	CS	Seaview Support Systems	22500 03/15
8	Industrial Tutoring on Java Programming	CS	Seaview Support Systems	Unsettled 10/15
9	Industrial Tutoring on Multi-media Projects	CS	Spot Writers Technologies	Unsettled 10/15
Total				22500.00

5.22 The IIIC Plan for the Next Three Months

The IIIC activities, planned for the next six months are presented in Table 21.

Action Sought The details are placed before the BoG to approve the activities.

Table 21: The plan for the of industry interaction and the anticipated expenditure for the next three months

Sl. No	Activity	Industry	Dept	Month /Year	Amt.
1	Expert Lecture	Load Despatch Centre	EE	12/16	7500
2	Expert Lecture	Energy Man-agement Cell	EE	01/16	7500
3	Expert Lecture	Electrical Inspec-torate	EE	02/16	7500
4	Short term training	Nayak Power system	EE	02/16	40,000
5	Graphics and Web Designing	Seaview Support System Pvt. Ltd. Technopark	CS	2015-12-01	35000
6	Project Development Using JAVA	Softtex digital private limited Technopark	CS	2015-12-01	35000
7	Software Development Process	Seaview Support System Pvt. Ltd. Technopark	CS	2015-12-01	35000

8	Android Application Development	Seaview Support System Pvt. Ltd. Technopark	CS	2016-01-01	35000
9	.NET Framework	Softtex digital private limited Technopark	CS	2016-01-01	35000
10	Workshop on PCB Design	IHRD	EC	12/15	20000
11	Expert lecture Entrepreneurship	Union Bank	EC	11/15	5000
12	Talk on Communication	BSNL	EC	12/15	5000
13	Tutoring PIC	Brain Bitz	EC	01/16	20000
14	Talk on industries	Department of Industries	EC	01/16	5000
15	Talk on VLSI	CDAC	EC	02/16	5000
16	Workshop on Open Hardware	zyxware	EC	01/16	20000
Total					3,17,500.00

5.23 Research and Development Activities

- Eight faculty members obtained seed money worth Rs. 100,000.00 each for making project proposals to be submitted to funding agencies. Though the duration of the advance was one year, the period was extended twice by the Research Guidance committee. The minutes of the RGC committee is included as Appendix E in page 105. The approval letters for further extensions upto October 31, 2015 are also included in this Appendix.
- Seven proposals are prepared. One is in the final stage. Two proposals are submitted each for Rs. 10,00,000.00 each to SERB and TDIL respectively. Other proposals are

also waiting for submissions.

- An MoU has been signed with Regional Cancer Center, Thiruvananthapuram in respect of Research activities. The copy of MoU is attached as Appendix F in page 112.
- All bills are settled and the details are listed in Table 22. The total expenditure is Rs. 532.346.00. The remaining amount has been paid back by the investigators.

Table 22: The details of expenditure of seed money

Sl. No	Name of PI	Name of Proposal	Advance amount received	Amount Spent	Amount Returned
1	Dr. Hari V S	Development of Visualizer, based on VTK, for k-space MRI Data and the Implementation of Quadratic Systems for Periphery Detection, De-noising and Brain Segment Volume Detection	1,00,000	39967	60033
2	Deepa A K	Image processing Techniques for Breast Image Analysis	1,00,000	46505	53495
3	Smitha P	Grading through H and E images and Scoring using IHC images for Automation of breast cancer	1,00,000	100691	NIL
4	Jyothi R L	Hand written character recognition of current and ancient Malayalam fonts	1,00,000	40146	59854

5	Remya R S	Automated de- tection of Acute Limphotic Lukhemia	1,00,000	98272	1728
6	Shajy L	Analysis of chromatin tex- ture for the estimation of malignancy as- sociated changes	1,00,000	99087	913
7	Jyothi R L	Hand writ- ten character recognition of manuscript in ancient Grandha script	1,00,000	51890	48110
8	Remya R S	Automated video forgery detection	1,00,000	55788	44212
Total				5,32,346.00	268345.00

Actios Sought The BoG is requested to approve the project proposals and the expendi-
ture.

Part III

Reports

6 Summary of Expenditure

The statement of expenditure post the sixthg BoG is presented in Table [23](#)

Table 23: The statement of expenditure from May 1, 2015

No	Expenditure Name	Expenditure up to April 30 2015	Expenditure for May 2015	Expenditure for June 2015	Expenditure for July 2015	Expenditure for August 2015	Expenditure for Sept. 2015	Expenditure for Oct 2015	Cumulative expenditure till 31-10-2015
1	Procurement	4,13,51,031	0	11,16,074	2,09,606	10,34,118	0	32,60,855	4,69,71,684
2	Providing Assistantships for Increased enrolment in existing and new PG Programmes in Engineering Disciplines	35,99,000	13,50,000	0	0	10,92,000	4,50,000	2,10,000	67,01,000
3	Enhancement of Research and Development and Institutional Consultancy Activities	8,74,130	0	-8,00,000	39,370	0	0	5,32,346	6,45,846

4	Faculty and staff development for improved competence based on Training Needs Analysis(TNA)	41,30,579	0	36,102	1,88,014	0	3,22,703	1,13,766	47,91,164
5	Enhanced Interaction with Industry	3,97,889	0	0	13,704	0	0	0	4,11,593
6	Institutional Management Capacity enhancement	3,79,835	0	0	0	0	0	0	3,79,835
7	Implementation of Institutional reforms	8,98,880	0	0	0	0	0	0	8,98,880
8	Academic support for weak students	5,59,757	0	38,400	70,200	0	23,400	0	6,91,757
9	Incremental Operating Cost	26,84,257	67,979	77,251	1,10,486	55,510	1,28,437	1,35,267	32,59,187
9.1	Salaries	8,71,408	48800	50,000	50,000	49,600	48,000	48,800	11,17,808
9.2	Consumables	3,70,999	19,179	750	500	0	1,600	0	3,93,028

9.3	Operation and Main- tence	14,41,850	0	26,501	59,986	5,910	78,837	86,467	16,99,551
Total		5,48,75,358	14,17,979	12,67,827	6,31,380	21,81,628	9,24,540	42,52,234	6,47,50,946

7 Report of Statutory Audit

The report of statutory audit is included as Appendix [G](#) in page [124](#)

Part IV

Any Other Item with the Permission of the Chair

A Minutes of the Sixth BoG

Minutes of the Sixth meeting of the Board of Governors

College of Engineering Karunagappally

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Part I

Procedural Items

Minutes 1

Opening of Meeting

Those present		
Sl.No.	Participant	Title
1	Prof. V P N Nampoori	Chairman
2	Mr. Sherif M	Govt.Representative
3	Mr. James	Govt.Representative
4	Dr. Hari V S	Principal
5	Dr. V P Devassia	Educationist, Addln. Director,IHRD
6	Dr. Sureshkumar P	Educationist, Addln. Director,IHRD
7	Dr. Sam Thomas	Representative of CUSAT
8	Dr. Ajilkumar A	Member, HOD(Mechanical Engg.)
9	Mr. Manoj Ray D	Member

Absent Director, IHRD

MINUTES 1. OPENING OF MEETING

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Guest		
Sl.No.	Participant	Title
1	Dr. V Gopakumar	Director,SPFU,Kerala
2	Mrs. Deepa V S	Academic coordinator
3	Mr. Sylish S V	Procurement coordinator
4	Mr. Jayadeepkumar J	Finance coordinator
5	Mr. Baiju V	IIIC coordinator
6	Mr. Shaji L	Civil work coordinator
7	Mrs. Premakumari R	EAP coordinator
8	Mr. Anilkumar C V	HOD (EC)
9	Mr. Binu V P	HOD (CS)
10	Mrs. Libi A	HOD (EE)
11	Mrs. Smitha P	R and D coordinator

Location of the meeting College of Engineering Karunagappally

Date May 4, 2015 09:30 AM–01:00 PM

List of topics

1.1	Opening of Meeting	6
1.2	Approval of the Minutes of the Fifth Meeting of BoG	6

MINUTES 1. OPENING OF MEETING

6

1.3 Report on the action taken/action pending . . . 6

1.1 Opening of Meeting

The meeting started at 09:30 AM under the presidency of the honourable Chairman with Welcome Address by the principal. Principal, Dr. Hari V S welcomed all members and special invitees. A brief report was made by the Principal about the agenda of meeting.

1.2 Approval of the Minutes of the Fifth Meeting of BoG

Minutes of the Fifth BOG meeting was circulated to the BOG members for confirmation.

Prof. V P N Nampoori opined that the minutes need some corrections. He pointed out that the appreciation the fifth meeting expressed towards the good deed of Mr. Reji Thankachan in the construction of the new playground with the help of contributions from the members of the faculty and parent teachers association is missing from the minutes. He suggested to incorporate it in the minutes.

Dr. V P Devassia Expressed concern in the missing figures in the minutes related to the procurement.

Principal Agreed to the above points and asserted that the necessary corrections will be made in the minutes of the fifth meeting of the BoG.

Decision: The BoG decided to approve the minutes of the meeting held on December 14, 2014, subject the modifications mentioned above.

1.3 Report on the action taken/action pending

The BoG examined the 11 decisions taken in the fifth meeting of the BoG

MINUTES 1. OPENING OF MEETING

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on December 16, 2014 taken and its execution.

Decision: Approved the action taken report.

Part II

Discussion, Ratification and Approval

Minutes 2

Procurement Activities

List of topics

2.1	Expenditure for Packages completed post the Fifth BoG	9
2.2	Expenditure for Packages committed post the Fifth BoG	11
2.3	Expenditure for Packages initiated post the Fifth BoG	14
2.4	Expenditure on Civil Works	14

2.1 Expenditure for Packages completed post the Fifth BoG

The details of packages, whose procurement has been completed post the last BoG meeting, were presented before the BoG for approval. The packages are worth Rs. 4454827.00 as detailed in Table 2.1 in page 10. Ratification of the purchase and payment was sought for.

Mr. Sherif Inquired about the price revisions.

Procurement coordinator Assured that the variation are negative in value and are permitted

Decision: BoG ratified the purchase of the three packages worth Rs. 4454827.00 and their price revisions and payment.

Sl No	Package No TEQIP II/ KL1G18/	Package Name	Mode of purchase	Firm	Estimated Amount (Rs)	Actual Amount (Rs)	% Variation
1	21	Digital Storage Os- cilloscope	NCB	Innovative instruments Inc. Thiru- vanantha- puram	2785000	1978276	28.97
2	105	PSCAD software	DC	Nayak Power Systems Bangalore	445000	441975	0.68
3	128	Campus networking	NCB	Techser Kochi	2499400	2034576	18.6
Total					4454827.00		

Table 2.1: Completed packages post the fifth BoG meeting

MINUTES 2. PROCUREMENT ACTIVITIES 11

2.2 Expenditure for Packages committed post the Fifth BoG

The details of committed packages post the last BoG meeting, were presented before the BoG for approval. The packages are worth Rs. 1499167.00 as detailed in Table 2.2 in page 13. Approval of the packages was sought for.

Decision: BoG approved the of the three packages worth Rs. 1499167.00 and their price revisions.

Sl No	Package No TEQIP II/ KL1G18/	Package Name	Mode of purchase	Firm	Estimated Amount (Rs)	Actual Amount (Rs)	% Variation
1	170	DreamSpark	Shopping	TEG, 39/5366, 4th cross road, Panam- pally Nagar Kochi Ker- ala, 682036	170000	139106	18.17
2	48	Microprocessors and micro- controllers	Shopping	"SCIENTIFIC ENTER- PRISES P.B.NO : 1951,Shine road, Vytilla Cochin, Kerala	583000	544504	0.06

3	169	DC Ma- chines and Servomo- tors	Shopping	"SCIENTIFIC ENTER- PRISES P.B.NO : 1951,Shine road, Vytilla Cochin, Kerala	843000	815557	0.03
					Total	1499167.00	

Table 2.2: Committed packages post the fifth BoG meeting

MINUTES 2. PROCUREMENT ACTIVITIES 14

2.3 Expenditure for Packages initiated post the Fifth BoG

The details of initiated packages post the last BoG meeting, were presented before the BoG for approval. The packages are worth Rs. 1499167.00 as detailed in Table 2.2 in page 13. Approval of the packages was sought for.

Mr. Sherif inquired on why the first six packages in Table 2.3 were not purchased yet.

procurement coordinator explained that no firm quoted them despite every effort.

Dr. V P Devassia opined that reasons should be well laid out on canceling the packages.

Dr. Gopakumar V inquired the need of the currency counting machine and the surveillance system.

Principal Explained that the institution has no compound wall and very thin security and the surveillance system is to safeguard the systems we purchased. Counterfeit currency is a big problem in Karunagappally and the currency counter will aid the cash section in the office.

Decision: BoG decided to cancel the first six packages in Table 2.3 and approved the purchase of the remaining four packages worth Rs. 1142000.00 with their price revisions.

Decision: It is also decided to buy national journals from publishers

2.4 Expenditure on Civil Works

The status of civil works is placed before the BoG as shown in Table 2.4. Four works are completed and paid. One is completed but not paid for lack of funds. One work is yet to be completed whose part payment is done. One work is yet to be initiated. The BoG was sought to approve the payments (including one part payment) made to completed works. Also it was sought to approve the one civil work *Electrical work in Library and Office with package no. TEQIP II/KLG18/180* to be initiated.

Decision: BoG approved the payments (including part payment) and the initiation of the package *Electrical work in Library and Office with package no. TEQIP II/KLG18/180*

Sl No	Package No TEQIP II/ KL1G18/	Package Name	Date initiated	Type	Estimated Amount (Rs)
1	18	Multimeter	05/03/14	Shopping	194000
2	165	National Journal	06/02/14	Shopping	41438
3	69	Television	22/02/14	Shopping	73000
4	37	Visual Pre- senter	31/03/14	Shopping	210000
5	94	Weighing Machine	25/03/14	Direct Con- tract	4250
6	168	Water Cooler	31/03/14	Shopping	75000
7	171	APFC	20/03/15	Shopping	200000
8	172	IEEE e journal	10/02/15	Direct Con- tract	380000
9	173	Science Di- rect E jour- nal	10/02/15	Direct Con- tract	500000
10	175	Furniture Library	02/03/15	Shopping	62000
Total					1739688.00

Table 2.3: Initiated packages post the fifth BoG meeting

Sl No	Work	Package no	"Estimate "	% Above	Quoted	Agreement	Extension	Status	"Amount paid	
		TEQIP II/ KL1G18/	amount(Rs)	/below	amount(Rs)	date	date		and date	
1	Extension of Generator Room	130	1282039	14.95 above"	1473703	1/11/2013-28/2/2014	1/3/2014-30/6/2014	Not completed	3,68,425.00(part ment)	pay-
2	Refurbishment work of labs	132	617298	15 above"	709892	23/10/2013-22/2/2014		Completed	"615131/- 15/2/2014"	
3	Foundations for Machines	131	173676	15 above"	199727	17/10/2013-16/2/2014		Completed	"178538/- 30/12/2013"	
4	Ceiling work of Computer lab	133	173500	14.5 above	198657	17/10/2013-16/2/14		Completed	"187215/- 28/10/2013"	
5	Partitioning work	127	991088	14.81 above	1137868	1/11/2103-28/2/2014	1/3/14-30/6/2014	Completed	"1051676/- 5/9/2014"	
6	College electrical work		1225329	"7.9 Below"	1128528	7/2/2014-6/5/2014	7/5/2014-6/8/2014	Completed	Not paid	

7	Electrical work in Li- brary and Office	180	79000	Not initi- ated
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Table 2.4: Details of civil works

Minutes 3

Academic Activities

List of topics

3.1	Outstation Training Programmes	18
3.2	In-house Training Programmes	19
3.3	Refund of Fees	19
3.4	Approval of IIIC Activities	19
3.5	Approval of R& D Activities	20
3.6	Approval of EAP Activities	21

3.1 Outstation Training Programmes

Twenty seven outstation training programmes that spans over the next three months were placed before the BoG for approval.

Mr. Sherif opined to limit to one course per faculty member.

Decision: Decided to limit to one outstation course per faculty member.

Decision: Decided to depute guest faculty to academic programmes outside Kerala, with the condition that air fare is not permissible.

MINUTES 3. ACADEMIC ACTIVITIES

19

3.2 In-house Training Programmes

The proposal for eight in house programmes were placed before the BoG for approval. BoG instructed report the number of external participants, once the courses are over.

Decision: Decided to approve the eight in house training programmes

3.3 Refund of Fees

Mr. Raju M, Assistant Professor in Electrical and Electronics has submitted the receipt of fee of Rs.23000.00 paid towards the tuition fee for PhD programme and requested the refund. The matter is placed before the BoG for approval and sanction of the said amount. He also submitted the receipt for Rs. 5773.00 towards the IEEE annual membership fee and requested its refund also. Half of this amount viz. Rs 2886.00 can be sanctioned as per guidelines. The matter is presented before the BoG for approval and sanction.

Dr. V Gopakumar Instructed to increase the membership in professional bodies such as IEEE, ACM etc. and promote the activities of their student bodies in the institution. It is also instructed to report the number of faculty in each professional body should be reported in next BOG.

Principal Agreed to promote membership among faculty and do whatever is required to encourage the student activities under ISTE and IEE student chapters.

Decision: It is decide to approve the refund of Rs.23000.00 and Rs. 2886.00 to Mr. Raju M, Assistant Professor in Electrical and Electronics towards the refund of PhD tuition fee and the fee towards membership in IEEE respectively.

3.4 Approval of IIIC Activities

Ten student internship programmes were placed before the BoG for approval. BoG was sought to approve them. BoG needed a clearer picture on the IIIC activities.

MINUTES 3. ACADEMIC ACTIVITIES

20

Dr. V Gopakumar Inquired about the the expert talk by the resource person from Union Bank and its relevance.

IIIC coordinator Explained that the talk is not on banking but on entrepreneurship by students.

Decision: Decided to approve the said ten IIIC programmes.

Decision: Decided that faculty members can also attend training at any industry, provided they have project and MOU. The training fee can be paid from TEQIP.

Decision: Decided to activate the entrepreneurship club in the institution.

3.5 Approval of R& D Activities

BoG inquired about the progress in the eight research proposals for which seed money was given.

Dr. V Gopakumar Inquired the reason for the extensions, approved by the research guidance committee by some more months.

Principal Explained that majority of these proposals are joint with research institutions like Sree Chitra Institute, Regional Cancer Centre etc. The co-investigators in these institutions need approvals from technical committee and ethical committee, in some cases and hence the need for the extended time. This procedure generally involves

- A short preliminary proposal that highlights the involvement of the resaerch institution besides the objectives, methodologies etc.
- Presenttaion before a review committe that decides whether the proposal needs the approval of the technical committee or ethics committee or both.
- Approval by committees
- MOU, if any

It is stated that the proposals are going through various phases.

Decision: BoG approved the extensions granted to the eight proposals by the RGC and instructed to finish all the proposals and to submit them at the earliest.

MINUTES 3. ACADEMIC ACTIVITIES

21

3.6 Approval of EAP Activities

The details of EAP sessions conducted after the last BoG meeting have been placed before the BoG. EAP sessions for 101 hours for which Rs. 60600.00 has been paid. The BoG was sought to approve the payment.

The details of 51 EAP sessions, conducted but has not been settled due to want of funds, were also placed before the BoG for information.

The action plan for the soft skill training and bridge courses were also presented for approval.

Dr. V Gopakumar was unhappy about the progress in EAP.

Dr. V Gopakumar The first year results are poor and the faculty should be mandatorily deputed for Pedagogy training.

Mr. Sherif Opined to limit EAP sessions to weak students only.

Decision: To activate the EAP sessions

Decision: Decided to have lessons on Saturday for weak students and also to conduct special sessions for papers like computer programming for which not enough hours are allocated in the syllabus.

Decision: Decided to depute faculty, especially those who take for the first year, to Pedagogy training obligatorily.

Decision: Decided to conduct bridge courses, contiguously, at the beginning of the first year classes.

Decision: Decided to approve the payment of Rs.60600.00 towards payment of EAP sessions.

Decision: Decided to approve the EAP action plan for the next three months.

Minutes 4

Financial Matters

List of topics

4.1	Expenditure incurred under IOC	22
4.2	Summary of Expenditure	25

4.1 Expenditure incurred under IOC

The expenditure incurred under IOC post the fifth BOG meeting is Rs. 7,8,2443.00. This amount is due to Salaries of TEQIP staff, Consumables purchased for TEQIP cell and other departments, and Operation and Maintenance charges. All the amounts have been paid as per TEQIP II norms.

The salaries paid to TEQIP staff post the last BoG are presented in Table 4.1. An amount of Rs.203400.00 has been paid as salaries and this payment is brought before the BoG for approval. The details of consumable purchased for the TEQIP office and various departments are detailed in Table 4.2. An amount of Rs. 67659.00 has been expended under this. The matter was placed before the BoG for approval.

Decision: BoG decided to approve the payment of Rs 203400.00 towards payment of salaries to TEQIP staff

MINUTES 4. FINANCIAL MATTERS

23

Sl.No	Month	Amount
1	December 2014	53800
2	January 2015	50000
3	February 2015	49200
4	March 2015	50400
Total		203400.00

Table 4.1: Expenditure under salaries

Decision: BoG decided to approve the payment of Rs. 67659.00, paid towards consumables.

Sl No:	Date of Settlement	Department	Item Pur- chased	"Amount (Rs)"
1	29-12-2014	EC	Components	11661
2	14-01-2015	EC	Electrical appliances	13468
3	09-03-2015	EEE	Electrical appliances	18425
4	09-03-2015	TEQIP	Stationary	7760
5	12-03-2015	TEQIP	Toner Refill- ing	750
6	12-03-2015	ECE	Electronics Item	15595
Total				67659

Table 4.2: The expenditure for consumables

MINUTES 4. FINANCIAL MATTERS

25

4.2 Summary of Expenditure

The summary of expenditure is placed before the BoG for consideration and approval. it is detailed in Table 4.3 in page 26. The cumulative expenditure as on March 30, 2015 is Rs 5, 48, 75358.00.

Decision: BoG examined expenditure under various heads and approved the statement of expenditure.

Sr.No.	Expenditure Name	Expenditure Upto March 31 2015	Expenditure for April 2015	Cumulative Expenditure upto April 30 2015
1	Procurement	41351031	NIL	41351031
2	Providing Assistantships for Increased enrolment in existing and new PG Programmes in Engineering Disciplines	3599000	NIL	3599000
3	Enhancement of Research and Development and Institutional Consultancy Activities	874130	NIL	874130
4	Faculty and staff development for improved competence based on Training Needs Analysis(TNA)	4130579	NIL	4130579
5	Enhanced Interaction with Industry	397889	NIL	397889
6	Institutional Management Capacity enhancement	379835	NIL	379835
7	Implementation of Institutional reforms	898880	NIL	898880

MINUTES 4. FINANCIAL MATTERS

26

8	Academic support for weak students	559757	NIL	559757
9	Incremental Operating Cost	2633857	50400	2684257
9.1	Salaries	821008	50400	871408
9.2	Consumables	370999	NIL	370999
9.3	Operation and Maintenance	1441850	NIL	1441850
Total		5,48,24958.00	50400	5,48,75358.00

Table 4.3: Summary of Expenditure

Minutes 5

Other Matters

List of topics

5.1	Other Matters	27
5.2	International Conferences, Workshops and Seminars	28
5.3	Training Attended	28

5.1 Other Matters

The IDP for the extended period of TEQIP was presented before the BoG. The members of the BoG instructed to conduct one more SWOT Analysis to exploit the strengths of the institution.

Dr. V Gopakumar Instructed to prepare a master plan for the institution with the help of experts.

Dr. V Gopakumar Instructed to take steps to improve carrier development of students

Prof. V P N Nampoori Instructed to make a better IDP, including the papers published etc.

MINUTES 5. OTHER MATTERS

28

5.2 International Conferences, Workshops and Seminars

Principal reported some academic activities, which were not included in the agenda, with the permission of the chair. The details of the papers presented/attended in international conferences, workshops and seminars are in Table 5.1.

Prof. V P N Nampoori Instructed to conduct an international conference.

Dr. V P Devassia Opined that the deputations to conferences should be based on the merit of the conference and the organizing body. The presentations in conferences held by ISTE, IEEE, Springer, Elsevier etc. should be encouraged.

Decision: BoG decided to approve the conference /workshops/seminar presentations in Table 5.1.

5.3 Training Attended

The details of academic and pedagogical programmes are presented in Table 5.2.

Dr. V Gopakumar Instructed to ensure maximum participation in courses.

Decision: BoG decided to approve the participation and to sanction the settled amount of Rs. 125160.00 spent as per Table 5.2.

With this, the BoG meeting on May 4, 2015 came to the end.

No	Name	Name of Conference	Date	Organizer	Amt.
1	JAYADEEP KUMAR J	International conference on energy, environment, materials and safety (ICEEMS' 14), TEQIP	10-12 Dec 2014	School of Engineering, CUSAT	Unsettled
2	SMITHA P	2014 ieee international conference on computational intelligence and computing research, IEEE Podigai	18-20 Dec 2014	Park college of Engineering and Technology, Coimbatore, Tamilnadu	Unsettled
3	SHAJY L	2014 ieee international conference on computational intelligence and computing research, IEEE Podhigai	18-20 Dec 2014	Park college of Engineering and Technology, Coimbatore, Tamilnadu	Unsettled
4	REMYA R S	International conference on engineering and technology (icetech 15), IEEE	20 Mar 15	Rathinam technological Campus, Coimbatore, Tamilnadu	Unsettled
5	SHAJY L	International conference on engineering and technology (icetech 15), IEEE	20 Mar 15	Rathinam technological Campus, Coimbatore, Tamilnadu	Unsettled
6	REJI THANKACHAN	4th international conference on communication and signal processing (iccsp 15), IEEE	2 4 April 2015	Adhiparasakthi Engineering College, Melmaruvathur, Tamilnadu	Unsettled

MINUTES 5. OTHER MATTERS

7	SHAJY L	International conference on recent advances in engineering, science and technology (icon' 15), ISTE, new delhi	17 Apr 15	Noorul islam university, Kumaracoil, Kanyakumari	Unsettled
8	SMITHA P	International conference on recent advances in engineering, science and technology (icon' 15), ISTE, new delhi	17 Apr 15	Noorul islam University, Kumaracoil, Kanyakumari	Unsettled
9	SMITHA P	International conference on advances in engineering and applied sciences (ICAEAS'15) IEEE	29 Apr 15	Noorul islam University, Kumaracoil, Kanyakumari	Unsettled
10	SHAJY L	International conference on advances in engineering and applied sciences (ICAEAS'15) IEEE	29 Apr 15	Noorul islam university, Kumaracoil, Kanyakumari	Unsettled
11	BINU V P	Image and video processing using matlab	10 - 14 FEB 2015	IIITM - K, THIRUVANANTHAPURAM	12063
12	DR. AJIL KUMAR A	All india seminar on accreditation and quality assurance in higher education institutions	17 DEC 2014 - 18 DEC 2014	NSS COLLEGE OF ENGG, PALAKKAD THE INSTITUTION OF ENGINEERS (INDIA)	4162

Table 5.1: Papers presented in international conferences. workshops and seminars by faculty and staff

Sl.No	Name of Faculty	Title	Date	Amt.
1	REJI THANKACHAN, LIBI A, REMYA R S, ANUJA V NAIR	Pedagogy implementation in mathematics for engineering education	16 -20 FEB 2015	116080.00
2	MILI ROSELINE MATHEWS, DEEPA T R, JYOTHI R L	Pedagogical training	23- 25 Feb 2015	Not Settled
3	AJIL KUMAR A, REVIKUMAR THAMPI V R, RAJU M	Pedagogical training	26-28 Feb 2015	Not Settled
4	SAJIL DANIEL JOHN, MANJU M, AP IN ECE	Assembly language programming in NASM	19 - 21 JAN 2015	9080.00

Table 5.2: Trainings attended by faculty and staff

MINUTES 5. OTHER MATTERS

32

The BoG decided to approve the minutes of the meeting held on December 14, 2014, subject the modifications mentioned above.	6
Approved the action taken report.	7
BoG ratified the purchase of the three packages worth Rs. 4454827.00 and their price revisions and payment.	9
BoG approved the of the three packages worth Rs. 1499167.00 and their price revisions.	11
BoG decided to cancel the first six packages in Table 2.3 and approved the purchase of the remaining four packages worth Rs. 1142000.00 with their price revisions.	14
It is also decided to buy national journals from publishers	14
14	
Decided to limit to one outstation course per faculty member.	18
Decided to depute guest faculty to academic programmes outside Kerala, with the condition that air fare is not permissible.	18
Decided to approve the eight in house training programmes	19
It is decide to approve the refund of Rs.23000.00 and Rs. 2886.00 to Mr. Raju M, Assistant Professor in Electrical and Electronics towards the refund of PhD tuition fee and the fee towards membership in IEEE respectively.	19
Decided to approve the said ten IIIC programmes.	20
Decided that faculty members can also attend training at any industry, provided they have project and MOU. The training fee can be paid from TEQIP.	20
Decided to activate the entrepreneurship club in the institution.	20
BoG approved the extensions granted to the eight proposals by the RGC and instructed to finish all the proposals and to submit them at the earliest.	20
To activate the EAP sessions	21
Decided to have lessons on Saturday for weak students and also to conduct special sessions for papers like computer programming for which not enough hours are allocated in the syllabus.	21
Decided to depute faculty, especially those who take for the first year, to Pedagogy training obligatorily.	21
Decided to conduct bridge courses, contiguously, at the beginning of the first year classes.	21
Decided to approve the payment of Rs.60600.00 towards payment of EAP sessions.	21

MINUTES 5. OTHER MATTERS

33

Decided to approve the EAP action plan for the next three months. . .	21
BoG decided to approve the payment of Rs 203400.00 towards payment of salaries to TEQIP staff	22
BoG decided to approve the payment of Rs. 67659.00, paid towards consumables.	22
BoG examined expenditure under various heads and approved the statement of expenditure.	25
BoG decided to approve the conference /workshops/seminar presenta- tions in Table 5.1.	28
BoG decided to approve the participation and to sanction the settled amount of Rs. 125160.00 spent as per Table 5.2.	28

B Review Comments to the Journal Publications



Journal Name: International Journal of General Engineering and Technology (IJGET)
Status: Accepted
Authors: GOPAKUMAR C & RESHMA S
Manuscript Title: WAVELET BASED ANALYSIS OF ECG SIGNAL FOR THE DETECTION OF MYOCARDIAL INFARCTION USING SVM CLASSIFIER

Abstract: This paper introduce a new technique for automatic and accurate detection of heart attack which is also known as Myocardial Infarction. The ECG signals may be corrupted with different types of noise. So an efficient noise removal technique is inevitable. In this paper, we use a denoising technique using wavelet transform. The aim of this denoising process based on wavelet transform is to estimate the signal of interest from the composite signal. Features are extracted using polynomial fitting algorithm and classification of ECG beats is done by using an efficient support vector machine classifier. The proposed algorithm is capable for automatic detection of heart attack and also

improves the classification quality.

KEYWORDS: Myocardial Infarction, Wavelet Transform, Polynomial Fitting, Support Vector Machine

Pages: 10

Tables: 1

Figures:

Journal Volume: 4

Journal Issue: 04

SUMMARY OF REVIEWERS COMMENTS

Originality: Accepted	Technical Quality: Accepted	Significance & Relevance: Accepted
Presentation: Accepted	Language requirement: Should be honed a bit in certain cases	Introduction is Adequate: Yes
Technicality & Accuracy: Accepted	Problem Statement & Objective is Clear: Yes	Need More References: Yes
Conclusion and Results: Accepted	Implication for Industrial Practice: Accepted	Need Comparative Evaluation: Yes

Overall Rating: Accepted with Minor Revision

Technical Comments Summary: There are spelling mistakes in the manuscript which should be corrected. More result-oriented discussions may be added.

1. Presentation including structure, clarity and readability is fair
2. Proposed methodology will meet the stated objectives.

Please submit only the MS Word file along with bank receipt so that we can improve the remaining errors. Also provide physical address (with pin code or zip code) along with telephone number

From: **Natarajan Gajendran** <indjst@gmail.com>
Date: Wed, Oct 28, 2015 at 11:43 AM
Subject: 79369 article
To: smithakannur@gmail.com

Dear Author,

Please find the reviewer 1 comments below and attached reviewer 2 comments embedded article for revision and submission

First Review:

This paper is evaluating of the breast cancer subtypes, with different biomarkers and the staining method. Although it is very interesting paper, it is not based on the journal template. So, the paper structure and referencing style should be revised based on the journal template.
The paper needs more literature review to present previous relevant studies and limitations and gaps in previous studies.

Overall, it is a good paper and can be acceptable after applying comments.

regards
NG

--

Prof.Natarajan Gajendran
Editor

Indian Journal of Science and Technology

Access the journal at: <http://www.indjst.org> (ISSN:0974 -5645)

Indexed in:

1. DOAJ;
2. Ulrich's Periodical Directory, USA;
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4. Indian Science Abstracts, India;
5. Index Copernicus, Poland;
6. ISI, Thomson Reuters (Zoological database);
7. SCOPUS, Elsevier B.V.

Date: Wed, Feb 11, 2015 at 11:06 AM

Subject: Paper reviewer comments for IJAER Paper Code:32140

To: Shaji Kalluvila <shajikalluvila@gmail.com>

Paper reviewer comments for IJAER Paper Code:32140

Dear Dr. **Shaji Kalluvila**,

Paper Code:32140

Dear Author(s),

We have received the review reports for your paper "**Analysis of Textures of Sputum Cytology Images for Lung Cancer Diagnosis Using Discrete Wavelets Transform**". We require now that you implement in your submission the following recommendations made by the reviewers:

Reviewer A Comments:

=====

Suggestions which would improve the quality of the paper but are not essential for publication:

The paper is dealing with a very important topic. it sounds solid in terms of the contents methodology, and the results. Not sure though from the validity of the equations.

Reviewer B Comments:

=====

Suggestions which would improve the quality of the paper but are not essential for publication:

- Style of writing of the paper could be improved

Changes which must be made before publication:

- What are the inferences the author(s) try to do from Table 1 and 2?

- What are the significance of plotting the values of standard deviation and Kurtosis, over the images (here line chart is not suitable)

- Some grammatical mistakes like "to segmented" are there. Please check other parts also completely

- The paper does not demonstrate the novelty of the work (What are the contributions by the authors in terms of feature extraction, classification?)

- References are not rich (Refer to some reputed journal for studying about the existing work)

- The work is not compared with any one of the recent existing works (The work could be compared with some of the recent existing work)

Thanking you and hope to hear from you soon,

With Kind Regards,

Viveka Nand

Publication Department

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Delhi-110089 INDIA

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C Terms of Reference (ToR) for Technical Selection of Training Providers

Terms of Reference (ToR)

for

**Technical Selection of Training
Providers**

in

Embedded System Design and Programming

Under

**Technical Education Quality Improvement
Programme
(Phase-II)**

1. BACKGROUND

The Ministry of Human Resource Development (MHRD), Government of India in the year 2002 conceived and designed the Technical Education Quality Improvement Programme (TEQIP) as a long term programme for implementation in 2 to 3 phases over duration of 10-12 years for systemic transformation of the technical education system. TEQIP Phase-I commenced in March 2003 and was successfully completed in March, 2009, covering 127 institutions. Encouraged by the highly significant achievements of Phase-I of the Programme, the Government of India has decided to implement Phase-II of the Programme through MHRD.

According to a survey published by Nasscom, only 17.5% of total engineering students got employment in 2011. Considering the factors affecting the quality of the training, a key component of the Phase-II Project is the support to weak students under Equity Action Plan. Under this plan, it is considered important that focused efforts be made by institutions to improve the academic performance of 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. For increasing institutional focus on providing academic and guidance support to the academically weak students, all project institutions are required to constitute a **Finishing School** with a senior faculty as coordinator. 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 centers, 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 students participating in the 4-week training and the percentage of these participants securing employment within 3 months of completion of training.

2. OBJECTIVES OF HIGH INTENSITY TRAINING ON EMBEDDED SYSTEM DESIGN AND PROGRAMMING

The main objectives of TEQIP-II project are Strengthening Institutions to improve Learning Outcomes and Employability of Students. Many organizations visiting campuses for recruitment point out that the employability of students are not as expected due to poor communication and professional skills.

The broad objectives of high intensive training on “Embedded System Design and Programming” are:

- a) To design and develop embedded system applications with 8 and 16-bit microcontrollers with C as the programming language.
- b) This training shall give the students to develop skills for identifying the key problem area and to develop cost effective solutions with particular emphasis on hardware and software engineering concepts.
- c) To assist the Placement Cell of the College for a placement drive.
- d) To provide soft skill training

3. SCOPE OF WORK

- 1) The Project provides for hands on training of passed out students (B.Tech) in Electronics & Communication, Applied Electronics & Instrumentation and Computer Science & Engineering Streams.
- 2) The training is to be imparted in-situ (at the institutions) through two sections: 120 hours training on Embedded System Design and Programming followed by a certification exam. The 120 hours of training shall include periodic evaluation tests, typically online tests enabling the students and faculties to know the scores faster for speedier actions. The venue of the certification exam shall be arranged at College of Engineering, , if feasible; or any other venue as suggested by the Provider.
- 3) The details of the modules in terms of the elements of training; and the corresponding suggested modes of teaching & training, expected outcomes and duration are given at Annexure-1. The

- program aims to train 40 B.Tech. passed out students from this Institution.
- 4) Training is to be imparted at College of Engineering, in batches of 20 candidates.
 - 5) The training providers will need to ensure coverage of all the elements identified for the course.
 - 6) The training providers are free to add more elements in main module that will be covered during the training, provided that these additional elements and additions to the contents can be covered within the stipulated duration of the training. The additional elements and contents are to be declared in the proposal submitted.
 - 7) The training providers are also free to suggest alternates to the suggested modes of training of various elements.
 - 8) To qualify for being selected, a training provider will need to demonstrate capability for the training in the respective fields and agree to provide the same at the institution and according to schedules as agreed with the College
 - 9) The training provider shall include the Students, who successfully complete the training program in the placement drives that are conducted or facilitated by them.

4. ELIGIBILITY AND CAPABILITY OF TRAINING PROVIDERS

1. Public and private training organizations, group of professionals, consortium of organizations or professionals are eligible to provide training(hereinafter referred to as the “training provider”)
2. The training provider should meet the following benchmarks:
 - a) Minimum 7 years experience in providing “Embedded System Design and Programming” training (please provide the copies of the credentials/ self-certificate for the last 5 years)
 - b) The trainer should have a training related certification or affiliation to atleast one MNC working in the field of embedded systems
 - c) The lead training personnel should be have at least 7 years of consolidated experience in training and industrial works and should have atleast one certification in embedded domain by a relevant MNC or Government authority.
 - d) Brief experience profile of the resource persons must be provided.
 - e) The training provider will need to demonstrate that it possesses the capacity to impart training to about 2 batches of students in a year.
 - f) An undertaking (self-certificate) is to be submitted that there has been no outstanding bankruptcy, judgment or pending legal action that could impair operating as a going concern.
 - g) An Undertaking (Self Certificate) is to be submitted that the organization hasn't being black listed by any Central/State

Government Department/Central Government Funded Organizations/State Government Funded Organization/World Bank, or other World Bank Organizations (including the UN Organizations) and is not under investigation by Government or UN Member State Government.

- h) Upon the completion of training the students should be provided with a completion certificate and preferably the certificate approved by an MNC or Government authority.

5. SELECTION OF TRAINING PROVIDERS

A list of technically qualified Institutions will be finalized, following the procurement norms of TEQIP II. This process will involve short-listing all qualified institutions that responds to the Request for Expressions of Interest (Eoi), inviting technical proposals from the short listed agencies, technical evaluation of proposals submitted by shortlisted agencies and final selection of agencies on the basis of technical competencies for the assignment.

6. PAYMENT TO TRAINING PROVIDERS

Training will take place at the institution as per the schedule. The training of students will be followed by a feedback session and a post-training assessment. The aggregated results of these will be made available to the respondents, Head of Institution and the training provider. The contracted cost for any training package will cover training in all the elements, contents and modes as quoted in the proposal submitted to the College. The payment of this cost will be made in two instalments. The first instalment will be 75% of the contracted cost which will be paid after the completion of all the training modules. The second instalment (25%) will be paid after six months of completion of the training program under the condition that 25% of students undergone training got placed within three months.

7. COPIES OF RESPONSE

Respondents must submit one hard copy and one soft copy in CD, of their response to this invitation to the designated point of contact by the date and time specified in the invitation.

8. DESIGNATED POINT OF CONTACT

Principal College of Engineering Karunagappally, Thodiyoor PO, Karunagappally. Kollam

Annexure I

Embedded C

- *Basics of C*
- *Variables and Data types*
- *Efficient use of variables and data types*
- *Programming constructs and controlling the program flow*
- *Operators*
- *Binary operations*
- *Structures and Unions*
- *Pointers*
- *Dynamic memory allocation*
- *Modular programming and functions*
- *Coding Standards*

Embedded Systems

- *Embedded System Introduction*
- *Components of embedded system design*
- *Introduction to Basic Electronics*
- *Embedded System Design Life Cycle*
- *8 Bit Microcontrollers (PIC 16 Series) and 16 Bit Microcontrollers (PIC 24 Series)*
 - *Detailed Architecture*
 - *Ports*
 - *Peripherals: UART, ADC, PWM, TIMERS, CCP etc.*
 - *Programming*
 - *MPLABX IDE*
 - *Assembly Language Programming*
 - *Embedded C Programming*
 - *Debugging*
 - *Sensor Interfacing*
 - *Interfaces/ Protocols- RS232, SPI, I2C, Zigbee, GSM/GPRS modem interfacing, LCD interfacing*
 - *Servo, DC & Stepper Motor Controls*
- *PCB Designing*
- *Power considerations & EMI issues and precautions*
- *Testing & Debugging Procedures*
- *Development with Open Source Hardware*
 - *Introduction to Arduino*
 - *Introduction to Raspberry Pi*
- *Multiple projects: 2 Mini Projects and One Main Project*

Personality Development Training Module

- *Communication skill*
- *Basic training on facing the interview Interview and mock interviews*
- *Group discussion training and mock GDs*
- *Resume writing*
- *Presentation skills: How to present things effectively, professionally and logically*

D MoU with ICT Academy



This Memorandum of Understanding (MoU) made and entered into on this 22nd September 2015

Between

Information and Communication Technology Academy of Kerala (hereinafter referred to as ICTAK), situated at Module No. L9, -1(Lower Level Floor), Thejaswini Building, Technopark Campus, Karyavattom, Trivandrum-695581, registered under Section 25 of the Companies Act 1956 to enhance the quality of graduates and to increase the employability of the students

And

College of Engineering, Karunagappally, an institution complying to the Eligibility Criteria (Appendix I) and decided by the Screening & Selection Committee of ICTAK (hereinafter called "COLLEGE" which expression shall include its successors and permitted assignees) with its registered office at Engineering College Rd, Thodiyoor, Kollam, Karunagappally, Kerala 690523

OBJECTIVES OF THE MOU

The objective of this Memorandum of Understanding is:

- a. To improve employability skills of the trainees (both Faculty and Students), Assessments and Certifications developed by ICTAK. This will be achieved through resources, regular workshops, training programs, capacity building and faculty development and Career Guidance & Placement support. Under this MOU, the ICTAK will ensure timely completion of training assessment and certification.
- b. ICTAK will ensure that training, assessment and certification which will be done by ICTAK approved Trainers.

1. SCOPE

Under this MOU, ICTAK provides the following: (Please refer appendix for Course & Fee details)

- a. One free Faculty Development Program for undergraduate/postgraduate faculty members in the COLLEGE;
- b. Facilitate the Students Development Program (SDP) using "Paatshala"
- c. Free entry to Industry - Institute Interaction even at regional level;
- d. The member institution can participate in the ICT Academy Awards, which will be announced later.
- e. ICTAK Partner Programme on mutually agreed terms of the Partner Organization.
- f. Any other programme that are mutually agreed upon.

2. ROLES AND RESPONSIBILITIES

2.1 COLLEGE

- a. To comply and continuously strive to comply with the Eligibility Criteria to become member of ICTAK program;

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KARUNAGAPPALLY

- c. To ensure participation of Faculty members for respective training programs conducted by ICTAK and to comply with the mutually agreed time schedule;
- d. To ensure participation of students by means of formation of clubs/groups, who are identified and eligible for respective training programs conducted by ICTAK and to comply with the mutually agreed time schedule;
- e. To identify one student among the group to act as student representative/champion (Institutional Student Champion) to assist and co-ordinate with ICTAK in its' activities relating to the effective execution of the training.
- f. To create awareness among Faculty and the students regarding the benefits of the ICTAK program;
- g. To provide training facility as prescribed in the COLLEGE premises free of charge, including uninterrupted power, projection and audio facilities, white board with markers, refreshments and food (as appropriate) for Trainers and support staff;
- h. To provide access to student data
- i. To identify participant list of Faculty members and Students for Industry - Institution Interaction as and when organized by ICTAK.
- j. The Membership Institution will ensure that, the faculty members who have attended the TTT will inturn train 20 students as per the required standards prescribed by ICTAK.
- k. To designate a Institution Knowledge Officer (IKO) who will have responsibility for coordination and implementation of this MOU;

2.2 ICTAK

- a. To monitor that the COLLEGE is in compliance with the Eligibility Criteria throughout the MOU/Agreement Period;
- b. To ensure timely execution of training programs for both Faculty and Students and to comply with the mutually agreed time schedule;
- c. To assist COLLEGE in creating awareness among Faculty and the students regarding the benefits of the ICTAK program;
- d. To deliver training as prescribed, in coordination with the Institution Knowledge Officer of COLLEGE;
- e. To ensure confidentiality and secure custody of all data including student data, project details, entrepreneurial project etc. collected from COLLEGE;
- f. To designate a Coordinator (Nodal Officer) who will have responsibility for coordination and implementation of this MOU;

2.3 FACULTY MEMBERS

- a. To commit a minimum of 4 faculty members for its TTT and 20 faculty for any program conducted in the college premises
- b. To ensure that, those faculty members who have undergone Train- The - Trainer (TTT) Program of ICTAK should be able to train at least 20 students of the same college within a time span of one year from the date of conclusion of TTT.

3. DURATION

Initially the term shall be formed for a period of one year and the parties herein, upon mutual agreement, may extend the said period from time to time.



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4. MEMBERSHIP FEE (Non Refundable)

COLLEGE agrees to pay the prescribed **Membership Fee** of **Rs. 60,000/-** (Rupees Sixty Thousand only) plus service tax @ 14%. The membership fee can be paid through DD addressed to ICT Academy of Kerala, payable at Trivandrum or Bank Transfer to ICT Academy of Kerala Bank account No:34469941089 with State Bank of India, Technopark Branch with IFS Code:SBIN0007617. Cheque and Online payments are also accepted.

5. COURSE FEE AND OTHER CHARGES

COLLEGE agrees to pay the Course Fee and Other Charges prescribed by ICTAK from time to time within the due date. (Please refer Appendix for course & fee details)

6. CONFIDENTIALITY

- a. During and for a period of one year from the date of disclosure, each party agrees to consider as confidential all information disclosed by the other party in written or tangible form or, if orally disclosed confirmed in writing within thirty days of disclosure and identified as confidential by the disclosing party.
- b. The obligations above shall not extend to any confidential information for which the receiving party can prove that this information:
 - Is in the public domain at the time of disclosure or comes within the public domain without fault of the receiving party.
 - is already known or become known to the receiving party
 - is received from a third party having no obligations of confidentiality to the disclosing party.
 - is independently developed by the receiving party; or
 - Is required to be disclosed by law or court order.
- c. During the term of the MoU and thereafter for a reasonable period, all the parties hereto undertake on behalf of their respective subcontractors/ employees/ representatives/ associates to maintain strict confidentiality and present disclosure thereof, of all the information and data exchanged/ generated pertaining to work/ activity under this MoU for any purpose other than that specified in this MoU.
- d. The member institute can use ICTAK logo and can display in their website or other branding activities during the tenure of the agreement. However, the member institute will cease the right to use ICTAK logo upon expiry/termination of the agreement.

7. NON-EXCLUSIVITY

The relationship of the parties under this MOU shall be nonexclusive and both parties, including their affiliates, subsidiaries and divisions, are free to pursue other agreements or collaborations of any kind. However, when entering into a similar agreement for Skills Enhancement and Faculty Development Programs, the participants may agree to limit each party's right to collaborate with others on that subject.

8. OTHER TERMS

- a. The parties hereto agree to enter into this MoU on a principle-to-principle basis and none of the parties shall do or cause to be done anything derogatory to the reputation of the other;
- b. None of the parties will be held responsible for non-fulfillment of their respective obligations under this MoU due to work/ activity under this MoU for any purpose other than in accordance with this MoU.



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9. PLACEMENT ASSISTANCE

Providing placement assistance to Students of Member Colleges is based on the demand scenario amongst our partner Organisations. Should the placement assistance programme take place for a member institute, only those students who have gone through at least one classroom training program (exclude Student Orientation Programme) of ICTAK becomes eligible for attending ICTAK placement drive.

10. TERMINATION

This MOU, unless extended by mutual written agreement of the parties, shall expire one year after the effective date specified in the opening paragraph. This MOU may be amended or terminated earlier by mutual written agreement of the parties at any time. Either party shall have the right to unilaterally terminate this MOU upon 60 days prior written notice to the other party. However, no such early termination of this MOU, whether mutual or unilateral, shall affect the obligations of the Confidentiality clause or any other agreement entered into pursuant to this MOU, which obligations shall survive any such termination.

Any such termination shall not affect the smooth course completion of the existing batch of students and upon serving of notice of termination by any of the parties, the ICTAK shall immediately restrain itself from further induction of any new batch of students and/ or individual students.

Upon serving of notice of termination, none of the parties herein shall be under any obligation to meet with any further expenses of the proposed ICTAK apart from the ones required for the smooth course completion of the existing batch.

11. FORCE MAJEURE

None of the parties will be held responsible for non-fulfillment of their respective obligations under this MoU due to the exigency of one or more of the force majeure events such as but not limited to acts of God, war, flood, earthquakes, strikes, lockouts, epidemics, riots, civil commotions, etc., provided on the occurrence and cessation of any such events, the party affected thereby shall give a notice in writing to the other party within one month of such occurrence of cessation. If the force majeure conditions continue beyond six months, the parties shall jointly decide about the future course of action.

12. ARBITRATION

Except as hereinbefore provided, any dispute arising out of this MoU, the same shall be referred to the arbitration of 2 (two) arbitrators, 1 (one) to be appointed by each party to the dispute and in case of difference of opinion between them to an umpire appointed by the said 2 (two) before entering on the reference and the decision of such arbitrators or umpire, as the case may be, shall be final and binding on all the parties. The venue of arbitration shall be at Trivandrum.

13. NOTICES & COMMUNICATION

All notices and other communications required to be served on each of the parties under the terms of this MoU, shall be considered to be duly served if the same shall have been delivered to by hand and properly acknowledged by the respective part/ parties, posted by registered mail or sent by any accredited Courier Service to the respective part/parties at its last known/ officially disclosed address of business.

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14. AMENDMENTS

No amendments or modification of this MoU shall be valid unless the same is made in writing by all the parties herein or through their authorized representatives and specifically stating the same to be an amendment of this agreement. The modifications/changes shall be effective from the date on which they are made/ executed unless otherwise agreed to.

15. RELATIONSHIP

Nothing in this MOU shall be construed to make either party a partner, an agent or legal representative of the other for any purpose.

16. ASSIGNMENT

It is understood by the Parties herein this MOU is based on the professional competence and expertise of each party and hence neither Party shall transfer or assign this Agreement, or rights or obligations arising hereunder, either wholly or in part, to any third party.

17. COSTS OF THE MOU

Each Party shall bear the respective costs of carrying out the obligations under this MOU.

18. SIGNED IN DUPLICATE

This MOU is executed in duplicate with each copy being an official version of the Agreement and having equal legal validity.

BY SIGNING BELOW, the parties, acting by their duly authorized officers, have caused this Memorandum of Understanding to be executed, effective as of the day and year first above written.

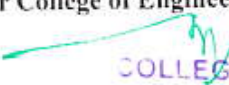
In WITNESS WHEREOF, the parties hereto have executed this MOU on this 22nd September 2015.

For Information and Communication
Technology Academy of Kerala (ICTAK)


Name of the Authorized Signatory:
Santhosh Kurup, Chief Executive Officer

Date: 22.09.2015

For College of Engineering, Karunagappally


Name of the Authorized Signatory:
Dr. Hari V.S.

Date: 22.09.2015

Witness: 1

For Information and Communication
Technology Academy of Kerala (ICTAK)


K V Sree Kumar, ARM

Date: 22.09.2015

Witness: 2

For College of Engineering, Karunagappally


BAIJU V, PLACEMENT OFFICER.

Date : 22.09.2015

APPENDIX- I

Eligibility Criteria for Institutions

1. Facility: Should provide the required IT infrastructure (2PCs with Min 1GB RAM, Min 2mbps broad band connectivity, cordless mike and sound system) classrooms and other facilities required for the conduct of the program.
2. Point of Contact: The appointed Institutional Knowledge Officer (IKO) & Institutional Student Champion (ISC) should be able to work closely with ICTAK for scheduling and successful delivery of its programs in college.
3. Faculty & Students Participation: The agreed number of faculty members & students participation will be regularly monitored by ICTAK and any deviation will be counted against continued eligibility to continue as a member.



PROGRAM COST CHART

Sl No	Program	Type Of Training	Minimum Participation	Duration		
					Final Cost Per Head (All inclusive)	Remarks
1	1) Concepts Coaching 2) IT Tools for Academic Research 3) IT Concepts & Tools for Teaching	Faculty Development Program	Upto 30	3 days	FREE	One FDP free as part of Membership Scheme
			For Addl. batch of 30	3 days	1500	
2	Empower Program - IT	Train The Trainer	25	4 days	2750	
			20	4 days	2100	If Course is conducted @ Member College
3	Empower Program - Life Skills	Train The Trainer	25	3 days	2100	
			20	3 days	1600	If Course is conducted @ Member College
4	Students Program Modules (i) Software Programming (ii) Building Corporate Attitude (iii) Entrepreneurship (iv) Software Testing & Quality Assurance	SDP	50	3 days	850	
5	Enable - Pre-placement Orientation V 1.0	SDP	50	3 days	850	
6	Enable - Pre-placement Orientation V 2.0	SDP + Aptitude Test Package	50	2 days + 2 weeks online Practice	1100	50% Amount along with PO and remaining on last day of training
7	Explore - 1 Year Students Orientation	Student Orientation Program	All 1st Year Students	Half Day	FREE	

E Minutes of the Research Guidance Committe held on March 21, 2015

Minutes of the Third Research Guidance Committee for TEQIP II at College of Engineering Karunagappally, Karunagappally, Kollam, Kerala Conducted on 21/03/2015 at 10:00 AM in Principal's room under the chairmanship of Senior Research Advisor Prof. E.Gopinathan

No: CEK/TEQIP/RPC/03/2014.

21-03-2015

Agenda

Silent Prayer

Welcome address

1.1 Confirming the Minutes of the Second Meeting of the Research Guidance Committee held on 06-12-2014 at College of Engineering Karunagappally.

The Minutes of the second Meeting of the Research Guidance Committee held on 06-12-2014 at College of Engineering Karunagappally was sent to the Chairman for his approval and upon his approval copies were circulated among the other members of the RGC. A copy of the Minutes is appended as **Annexure 1** for confirmation.

The Committee may consider the Minutes for approval.

1.2 Evaluation of the progress of the projects based on the Extension request reports submitted by the Principal Investigators

The Principal investigators submitted the Extension reports of the projects for which they had availed Research Seed Money.

1.3 Evaluation of the projects based on the presentations by the Investigators

The Principal Investigators may be asked to present the progress reports.

1.4 Any other matter regarding improvement of Research and Development

The following members were present:

1. Prof. (Dr.) Gopinathan E, Former Director, NIT Calicut, SRA of the Institution (Chairman)
2. Dr. Ajilkumar A, TEQIP II Coordinator, Member
3. Dr. Rajkumar Choudhary, Scientist Space Physics Laboratory, VSSC, Member
4. Sri. Shajahan M, Scientist Space Physics Laboratory, VSSC, Member
5. Ms. Smitha P, R&D Coordinator, Member
6. Dr. Hari.V.S, Principal

The Meeting started at 10.00.AM under the presidency of the Hon'ble Chairman with a silent prayer followed by welcome address by Dr. Ajilkumar A. He also briefed about TEQIP II and the progress of R & D activities at CE Karunagappally.

Resolutions Adopted

Item No 1.1 / RGC 3: Confirming the Minutes of the Second Meeting of the Research Guidance Committee held on 06-12-2014 at College of Engineering Karunagappally.

Minutes of the second RGC meeting held on 06.12.2014 was circulated to the RGC members for

~~confirmation. Based on the discussions, the RGC confirmed the approved minutes of the RGC meeting held on 06.12.2014.~~

Item No 1.2 / RGC 3: Evaluation of the progress of the projects based on the Extension request reports submitted by the Principal Investigators

The extension report submitted by the Principal Investigators (PIs) were discussed in detail. The comments received from the Hon'ble Chairman were also discussed. The Committee decided to find the reality and further, the Principal Investigators were asked to present the progress of the proposals.

Item No 1.3 / RGC 3: Evaluation of the projects based on the presentations by the Investigators

The Committee asked the Faculty members to present the progress of the proposals and the presentations started at 10.30 am in the Seminar Hall. The Principal Investigators presented the progress of the projects and the details of the discussions are given below:

1. Video Tampering Detection –An application to video forensics - Remya R S

The Principal Investigator(PI) explained the work done in this project with results. All the external members enquired about the relevance of 100 percentage results and PI explained the factors incorporated in this project. Mr.Shajahan asked to get help from forensic department for the verification. Remya enquired the joint submission with C-DAC persons and CET for helping in this work. But nobody was ready to accept this project. Remya asked for an extension of six months. The committee initially provided 4 months. Since she plan to do Internship at IIT Delhi for 2 months from May to July(6-8 weeks), she will get a total of six months. Committee told that she can efficiently utilize the resources at IIT Delhi during this period advised her to complete the work by that time.

The Committee has decided to give six months extension for submitting the proposal to an external funding agency.

2. Automatic detection of Lymphocytic Luekemia- Remya R S

PI presented the progress of the project. For Project proposal, she contacted RCC, submitted permission from IRB, IRB Sanctioned the permission and MOUformat discussion is going on. Members asked about the funding agency and PI replied to submit before ICMR. A MOC proposal is sent to ICMR. PI is Dr. Hariharan, HoD(Cytogenetic Deptment). She presented the expenditure statement and explained the reasons for the extension. For signing theMOU related discussions and MOC proposal acceptance need 4 months.

Dr.Gopinathan suggested to publish the results in journal rather than for presenting inferences.

The Committee has decided to give four months extension for submitting the proposal to an external funding agency.

3. Handwritten character recognition from manuscripts written in ancient Grantha scripts &
4. Handwritten character recognition of various ancient and current Malayalam fonts- JYOTHI R L

PI presented the developments in the project work and discussed about the results obtained and the stage of the proposal. She submitted a paper for an international conference at Tunisia and the acceptance will be known only on May 24th. Dr.Choudhary suggested not to send latest work developments to conference and also added that to publish in reputed journals. PI accepted it and she is waiting for good results to publish in journal. She also explained that modification of the zone based analysis is a new idea and nobody tried it.

Dr.Gopinathan suggested to send it in a journal. Dr.Gopinathan & Mr.Shajahan suggested that even if the paper is rejected, excellent comments would be received. PI asked 4 months extension for both the projects for finalising collaborative investigators from outside. All members opined that the researcher of parent institution must be the PI and make the other person as Co – PI.

PI reported that the procedures for MoU, consent from LBS etc need to be completed and hope to complete these procedures within four months.

Based on the discussions, the Committee has decided to give four months extension for both the projects

5. Smitha P :Automated Cancer Detection and Grading of Breast Microscopy Images

PI presented the developments in the project work and discussed about the results obtained and the stage of the proposal. Mr.Shajahan and Dr.Choudhary asked why automation is not yet done and Why 3 years needed for further work? PI replied that the detection is done only for 2 types of cancer cells. Detection of many other types of cancers are in breast cells, have to be done. She asked for 6 months extension. This is needed for the submitting the project proposal through RCC,Trivandrum and proposal is under the consideration of IRB of pathology department. But there is an opinion difference among the IRB members. So they redirected for an opinion from outside that institution and waiting for the reply. To Dr.Gopinathan's query about the journal publications, the Investigator replied that she had sent it for Biomedical Research Journal.

The Committee has decided to give six months extension for submitting the proposal to an external funding agency.

6. Deepa A K - Image Processing Techniques for Breast Image Analysis

PI explained the extension request and she told that she needed 4 months extension because she discussed it with the RCC Trivandrum and they had accepted to provide before their IRB. She is waiting for the result. She explained about the results obtained in this work. All the members are satisfied with the result and they asked to prepare journal papers to publish in reputed journals.

The Committee has decided to give four months extension for submitting the proposal to an external funding agency.

7. Shajy. L : Early Lung Cancer Detection Through Extraction And Analysis Of Sputum Cell Images

PI presented the details and the results achieved in the work. Dr.Choudhary enquired about the results of existing methods and the PI replied that the accuracy of this method is better than existing method (Got 89.8%, while existing is only 86%). Dr.Gopinathan asked about the publications and PI replied that he has published in a IEEE Explore and another paper is under publication of another journal. PI asked for six months extension and both this project and Smitha's project are under same Co-PI from RCC and also a common proposal given in IRB, awaiting the results due to the same

The Committee has decided to give six months extension for submitting the proposal to an external funding agency.

8. Hari V S :The visualization and modeling of raw MRI signals for volume segmentation and estimation.

PI explained the progress in the work and discussed about the results obtained. Mr.Shajahan and Dr.Gopinathan asked about the filter usage in this work. PI explained it and requested for 4 months extension for getting the IRB sanction and MoU between SCTIMS, Trivandrum. Dr. Kesavadas Chandrasekar accepted this work and will be assisting in this work. Dr.Choudary asked about the paper work and publishing done in this work. PI explained that work is in progress and will be publishing soon.

The Committee has decided to give four months extension for submitting the proposal to an external funding agency.

Item No 1.4 / RGC 3: Any other matter regarding improvement of Research and Development

After completing all the presentations a meeting was conducted at the Principals chamber and the Chairman appreciated the PIs for achieving progress in the projects. All the members accepted the requests by the PIs for extension of the projects. Dr.Gopinathan suggested that the PI must be from our institution and the other supporting persons from outside must be co-PI's. This was accepted by all the other external members. Similarly for the MOU discussions with the other institutions Principal and TEQIP Coordinator may accompany the PIs. Then the discussion will be considered in higher level and will be proceeded in proper direction. Also the new work should be published in journals not in conferences..External members extended their readiness to help the projects in any situation.

The meeting came to an end at 4.15 pm.

From

Dr. E. Gopinathan,

Chairman, Research Guidance Committee,

TEQIP II,

College of Engineering, Karunagappally

To whomsoever it may concern

I have received requests from the following faculty of College of Engineering, Karunagappally regarding extension of dates for the submission of research proposals mentioned against their names:

1. Dr. Hari. V.S., "Development of Visualizer based on VTR for k-space MRI data and Implementation of Quadratic Systems for Periphery Detection, De-noising, and Brain Segment Volume Detection".
2. Jyothi. R. L., "Hand-written Character Recognition of Ancient Malayalam Fonts"
3. Jyothi. R. L., "Hand-written Character Recognition of Ancient Grantha Fonts".
4. Ramya. R. S., " Automated Detection and Prognosis of Acute Lymphatic Leukaemia"
5. Deepa. A. K., "Image Processing Techniques for Breast Image Analysis"

All of them have given reasons why they are asking for extension of dates for submission and the reasons mentioned are reasonable. The PI's were asked to submit the project proposals before 30th June, 2015, but now all have requested to extend the date to 31-10-2015. Since the aim of TEQIP project is to encourage young faculty to do research in their chosen area and to develop useful products for the benefit of the society, as Chairman of the Research Guidance Committee, I felt that their requests may be considered favourably. Hence I approve the requests submitted by the above mentioned faculty to enable them to submit the projects to the appropriate funding agencies on or before 31-10-2015.

Sd./

Dr. E. Gopinathan

Chennai,

29-06-2015

From

Dr. E. Gopinathan,

Chairman, Research Guidance Committee,

TEQIP II,

College of Engineering, Karunagappally

To whomsoever it may concern

I have received requests from the following faculty of College of Engineering, Karunagappally regarding extension of dates for the submission of research proposals mentioned against their names:

1. Ramya. R. S., "Automated Detection of Video Tampering"
2. Smitha. P., "Automated Grading and Scoring System for Breast Cancer"
3. Shajy. L., "Detection of Lung Cancer using Sputum Cytology"

All of them have given reasons why they are asking for extension of dates for submission and the reasons mentioned are reasonable. The PI's were asked to submit the project proposals before 30st August 2015, but now all have requested to extend the date to 31-10-2015. Since the aim of TEQIP project is to encourage young faculty to do research in their chosen area and to develop useful products for the benefit of the society, as Chairman of the Research Guidance Committee, I felt their requests may be considered favourably. Hence I approve the requests submitted by the above mentioned faculty to enable them to submit the projects to the appropriate funding agencies on or before 31-10-2015.

Sd./

Dr. E. Gopinathan

Chennai,

03-09-2015

F MoU with Regional Cancer Center, Thiruvananthapuram



കേരളം KERALA

AS 974822



MEMORANDUM OF UNDERSTANDING

Between

Regional Cancer Centre,

Trivandrum, with its headquarters at Thiruvananthapuram, Kerala

and

College of Engineering Karunagappally,

Kollam, Kerala, India

This Research Collaboration and License Agreement is entered into on 30/04/2015 (the "Effective Date"), by and between Regional Cancer Centre (hereinafter referred to as "RCC"), an autonomous State Institute sponsored jointly by, Government of India and Government of Kerala and College of Engineering Karunagappally (hereinafter referred to as "CEK"), an Engineering College under IHRD Government of Kerala. RCC and

CEK - may be referred to herein as a "Party" or, collectively, as "Parties."

NO: 13/92K - college of
28-4-2015 Engineering
Karunagappally
Rupees one hundred only



[Signature]
Director,
Regional Cancer Centre
Trivandrum.

[Signature]
PRINCIPAL
COLLEGE OF ENGINEERING
KARUNAGAPALLY

യെട്ടുവാതിൽക്കര റെജണൽ
കാൻസർ സെന്റർ


I. PURPOSE:

The purpose of this Memorandum of Agreement (MOA) is to establish a mutual framework governing the respective organizational relationships, responsibilities, and activities between the parties. This agreement is primarily for utilization of expertise of Dr. Hariharan S of RCC and Mrs. Remya R S, Department of Computer Science and Engineering of CEK for research to develop software for karyotyping which can be entitled as "**An Indigenous Software for Karyotyping and Chromosome Abnormality Detection**". The areas of responsibility and relationships presented herein provide the concept under which the program will be executed.

2. BACKGROUND:

Cytogenetic research plays a vital role in the field of biomedical research and development as chromosome abnormality detection or chromosome analysis is crucial for the diagnosis and prognosis of many of the genetic disorders and cancers. The prior and most important technique behind the chromosome analysis is karyotyping. An efficient karyotyping system manually or automatically arrange the 23 pairs of human chromosomes from the metaphase or prometaphase images and paired 1 to 23 according to the descending length of the chromosomes or by other feature like centromere index etc.. Automatic pairing of chromosomes is a difficult task because these chromosomes appear bended, distorted, overlapped, and their images are usually blurred with undefined edges and low level of detail. Even today, fully automated system for karyotyping is not available. Medical Institution like Regional Cancer Centre Thiruvananthapuram uses the very expensive non indigenous software for the same but the system cannot have desirable efficiency. In current scenario, with the software manual intervention is also needed which suffers from operator fatigue, time consuming and may not be accurate all the time for all the cases.

In our observation, we have identified that in the literature during the last three decades, a number of techniques have been suggested for the automated analysis of the chromosomes. However, there is no fully automated method for the classification of abnormalities in karyotypes and the automatic detection and prognosis for any type of genetic disorders. Currently, the classification of the abnormalities from karyotypes and the identification of the disease specific features are done by the cytogenetic experts in the lab manually which is labor intensive and time consuming. The actions performed by the cytogenetic expert for abnormality detection is a challenging task.


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In India, softwares for automatic karyotyping have not been developed so far. The softwares used in India were imported from USA, Israel etc. The available softwares are very costly, costs from 8 lakhs to 20 lakhs.

3. RESEARCH COLLABORATION

3.1 Scope of Research Collaboration.

The main objective of this research collaboration is to develop efficient and fully automated software for **Karyotyping and Chromosome Abnormality Detection**. Surely, the detection and classification of numerical and structural abnormalities with considerably low cost indigenous software help in the prognosis and treatment evaluation of diseased persons. Such an economically feasible indigenous product is the goal of this research. And it aims at a fruitful solution to a societal problem of any developing country like India.

3.2 Research Plan:

College of Engineering Karunagapally(CEK) under IHRD is an affiliated institution by Cochin University of Science and Technology and AICTE. The institution has excellent laboratory facilities with strong interdisciplinary research expertise on Digital Image Processing in Computer Science and Engineering and Signal Processing in Electronics and Communication Engineering.

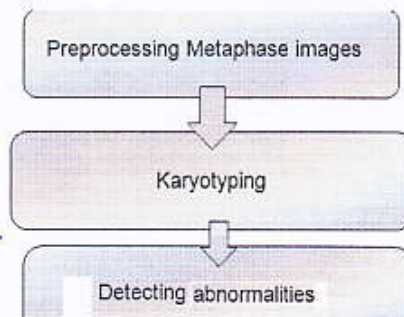
Laboratory of Cytogenetics and molecular Diagnostics of the Research Division RCC is the only cytogenetic research centre in Kerala, that specifically focuses on karyotyping and abnormality detection in leukemia and other genetic diseases. This lab is a reference cytogenetics laboratory of Kerala and is having all the most modern facilities in this field, like Cytogenetics-FISH software, Spectral Karyotyping (This equipment is available only in this Institute in Kerala).

With the help of image processing techniques we are planning to develop the software. The performance of the newly developed software will be compared with the existing software. The slides which are available in the Cytogenetic laboratory will be used for assessing the performance and validation.

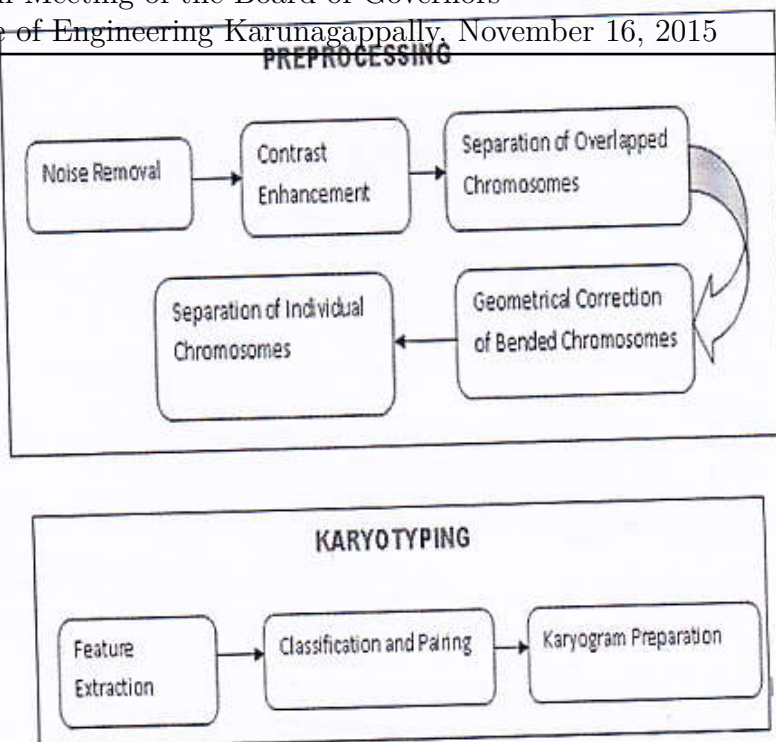
Methodology



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Regional Cancer Centre,
Trivandrum.



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KARUNAGAPALLY



3.3 Responsibilities.

I. RCC Responsibilities:

RCC will provide the cytogenetic slides for studying the normal chromosome pattern in normal individuals and abnormal chromosome pattern in abnormal cases. Every stage of the software will be analyzed in RCC. The performance of the newly developed software will be compared with the existing software in RCC

II. CEK Responsibilities.

The institution has excellent laboratory facilities with strong interdisciplinary research expertise on Digital Image Processing in Computer Science and Engineering and Signal Processing in Electronics and Communication Engineering. With the help of imaging processing techniques, software for efficient karyotyping and abnormality detection in metaphase images will be developed. For the development of such an automated system CEK will facilitate the research fellow with proper guidance, technical support and other reprographic facilities. The research fellow should screen and analyze the chromosome metaphase image through different image processing steps such as preprocessing, segmentation, feature extraction, classification etc for the development of an efficient automated system. Intermediate result and outputs should be validated in RCC periodically and new findings will be published with the co-authorship of RCC on the fly.

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Trivandrum.

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4. MANPOWER AND RESOURCES: One Research Fellow

Man power and resources anticipated are to be met from project funds. Each party will execute its responsibilities from the resources available for the project

5. FUNDING:

Funding of the project will be sought from the external agencies.

6. UTILIZATION AND DISTRIBUTION OF FUNDS

Funds will be utilized as per the guidelines of the funding agency and the rules of the institute. Separate auditable accounts will be kept by both institutes and made available for inspection whenever required.

7. APPLICABLE LAWS:

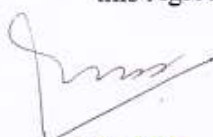
The applicable statutes, regulations, directives, and procedures of the Govt. of India, shall govern this MOA and all documents and actions pursuant to it. Unless otherwise required by law, all work undertaken by *RCC* and *CEK* shall be governed by the policies and procedures by the respective institutions.

8. DISPUTE RESOLUTION AND ARBITRATION

Should there be any difference of opinion between the parties or if any dispute arises as to any of the matters provided for in this **Agreement**, the parties shall endeavor to settle such differences and/or disputes in an amicable manner through mutual consultation. In case such differences or disputes cannot be mutually settled, the matter shall be decided by Arbitration held at Thiruvananthapuram in accordance with the provisions of the Indian Arbitration and Conciliation Act, 1996 or the corresponding legislation in force for the time being and the Award made by the competent authority, shall be final and binding on the parties.

9. WARRANTIES

Both parties in no way guarantee Research Services performed pursuant to this Agreement and make no warranties express or implied, regarding the quality of product produced under this Agreement.


Director,
Regional Cancer Centre


Principal,
College of Engineering
Karunagappally

10. INTELLECTUAL PROPERTY:

If and only if any "invention" arises from the performance of this agreement this clause shall apply. 'Invention' shall mean any discovery, in the absence of any specific guidelines from the funding agency, patent rights to an invention made jointly by RCC and CEK. RCC and CEK will have equal right on the technology development for commercialization licensing. In case of funding from external agencies commercialization licensing will be done according to the terms and conditions laid down by each funding agency.

Royalty obtained from third parties on technology developed shall be shared equally. Funding agency has also claim on royalty through the share of each party shall be decided as mutually agreed terms.

11. RECORDS:

During the term of this Agreement and for a period of licensing thereafter, the Developing Party shall keep complete and accurate records pertaining to the results and other details.

12. AUDIT:

During the term of this Agreement and for a period of two years thereafter, both parties shall keep complete and accurate records of the projects.

13. CONFIDENTIALITY:

A Party in receipt of Confidential Information from other Party must not use or disclose the other Party's Confidential Information without that other Party's prior written consent other than (i) for the purpose of carrying out this MOU, provided any disclosure is only to such of the receiving party's personnel or to its related company and its personnel who need to know and who are made subject to the confidentiality requirements of this MOU or (ii) as required by law. Neither Party may make any public announcement in relation to this MOU without first obtaining the approval of the Other Party.

Confidential information means (i) the subject and terms of this MOU and (ii) all information (in whatever form) disclosed by one party to the other, whether before or after the date of this MOU but excludes information which (iii) is or becomes public knowledge other than through a breach of this MOU (iv) the recipient can show to the discloser's reasonable satisfaction to have been in the recipient's lawful possession prior to disclosure or (v) the recipient can show to the discloser's reasonable satisfaction to have been lawfully received

from a third party not obliged to keep that information confidential. Each Party shall not use any name, logo, trade name, trademark, service mark or symbol associated with the other Party without the prior written consent of the other Party.

14. REPORTS AND PUBLICATIONS:

Each Party to this Agreement recognizes that the publication of papers regarding results of the Research Collaboration, including oral presentations and abstracts, may be beneficial to both Parties provided such publications are subject to reasonable controls to protect Confidential Information.

Accordingly, each Party shall have the right to review and approve any paper proposed for publication by the other Party regarding results of the Research Collaboration hereunder, including oral presentations and abstracts, which utilize data, generated from the Research Collaboration and/or include Confidential Information of the other Party. Before any such paper is submitted for publication, the Party proposing publication shall deliver a complete copy to the other Party at least 30 days prior to submitting the paper to a publisher. The receiving Party shall review any such paper and give its comments to the publishing Party within 14 days of the delivery of such paper to the receiving Party. With respect to oral presentation materials, the Parties shall make reasonable efforts to expedite review of such materials, and shall return such items as soon as practicable to the disclosing Party with appropriate comments, if any, but in no event later than 7 days from the date of delivery to the receiving Party. The disclosing Party shall comply with the other Party's request to delete references to such other Party's Confidential Information in any such paper and agrees to withhold publication in order to permit the Parties to obtain patent protection, if either of the Parties deems it necessary, in accordance with the terms of this Agreement.

15. NOTICES:

Any notices or communications provided for in this Agreement to be made by either of the Parties to the other shall be in writing, in English, and shall be made by prepaid mail with return receipt addressed to the other at its address set forth below. Any such notice or communication may also be given by hand, or facsimile to the appropriate designation. Either Party may be like notice specify an address to which notices or communications shall

thereafter be sent. Notices sent by mail, facsimile or cable shall be effective upon receipt and notices given by hand shall be effective when delivered.

If to *RCC*

Dr. Paul Sebastian
Director
Regional Cancer Centre
Thiruvananthapuram - 695 011
Kerala

If to *CEK*

Dr. Hari V S
Principal
College of Engineering, Karunagappally,
Kerala

16. MISCELLANEOUS:

a. Other Relationships or Obligations. This MOA shall not affect any pre-existing or independent relationships or obligations between the parties.

b. Survival. The provisions of this MOA that require performance after the expiration or termination of this MOA shall remain in force notwithstanding the expiration or termination of the MOA.

c. Severability. If any provision of this MOA is determined to be invalid or unenforceable, the remaining provisions shall remain in force and unaffected to the fullest extent permitted by law and regulation.

This Agreement shall be binding upon and inure to the benefit of the successors and permitted assigns of the Parties; provided, however, that any such permitted assignment or delegation shall not relieve the assigning Party of its responsibilities for performance of its obligations under this Agreement. Any assignment not in accordance with this Agreement shall be void.

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Director,
Regional Cancer Centre.


Principal,
College of Engineering,
Karunagappally

17. REVIEW:

This agreement will be reviewed annually to ensure adequate identification of support requirements. Additional reviews may take place when changing conditions or circumstances require substantial changes or development of a new agreement. Minor changes may be made at any time by correcting the existing document or attaching a memorandum to the basic document. Changes must be coordinated and initialed by a representative of both parties.

18. AMENDMENT AND MODIFICATION:

This MOA may be amended or modified only by written, mutual agreement of the parties.

19. TERMINATION OF THE AGREEMENT

Failure by either party to comply with any of the obligations herein contained shall entitle the other party to give the party in default written notice required to cure such default. If such default is not cured within 60 days after receipt of such written notice, the notifying party shall be entitled without prejudice to any of their other rights conferred on them by the **Agreement** or by law, to terminate this **Agreement** by giving written notice to take effect immediately. The right of either party to terminate this **Agreement** shall not be affected in any way by any waiver or failure to take action with respect to any previous default.

Upon termination of this **Agreement**, **RCC** and **CEK** shall cease to have any right to use and practice of the **Know-How** and the Process gained from the other and shall return all documents and information received from the **OTHER** related to the said **Know-How** within such time as may be specified by **RCC** and **CEK**.

20. FORCE MAJEURE

Except as hereinafter provided, no party hereto shall be liable for failure to perform as required by any provision of this **Agreement** where such failure results from a cause beyond control of the parties such as acts of God, Government regulations, or other acts of civil or military authorities, fire, flood, epidemic, quarantine, restrictions or riots, delay in transporting and inability due to causes beyond control of such parties to obtain necessary

~~labor, material or manufacturing facilities or strikes, lock-outs, or other concerted actions of~~
workmen or any circumstances of whatsoever nature beyond the control of either party;
provided that the party claiming that the force majeure has affected its performance shall give
notice to the other party immediately, but not later than 15 days after becoming aware of the
first occurrence of force-majeure, giving full particulars of the case or event and the date of
first occurrence thereof. Notwithstanding the foregoing however if performance required by
this **Agreement** be delayed or prevented for more than three continuous months, either party
may terminate this **Agreement** by giving notice (either before or after expiration of such six
months period) of its intent to terminate this **Agreement** to the other party.

21. EFFECTIVE DATE:

This agreement becomes effective upon the date of the last approving signature and will
remain in effect indefinitely until superseded, rescinded, or modified by written, mutual
agreement of both parties.

22. ACCEPTANCE OF AGREEMENT:



Dr. Paul Sebastian
Director
Regional Cancer Centre
Thiruvananthapuram-695 011
Kerala



Dr. Hari V S
Principal
College of Engineering,
Karunagappally,
Kerala



Date: 30.04.2015

Witness

1. DY. AJIL KUMAR.A
Associate Professor
College of Engineering
Karunagappally

huc

2. K.R. Bhaskaran Nair

2nd

Finance Manager (Projects)
Regional Cancer Centre
Medical College Campus
Thiruvananthapuram- 695011

Date:

Signed this 30th day of April, 2015 in the City of Thiruvananthapuram, in the state of
Kerala.

END OF DOCUMENT

Signed in Duplicates



G Report of Statutory Audit

TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME

COLLEGE OF ENGINEERING KARUNAGAPALLY, KOLLAM

Statutory Audit Observations for the FY 2014-2015

Administration of TEQIP

- Principal :- Dr. Hari V S
- TEQIP Co-coordinator :- Dr Ajilkumar A
- Nodal Officers:-
 1. Procurement :- Mr Sylish S V
 2. Finance :- Mr JayadeepKumar J
 3. Academic :- Mrs Deepa V S
 4. Civil Works :- Mr Shaji L
 5. Equity Assurance :- Mrs Premakumari K R

COLLEGE OF ENGINEERING, KARUNAGAPALLY

- MANAGEMENT LETTER
- UTILIZATION CERTIFICATE
- BALANCE SHEET
- INCOME AND EXPENDITURE ACCOUNT
- RECEIPTS AND PAYMENTS ACCOUNT
- STATEMENT OF SOURCES AND APPLICATION OF FUNDS
- STATEMENT OF RECONCILIATION OF CLAIMS TO TOTAL APPLICATION OF FUNDS
- BANK RECONCLIAION STATEMENT

PROJECT INSTITUTIONS UNDER STATE PROJECT FACILITATION UNIT, KERALA



K. VENKATACHALAM AIYER & Co.
CHARTERED ACCOUNTANTS

No. XVI/ 118K, Second Floor,
ADITHYA COMMERCIAL ARCADE
Near Axis Bank, Nagampadam,
KOTTAYAM, Kerala – 686 001

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Email • kvaier@gmail.com • kottayam@kvaier.com

TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP II)

COLLEGE OF ENGINEERING, KARUNAGAPALLY

MANAGEMENT LETTER

To

The Director,
State Project Facilitation Unit Kerala,
Directorate of Technical Education,
Trivandrum

We have audited the Project financial statements of *College of Engineering, Karunagapally, Kerala under TEQIP Phase II* for the year ending 31st March, 2015 and have issued our consolidated report dated 26.09.2015. The matters involving the internal accounting control structure and its operations that we consider to be material weakness in accordance with the standards referred to above have been dealt with in our audit report.

The following observations were examined during the course of the audit on the accounting records, systems and control:

1. During the course of audit it was observed that the institution has utilized Security Deposits amounting to Rs: 2,44,378/- for the meeting the expenses of the institution.





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Email • kvaiyer@gmail.com • kottayam@kvaiyer.com

1. GENERAL OBSERVATIONS:

SL No	OBSERVATIONS	AUDITORS REMARKS
I	The Institute is maintaining its accounts in cash basis.	General Procedure as per Financial Management Manual issued by MHRD.
II	The institute is not annexing the actual bus tickets and train tickets. Instead they are claiming the TA as per Kerala State Rules.	Each faculty/experts Can claim their TA/DA according to their grades prescribed in relevant rules. But the same should be supported by actual bills. Taxi Bills Should be annexed in case of Taxi Travels .But the institute in most cases is not annexing any trip sheets for travels, instead of this they are claiming Rs.16 per km as per the Government Order.
III	Proceedings which were sanctioned by the head of institution were overwritten.	During course of audit it was observed that many proceedings which were attached as final proceedings were overwritten and it creates an unknown scenario, whether it was overwritten before or after the sanction was given.
IV	Non mentioning of head of expense in the proceedings under which the expense have been incurred.	Proceedings sanctioned do not contain the heads of expense to which it relates .So it is difficult to confirm from vouchers where it has been actually accounted. Sanction should be made under appropriate head.
V	Non accounting of bank charges collected by bank in the books of accounts.	Bank charges collected by bank should be recorded in books of accounts as an expense incurred during the period.
VI	Accounting of part payment given for civil work as expenditure.	The amount given as part payment for civil work should be shown as advance for capital work.





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2. During the course of audit it was observed that the FMR submitted by the institution for the year ended March 2015 doesn't tallied with the actual expenditure incurred till the end of March 2015. The details of which are as follows :

Total expense as per FMR	: Rs 350.63 Lakhs
Total expense as per Books	: Rs 351.22 Lakhs
Difference	: Rs 0.059 Lakhs

3. Other Observations are furnished in **Annexure I**.

For K VENKATACHALAM AIYER & CO

Chartered Accountants

Firm Reg No: 004610S

CA M G SURESH KUMAR B.Sc,FCA,DISA(ICA)

Partner | Membership No:212795

Date : 26.09.2015

Place : KOTTAYAM



ANNEXURE-I

- Improvement in teaching, training and learning facilities

SL No	OBSERVATIONS	AUDITORS REMARKS
I	Lapses found in initiating proceedings for procurement.	Proceedings for procurement do not mention the method under which the procurement has been made. All the proceedings for procurement were sanctioned without mentioning the method in the proceedings.

- Academic support for weak students

SL No	OBSERVATIONS	AUDITORS REMARKS
I	Initiation of unauthorized expense under the head academic support for weak students.	An expenditure of Rs: 38,516/- incurred under the head student support were not authorized as the proceedings were not duly signed by principal.





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TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP II)

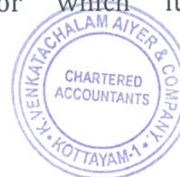
UTILIZATION CERTIFICATE

COLLEGE OF ENGINEERING, KARUNAGAPALLY

a) Opening Balance as on 1st April 2014	: Rs	55 57 975.00
b) Funds received from		
(i) Grant received from SPFU	: Rs	2 90 00 000.00
c) Interest earned on grant available for TEQIP	: Rs	3 49 493.00
d) Other Income	: Rs	54 107.00
		<u>3 49 61 575.00</u>
e) Expenditure	: Rs	3 51 21 753.00
Less:		
Fund utilised from EMD	: Rs	1 60 178.00
		<u>3 49 61 575.00</u>
Unspent Balance	: Rs	NIL

Certified that a sum of Rs. 2 90 00 000/- (Rupees Two Crores Ninety Lakhs) only was received by The College of Engineering, Karunagapally, for the financial year 2014-2015 from State Government [In addition to the opening balance of Rs 55 57 975/- (Rupees Fifty Five Lakhs Fifty Seven Thousand Nine Hundred and Seventy Five) as on 01.04.2014].

It is also certified that the above-mentioned funds of Rs.3 49 61 575 /-(Rupees Three Crores Forty Nine Lakhs Sixty One Thousand Five Hundred and Seventy Five) has been utilized by the institution during the year for the purpose for which it was sanctioned.





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We further certify that the conditions on which the grant was sanctioned have been fulfilled and where there have been any deviation from the sanctioned amount it is with prior approval of the concerned authority. We have exercised reasonable checks to see that money has been actually utilized for the purpose for which it was sanctioned.

We further state here that in our opinion out of the total expenditure of Rs.3 49 61 575 /-(Rupees Three Crores Forty Nine Lakhs Sixty One Thousand Five Hundred and Seventy Five), during the financial year 2014-2015, a sum of Rs. 38 516/- (Rupees Thirty Eight Thousand Five Hundred and Sixteen) is ineligible expenditure.

For K VENKATACHALAM AIYER & CO

Chartered Accountants

Firm Reg No: 004610S

CA M G SURESH KUMAR B.Sc,FCA,DISA(ICA)

Partner | Membership No:212795

Date : 26.09.2015
Place : KOTTAYAM





K. VENKATACHALAM AIYER & Co.
CHARTERED ACCOUNTANTS

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Reconciliation of unspent balance as per Utilization Certificate and Closing balance of Bank Account:

Unspent Balance as per Utilization Certificate	: Rs	NIL
Less : Net Current Asset Excluding Cash & Bank	: Rs	- 6 47 406.00
Add : Contribution from Project Institution	: Rs	-
Less : Cash in Hand	: Rs	-
TOTAL		6 47 406.00
Balance as per Bank statement		
a. SBT A/c 67219137689	: Rs	3 47 347.00
b. Corpus Fund	: Rs	11 864.50
c. Equipment Replacement Fund	: Rs	11 864.50
d. Faculty Development Fund	: Rs	12 450.50
e. Maintenance Fund	: Rs	11 864.50
f. Performance Security Account	: Rs	2 52 015.00
TOTAL		6 47 406.00



TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP) II
PROJECT INSTITUTIONS UNDER STATE PROJECT FACILITATION UNIT, KERALA

BALANCE SHEET AS AT 31.03.2015
COLLEGE OF ENGINEERING, KARUNAGAPALLY

(Amount in ₹)

S.No	PARTICULARS	CURRENT YEAR	PREVIOUS YEAR
A	SOURCE OF FUNDS		
	GENERAL FUND		
	Opening balance	5,557,975.00	
	Less : Exces of Expenditure over Income	5,718,153.00	
	Add : Excess of Income Over Expenditure		5,557,975.00
	TOTAL	-160,178.00	5,557,975.00
B	APPLICATION OF FUNDS		
	1) FIXED ASSETS	-	-
	2) Work-In-Progress-Scheme work under Implementation	-	-
	3) A.Current Assets , Loans and Advances		
	a. Cash Balance	-	-
	b. Bank balance	644,802.00	5,397,375.00
	c. Advance for Capital goods	-	-
	d. Loans and Advances	86,600.00	160,600.00
		731,402.00	5,557,975.00
	B. Less: Current Liabilities		
	a. Earnest Money Deposit	889,180.00	-
	b. Performance Security	-	-
	c. Statutory Liabilities	2,400.00	-
	d. Advance by Institutions		-
		891,580.00	-
	Net Current Assets (A-B)	-160,178.00	5,557,975.00
	TOTAL	-160,178.00	5,557,975.00

For SPFU , KERALA

For K VENKATACHALAM AIYER & Co.
Chartered Accountants


Dr. V. GOPA KUMAR
(Director)


LINDSEY THOMAS
(Finance Officer)


CA M G SURESH KUMAR B.Sc FCA DISA(ICA)
Partner | Membership No: 212795

Date : 26-09-2015
Place : Kottayam



TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP) II

PROJECT INSTITUTIONS UNDER STATE PROJECT FACILITATION UNIT, KERALA

INCOME AND EXPENDITURE ACCOUNT FOR THE PERIOD ENDED 31.03.2015


COLLEGE OF ENGINEERING, KARUNAGAPALLY

EXPENDITURE	₹		INCOME	₹	
	31.03.2015	31.03.2014		31.03.2015	31.03.2014
To 1.1.1					
Improvements in teaching, training and learning facilities :					
1.1.1A - Equipment	24,931,732.00	97 56 789.00	By Grant From SPFU	2 90 00 000.00	2 50 00 000.00
1.1.1B - Furniture	-	-	By Interest Received	3 49 493.00	2 90 836.00
1.1.1C - Books & LRs & Software	2,626,159.00	16 35 371.00	By Other Income	7 537.00	
1.1.1D - Minor Items	-	-	By Course Fee Received	46 570.00	
1.1.1E - Civil Works	1,420,101.00	980,879.00	By Excess of Expenditure over Income	57 18 153.00	
To 1.1.2					
Providing Assistantships for increased enrolment in existing and new PG programmes in Engineering disciplines.	1,787,000.00	1,812,000.00			
To 1.1.3					
Enhancement of Research & Development and institutional consultancy activities.	36,775.00	837,355.00			
To 1.1.4					
Faculty and staff development for improved competence based on Training Needs Analysis.	1,710,735.00	24 05 278.00			
To 1.1.5					
Enhanced interaction with Industry	197,656.00	2 00 233.00			
To 1.1.6					
Institutional Management Capacity enhancement	95,571.00	284,264.00			



To 1.1.7	Implementation of Institutional academic reforms	-	786,520.00	1 12 360.00	Total	3 51 21 753.00	25,290,336.00
To 1.1.8	Academic support for weak students	-	283,451.00	3 08 803.00			
To 1.1.9	Incremental Operating Cost	-	-	-			
	1.1.9A - Salaries	-	527,200.00	3 02 348.00			
	1.1.9B - Consumables	-	172,203.00	1 85 883.00			
	1.1.9C - Operation & Maintenance	-	546,650.00	9 10 798.00			
	To Excess of Income over Expenditure	-	-	5,557,975.00			
Total			3 51 21 753.00	25,290,336.00			

For SPFU, KERALA


Dr. V. GOPA KUMAR
(Director)


LINDSEY THOMAS
(Finance Officer)

Date :26-09-2015
Place : Kottayam

For K VENKATACHALAM AIYER & Co.
Chartered Accountants


CA M G SURESH KUMAR B.Sc FCA DISA(ICA)
Partner | Membership No: 212795



TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP) II
PROJECT INSTITUTIONS UNDER STATE PROJECT FACILITATION UNIT, KERALA

RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD ENDED 31.03.2015

COLLEGE OF ENGINEERING, KARUNAGAPALLY

RECEIPTS	₹		PAYMENTS	₹	
	31.03.2015	31.03.2014		31.03.2015	31.03.2014
To Opening balance :					
1. Cash in Hand	-	-	By 1.1.1		
2. Balance with Banks :			Improvements in teaching, training and learning facilities :		
a. SBT A/c 67219137689	5,397,375.00	.00	1.1.1A - Equipment	24,931,732.00	97,556,899.00
b. Corpus Fund	-	-	1.1.1B - Furniture	-	-
c. Equipment Replacement Fund	-	-	1.1.1C - Books & LRs & Software	2,626,159.00	16,357,132.00
d. Faculty Development Fund	-	-	1.1.1D - Minor Items	-	-
e. Maintenance Fund	-	-	1.1.1E - Civil Works	1,420,101.00	98,03,992.00
			By 1.1.2	-	-
To Interest Received	3 49 493.00	2 90 336.00	Providing Assistantships for increased enrolment in existing and new PG programmes in Engineering disciplines.	1,787,000.00	1,812,000.00
To Security Deposit	.00	-	By 1.1.3	-	-
To Grant Received from SPFU	2 90 00 000.00	2 50 00 000.00	Enhancement of Research & Development and institutional consultancy activities.	36,775.00	837,355.00
To Earnest Money Deposit Received	14 26 042.00	.00	By 1.1.4	-	-
To Registration Fee Collected from External participants.	46 570.00	.00	Faculty and staff development for improved competence based on Training Needs Analysis.	1,643,435.00	24,05,276.00
To Other Income	10 977.00	.00	By 1.1.5	-	-
TO TDS Deucted	76 213.00	.00	Enhanced interaction with Industry	187,656.00	2 00 233.00
			By 1.1.6	-	-
			Institutional Management Capacity enhancement	95,571.00	284,264.00
			By 1.1.7	-	-
			Implementation of Institutional academic reforms	786,520.00	1 12 360.00
			By 1.1.8	-	-
			Academic support for weak students	250,451.00	3 08 803.00



Note :Figures shown in Receipts and Payment account are taken after deducting the amount of expenses met from Previous year advance.

For K VENKATACHALAM AIYER & Co.
Chartered Accountants

CA M G SURESH KUMAR B.Sc FCA DISA(ICA)
Partner | Membership No: 212795



Date : 26-09-2015
Place : Kottayam

**TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME [TEQIP]
PHASE - II**

**STATEMENT OF SOURCES AND APPLICATION OF FUNDS
REPORT FOR THE YEAR ENDED 31.03.2015**

COLLEGE OF ENGINEERING, KARUNAGAPALLY

In ₹ Lakhs			
Particulars	Current Year	Previous Year	Project to Date
(A) Opening Balance	53.97		
(B) Receipts			
a). Funds from Government through Budget (These will include external assistance received by Government for the project)	290.00	250.00	540.00
b). Funds received directly by Project Implementing authority through external assurances	-	-	-
c). Cost share by Private Unaided Institutions for Component 1	-	-	-
d). Interest Received	3.49	2.90	6.39
e). Other Amount Received (Net of Payments)	9.46		9.46
f). Advance From Institutions/Expense met of previous year advance	1.61	-	1.61
Total Receipts	304.56	252.90	557.46
(C) Total Sources (A+B)	358.53	252.90	557.46
(D) Expenditure			
Expenditure by Component			
A. Improving Quality of Education	351.22	197.32	548.54
B. Improving System Management	-	-	-
Total Expenditures	351.22	197.32	548.54
(E) Advance for Expenditures	0.87	1.61	
Closing Balance, (C-D-E)	6.44	53.97	




TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME [TEQIP]
PHASE - II

RECONCILIATION OF CLAIMS TO TOTAL APPLICATIONS OF FUNDS REPORT
FOR THE YEAR ENDED 31.03.2015

COLLEGE OF ENGINEERING, KARUNAGAPALLY

Schedules	Amt (₹ Lakhs)		
	Current Year	Previous Year	Project to date
Bank Funds Claimed During the Year (A)			
I	210.50	113.59	324.09
Total Expenditure made during the year (B)	351.22	197.32	548.54
Less: Outstanding bills (C)			
Ineligible expenditures (D)			
(a) Seed Money		8.00	8.00
(b) Others	0.39	-	0.39
Expenditures not claimed (E)			
IV			
Total Eligible Expenditures Claimed (F)=(B)-(C)-(D)-(E)	350.83	189.32	540.15
World Bank Share @ 60 % of (F) above (G)	210.50	113.59	324.09

CFAO



Project Director



Date : 26-09-2015

Date : 26-09-2015




TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAMME (TEQIP) II

PROJECT INSTITUTIONS UNDER STATE PROJECT FACILITATION UNIT, KERALA

BANK RECONCILIATION STATEMENT

COLLEGE OF ENGINEERING KARUNAGAPALLY

Reconciliation as on 31st March 2015

Bank's Name State Bank of Travancore

A/c Number SBT Main A/c No. 67169019309

Sl.No	Particulars	Amount Rs.	Amount Rs.
A	Balance as per Bank Statement		4 16 846.00
B	Add: (i) Amount Deposited but not Credited by Bank (ii) Amount debited but not taken to Cash Book		
C	Sub total (A+B)		4 16 846.00
D	Less: (i) Cheques issued but not presented in the bank (ii) Amount credited by bank but not taken to Cash Book	72 103.00	
E	Balance as per Cash book (C - D)		3 44 743.00

List of Cheques Issued but not Presented in the Bank		Amount Rs.	Date of Encashment
1	Chq No. 234194	1 094.00	21-Feb-14
2	Chq No. 849820	750.00	6-Apr-15
3	Chq No. 849828	12 063.00	6-Apr-15
4	Chq No. 849832	1 308.00	21-Apr-15
5	Chq No. 849833	808.00	7-Apr-15
6	Chq No. 849834	808.00	21-Apr-15
7	Chq No. 849835	1 453.00	10-Apr-15
8	Chq No. 849836	1 540.00	2-Apr-15
9	Chq No. 849837	4 540.00	7-Apr-15
10	Chq No. 849838	1 008.00	6-Apr-15
11	Chq No. 849839	1 508.00	7-Apr-15
12	Chq No. 849840	5 674.00	7-Apr-15
13	Chq No. 849841	5 674.00	6-Apr-15
14	Chq No. 849842	602.00	7-Apr-15
15	Chq No. 849843	602.00	27-Jun-15
16	Chq No. 849844	2 336.00	7-Apr-15
17	Chq No. 849845	2 336.00	10-Apr-15
18	Chq No. 849846	27 999.00	7-Apr-15
		72 103.00	

