

**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
COLLEGE OF ENGINEERING, GUINDY  
ANNA UNIVERSITY, CHENNAI – 600 025**

**Minutes of the Eighteenth Departmental Consultative Committee meeting of the Department of Electronics and Communication Engineering held on 24.02.2016 at 3.00 p.m. in the Conference Hall, Department of Electronics and Communication Engineering.**

The Eighteenth Departmental Consultative Committee meeting of Department of Electronics and Communication Engineering was held on 24.02.2016 at 3.00 P.M. in the Conference Hall, Department of ECE. Dr.S.Muttan, Head, ECE Department and Convenor of Departmental consultative Committee started the meeting with a welcome note.

The following members were present during the meeting and offered suggestions for the further growth of the Department.

- |                      |                 |
|----------------------|-----------------|
| 1. Dr.S.Muttan       | Convenor of DCC |
| 2. Dr.S.Shenbagadevi | Member          |
| 3. Dr.M.Meenakshi    | Member          |
| 4. Dr.M.A.Bhagyaveni | Member          |
| 5. Dr.V.Jeyalakshmi  | Member          |
| 6. Dr.P.Sakthivel    | Member          |
| 7. Dr.O.Umamaheswari | Member          |

**SECTION – 1**

**Item No.18.01.01      Confirmation of the minutes of the 17<sup>th</sup> meeting of the DCC**

Minutes of the Seventeenth Departmental Consultative Committee meeting was confirmed by the members.

## SECTION – 2

### Item No.18.02.01 Report on the follow up action taken on the minutes of the 17<sup>th</sup> meeting of the DCC

Follow up action taken on the minutes of the 17<sup>th</sup> meeting of the DCC was presented to the members by the Convenor and the members expressed their satisfaction over the action taken.

## SECTION – 3 Information to members

### Item No. 18.03.01 Recruitment of Faculty / Teaching Fellow

The Convenor informed the members about the recruitment of two teaching fellows namely Mrs.Jenifer Anies and Mrs.Priti Rishi and also informed the members that in order to meet the laboratory load, 3 more teaching fellows were requested and approval was obtained from the Vice-Chancellor.

### Item No.18.03.02 Department Achievements

The Convenor of the DCC presented the following on-going projects in the Department and also progress of the projects.

#### (i) On-going Projects :

Sl. No.	Title of the project	Name of Principal Investigator	Name of the Funding Agency	Amount of grant received (Rs. in Lakhs)	Duration (From – To)
1.	Mass Screening Gadget for Ophthalmic Lesions	Dr.S.Shenbaga Devi	DST, Govt. of India	20.0	2011-2016
2.	Hystero Electrical Activity Mapping Device	Dr.S.Shenbaga Devi	DST, Govt. of India	20.0	2011-2016
3.	Development of Tactile Sensor based ligature controller to assess pancreatic leak after Whipple's procedure	Dr. S.Poonguzhali	DST, Govt. of India	29.60	2013-2016

4.	Automated Low Cost system for malaria Diagnosis and Classification	Dr.N.Kumaravel, Dr.S.Muttan	UKIERI Project with University of Westminster, UK, funded by British Council	£19960	2012-2016
5.	Evaluation of Functional Electrical simulation in hemiplegics for functional restoration of upper limb using EEG based Brain Computer Interface.	Dr.S.Shenbaga Devi	LSRD – DRDO Project	11.00	2014-2016
6.	Wireless Body Area Networks for Telemedical Applications	Dr. S. Muttan Dr. M.Meenakshi	UGC	60.00	2012- 2016
7.	CARS Project entitled “Design of Spread Spectrum Transceiver using AD 9361 Platform”	Dr.P.V.Ramakrishna	DRO/RCI	9.50	
8.	Design and Development of Intelligent Automated System for Respiratory Measurements	Dr.C.M.Sujatha	DST-SERB	8.64	2012-2016
9.	An Improved resource utilization approach with normalized rate based scheduler for multiuser MIMO system	Dr.M.A.Bhagyaveni	DST-SERB	8.64	2012-2016
11.	Development of hardware system for Beam forming and Beam steering for Non Destructive Testing Applications	Dr.P.V.Ramakrishna	Lucid software Ltd	3,10,000	2014-2015

The Committee congratulated the following faculty members those who have completed Ph.D.Degree.

**(ii) Ph.D Degree awarded to faculty members :**

Sl. No.	Title of the thesis	Name of the scholar	Name of the supervisor	Month & year of viva-voce conducted
1.	Studies on design space exploration of CMOS radio frequency front end circuits	Mr.T.Laxmikandhan	Dr.P.V.Ramakrishna	22.03.2015
2.	Study on mems enabled optical code based router	Mrsr.M.Shanmugapriya	Dr. M.Meenakshi	25.3.2015
3.	Stochastic process variation and optimization of clock tree synthesis	Mr.T.S.Karthik	Dr. V.Jawahar Senthilkumar	06.04.2015
4.	Low Power delay High Precession Log based Floating point unit for Image PCompression	Mr.D.Vaithiyanathan	Dr.R.Seshasayanan	06.04.2015
5.	Analysis of Near Infrared Spectroscopy as a tool to study the Brain activity during cognitive tasks.	Mr.S.Bagyaraj	Dr.G.Ravindran Dr.S.Shenbagadevi	11.01.2016

The Committee also congratulated the following Research Scholars those who have completed Ph.D.Degree.

**(iii) Ph.D Degree completed by Research Scholars :**

Sl. No.	Title	Name of Scholar	Name of Guide	Year of completion
1	Segmentation and Classification of Breast masses using Ultrasound b mode and Ultrasound Elastography images	Shirley Selvan	Dr.S.Shenbaga Devi	2015
2	Analysis of Brain functions using NIRS and EEG	S.Bagyaraj	Dr.S.Shenbaga Devi	2015
3	Studies on Light Weight Collaborative Trust -Based Security Design for Routing	X.Anitha	Dr.M.A.Bhagyaveni	2015

	in Wireless Sensor Network.			
4	Investigational on Interference Reduction Techniques for Next Generation Wireless Networks	R.Kalidas	Dr.M.A.Bhagyaveni	2015
5	Reconfigurable system on chip for Wireless Sensor Networks	P.Latha	Dr.M.A.Bhagyaveni	2015
6	Design of Energy Optimized Routing Methodologies for Wireless Sensor Network	Mrs.K.Pavai	Dr.D.Sridharan	2015
7	Design, Development and Performance Evaluation of Conformal Antennas	S.Esther Florence	Dr.K.Malathi	2015
8	Design and Implementation of Analog Microwave phase shifters	K. Indhumathi	Dr.K.Malathi	2015
9	Reflect Array	S.Sridhar	Dr.K.Malathi	2015
10	Vehicular Antennas	Gulam Nabi Alsath	Dr.K.Malathi	2015
11	Synthesis and Implementation of evaluable arithmetic IP core for reconfigurable hardware	K.Kunaraj	Dr.R.Seshasayanan	2015
12	Area and Power sufficient double output Architecture for signed and Modula multiplier	A.Rosi	Dr.R.Seshasayanan	2016
13	Optimizations of 3D Network on Chip	A.Vino Vilmet Rose	Dr.R.Seshasayanan	2015
14	Screening and Characterization of Breast abnormality in Rotational Thermography images	Sheeja Francis	Dr.M.Sasikala	2016
15	Formal verification	S.R.Malathi	Dr.P.Sakthivel	2015
16	A Multi Processor Dynamic and Partial Reconfigurable Coarse – Grained System – On-Chip Architecture for Real – Time Embedded Computing Applications	N.Janakiraman	Dr.P.Nirmalkumar	2015

17	Integrated Framework for Design of Adaptive and Reliable Fault tolerant system-on-chip using Partial Dynamic Reconfiguration	Deepa Jose	Dr.P.Nirmalkumar	2015
18	An Integrated Compressive Acquisition System-on-Chip Architecture for CMOS Image Sensor	P.Ezhilarasi	Dr.P.Nirmalkumar	2015
19	Analysis of Breast Thermogram using Adaptive level set and Riesz Transform	S.Prabha	Dr.C.M.Sujatha	2016

**(iv) Awards and membership of important bodies :**

The Convenor of the DCC congratulated Dr.M.Meenakshi for membership in Curriculum Advisory Committee for SSN Engineering College and SRM University and also for Interview Committee Member for SAMEER Centre for Electromagnetics and Sai Ram Engineering College.

The Convenor of the DCC congratulated Dr.M.A.Bhagyaveni for being the academic council member for NEC kovilpatti, Board of studies member for GCT, Coimbatore and also for Interview Committee Member for CDAC, Chennai, Easwari Engineering college and SRM Engineering College Kattankulathur.

The Convenor also congratulated for Dr.P.Sakthivel who have been elected as the Treasure, IEEE Madras Section, Treasurer, IEEE Information Theory Society Madras Chapter and Honorary Secretary, IEEE Computer Society Madras Chapter for the year 2016.

**(v) Foreign visits**

The Convenor informed the members about the foreign visits undertaken by the faculty members for attending International Conference and for paper presentation. While congratulating the faculty members for their visit to Foreign countries, the Convenor also requested them to submit a participation report in connection with their visit.

Sl. No.	Faculty Name and Designation	Name of Country visited	Duration	Purpose / Programme
1.	Dr.M.A.Bhagyaveni	Dubai	22-23, April 2015	International conference on Next generation computing and communication Technologies
2.	Dr.Jawahar Senthil Kumar	Dubai	22-23, April 2015	International conference on Next generation computing and communication Technologies

3.	Dr.J.Kamala	Dubai	22-23, April 2015	International conference on Next generation computing and communication Technologies
5.	Dr.C.M.Sujatha	Taiwan	October 30 to November 3, 2015	International Conference on Biomedical Engineering and Innovations

**(vi) Invited lectures delivered by staff members:**

The Convenor appreciated the invited lectures delivered by the following staff members in various Workshops / Short term courses.

1. Dr.M.A.Bhagyaveni, Professor delivered lecture on “Cognitive Radio Networks for next generation Wireless Communication” at Roadmap for 5G Wireless Networks held at Pondicherry University on 18<sup>th</sup> November 2015.
2. Dr.M.A.Bhagyaveni, Professor delivered lecture on “Cognitive Radio Adhoc Networks” at QIP sponsored Short Term Course on Recent Trends in Development of Communication: Cognitive Networks” held on 30/11/2015 held at Pondicherry Engineering College 30<sup>th</sup> November 2015.
3. Dr.D.Sridharan delivered lecture in MAC Protocols in Wireless networks in AICTE sponsored QIP Course at Coimbatore Institute of Technology, 30.12.2015.
4. Dr.M.Sasikala delivered a lecture in a Workshop on “DIVMED” organized in association with the Tamil Nadu Dr.MGR Medical University, Directorate of Medical Education & Anna University, Chennai titled Ventilator during 4-10, February 2016.
5. Dr.S.Poonguzhali delivered a lecture in a Workshop on “DIVMED” organized in association with the Tamil Nadu Dr.MGR Medical University, Directorate of Medical Education & Anna University, Chennai titled Surgical Diathermy and Infusion Pump during 4-10, February 2016.
6. Dr.R.Seetharaman delivered a key note address on “EMC in Communication Systems in National Conference on “Advances in Wireless Technology and Signal Processing” (AWTSP-15) organized by Sri Venkateswara Institute of Science and Technology, Tiruvallur on 5<sup>th</sup> August 2015.

**(vii) Activities organised / proposed**

The Convenor informed the Committee about the following Workshops which are all conducted in the department and also conveyed his wishes for the Short Term Training Programme to be conducted during 2-6, March 2016. He congratulated the Co-ordinators for utilizing the department funds.

**Conferences / Seminars / Symposia / Workshops already conducted by the Department :**

<b>Sl. No</b>	<b>Name of the Conferences / Seminars / Symposium / workshop</b>	<b>Duration</b>	<b>Venue</b>	<b>No.of participants</b>	<b>Coordinator &amp; Sponsoring Agency</b>
1.	"Digital IC Design Flow Using Cadence Tool".	3 Days 12-14 March 2015	Dept. of ECE CEG Campus	70	Dr. P. Sakthivel Dr. N. Ramadass Dr. P. Nirmal Kumar Cadence Design Systems,Inc
2.	"WBAN- Sensing and Signal Processing Challenges"	2 Days 23-24, March 2015	ECE,CEG	85	Dr.M.Meenakshi UGC SAP
3.	Workshop on "Recent Research Technologies in next Generation Wireless Technologies"	2 Days August 21-22,2015	ECE,CEG	100	Dr.M.A.Bhagyaveni
4.	Workshop on "Recent Developments in Tissue Engineering"	1 Day September 29, 2015	Bio medical, ECE, CEG	79	Dr.S.Shenbagadevi
5.	Workshop on "Wireless Sensor Networks and its use in IoT"	1 Day November 20, 2015	ECE,CEG	100	Dr.M.A.Bhagyaveni
6.	Workshop on "Internet on Things- Technology on Tomorrow"	2 Days November 26-27 <sup>th</sup> 2015	ECE,CEG	48	Dr.V.Jeyalakshmi
7.	Workshop on "Recent Advances in Medical Imaging Techniques"	1 Day 31 <sup>st</sup> July 2015	ECE, CEG	80	Dr.S.Shenbagadevi
8.	Hands on Workshop on "Real Time Image Processing using NI Labview	2 Days 10-11, September 2015	ECE,CEG	65	Dr.S.Shenbagadevi



**(iii) Faculty required for (M.E VLSI)**

Professor - 1  
Associate Professor - 1  
Assistant Professor - 2 Total requirement : 4

**(iv) Faculty required for (M.E Communication Systems)**

Professor - 1  
Associate Professor - 1  
Assistant Professor - 2  
Total requirement : 4

**Total faculty required for the department : 48**  
**Available faculty members in the Dept. : 33**  
**No.of new faculty members needed : 17**

**(v) Faculty required for (B.E Bio Medical Engg.)**

Total number of students in 4 years = 240  
Total Faculty Required at the ratio of ( 1: 15 ) = 16  
H&S Faculty = 3  
For the BME Department = (16-3)= 13  
**Professor:Associate Professor:Assistant Professor**

**=1: 3: 9 faculty members**

(Ratio of 1 : 2 : 6 )

**(vi) Faculty required for (M.E Medical Electronics)**

Professor - 1  
Associate Professor - 1  
Assistant Professor - 2  
Total requirement : 4

**(vii) Faculty required for (M.E Bio Medical Engineering)**

Professor - 1  
Associate Professor - 1  
Assistant Professor - 2  
Total requirement : 4

**(viii) Total faculty required for the department ( ECE + BME )**

	Prof.	Asso.Prof.	Asst.Prof.
Faculty Required	10	16	43

Sanctioned post Available	4	10	19
Deficiency	6	6	24

## II. Permanent Administrative staff required

The Department of ECE runs two U.G programs [**one in ECE** (3 batches) & **one in BME**] and 5 P.G. programs, with a total strength of 1330 full time students. The Department also runs one UG Part time programs and two PG Part time Program.

Sl.No.	Name of the Branch	Sanctioned Students intake	Total No. of Students
UG Programmes: (Full Time)			
1.	ECE	180	540
2.	BME	60	180
PG Programmes: (Full Time)			
3.	Applied Electronics	25	50
4.	Medical Electronics	25	50
5.	Communication Systems	25	50
6.	VLSI	25	50
7.	Bio-medical Engineering	25	50

Presently, the department is struggling to satisfy the basic needs in the administrative aspects such as distribution of certificates to students, settlement of bills, dispatch of tapals, issue of circulars, co-ordination with University office, Dean office, Controller office and other Centers, etc., due to insufficient manpower. The details of the administrative staff members available and required for the Department are mentioned below:

Sl.No	Regular Staff Category	Required	Available	To be filled
1.	Superintendent	1	0	1
2.	Stenographer	1	1	0

3.	Assistant	1	0	1
4.	Junior Assistant	3	1	2
5.	Office Assistant	2	1	1

### III. Permanent Requirement of Non-teaching Technical staff :

The Department of ECE runs two U.G programs (**one in ECE & one in BME**) and 5 P.G. programs, with a total strength of 1330 full time students. The Department also runs one UG Part time programs and two PG Part time Program.

Sl.No.	Name of the Branch	Sanctioned Students intake	Total No. of Students	No. of Labs	No. of Lab Sessions	
					Odd Semester	Even Semester
<b>UG Programmes: (Full Time)</b>					72	44
1.	ECE	180	540	12		
2.	BME	60	180	4		
<b>PG Programmes: (Full Time)</b>						
3.	Applied Electronics	25	50	1		
4.	Medical Electronics	25	50	1		
5.	Communication Systems	25	50	1		
6.	VLSI	25	50	1		
7.	Bio-medical Engineering	25	50	1		

Now, the department is struggling to satisfy the basic needs in the technical aspects due to insufficient manpower. The details of the non-teaching (technical) staff members available and required for the Electronics and Communication Engineering Department are mentioned below:

Sl.No.	Regular Staff Category	Qualification	Required	Available	To be filled
1.	General Foreman	B.E.(ECE)	1 No.	1 No.	---
2.	Store keeper	B.E.(ECE)	1 No.	1 No.	---
3.	Technical Assistant	B.E.(ECE)	2 Nos.	2 Nos.	---

4.	Junior Tech. Asst.	Dip. (ECE)	6 Nos.	---	6 Nos.
5.	Mechanic (ordinary grade 'B')	ITI.(Electronics)	10 Nos.	6 Nos.	4 Nos.
6.	Lab Assistant	Xth std.	10 Nos.	5 Nos.	5 Nos.

Technical Staff details:

- a) Total No. of Laboratories: 15 Nos.
- b) The total technical staff required for each lab: 2 Nos.  
[Each Laboratory must have either a Tech. Asst. / Jr.Tech. Asst. / Mechanic and a Lab Assistant]
- c) Total technical staff required for 15 labs:  $(a \times b) = 30$  Nos.
- d) Available technical staff: 15 Nos.
- e) Technical staff category to be filled:  $(c - d) = 15$  Nos.

Further, *Mr.B.Vijayakumar* (Lab Assistant) and *Mr.M.Rajan* (Lab Assistant) are *retired* after attaining superannuation during the year 2014 and there is no alternative hand has been posted till date. Also, *Mr.K.Mohammed Nabi* (M.O.G. 'B') is under suspension for a long period.

**(IV) Separate building for BME proposal**

The proposal for separate building for BME has been submitted to the Vice-Chancellor has been placed before the DCC for approval and the same has been approved by the Committee.

The overall demand for engineers in all industries will increase by substantially. In contrast, engineering jobs in the health service and medical instrument industries are forecasted to increase by many folds. In India, the government is trying hard to reach the goal of 'Health for all' by 2020. Hence the demand for technical personnel in the field of Medical Electronics and Bio Medical Engineering is increasing day by day.

But only a few institutions exist in India to meet this need: Currently not many institutions in India are offering Post Graduate course in Medical Electronics for more than 2 decades and Biomedical Engineering courses both at Under Graduate and at Masters degree in biomedical engineering.

Hence to meet all these requirements and to bring the name of our university in the global map in the field of Medical Electronics and Bio Medical Engineering, establishment of a separate Department of Medical Electronics Engineering is requested to meet the following objectives:

- To develop trained man power in the area of Medical Electronics and Bio Medical Engineering
- To increase the activities in the area of Medical Electronics and Bio Medical Engineering in the university
- To develop newer and affordable healthcare devices and hence
- To invite and attract funds from different funding agents both nationally and internationally.
- To bring name and fame for our university

Also, for the country to remain competitive with the rest of the world on this front, additional avenues may be undertaken to educate learners on biomedical engineering concepts. To this end, the Department of Medical Electronics Engineering would provide avenues to i) increase

the interest of junior/high school students in medical electronics and biomedical engineering, ii) provide training for industry employees to better prepare them for this rapidly changing and growing field, iii) assist instructors at academic institutions to teach medical electronics and biomedical engineering, and iv) educate college students in fundamental medical electronics and biomedical engineering principles.

The following is the projection of space and faculty requirement for the Department of Medical Electronics Engineering. This may be considered and the DCC may kindly recommend the same for necessary further action by the university.

#### **Space Requirement for Conducting M.E – Medical Electronics:**

Sl. No	Description	Capacity	No. Rooms / Labs	Area per Room / Lab in Sq. m.	Total Area in Sq. m.
1	M.E. Class Room	25	2	50	100
2	PG Lab	25	1	100	100
3	Research Lab	25	1	100	100
4	Seminar Hall	50	1	150	150
5	Library	50	1	150	150
6	Staff Room	4	4	10	40
<b>Total Space Required</b>					<b>640</b>

**Space Requirement for Conducting M.E – Bio Medical Engineering:**

Sl. No.	Description	Capacity	No. Rooms / Labs	Area per Room / Lab in Sq. m.	Total Area in Sq. m.
1	M.E. Class Room	25	2	50	100
2	PG Lab	25	1	100	100
3	Staff Room	4	4	10	40
<b>Total Space Required</b>					<b>240</b>

**Space Requirement for Conducting B.E – Bio Medical Engineering:**

Sl. No	Description	Capacity	No. Rooms / Labs	Area per Room / Lab in Sq. m.	Total Area in Sq. m.
1	B.E. Class Room	60	4	100	400
2	UG Labs	30	5	120	600
3	Seminar Hall	100	1	150	150
4	Computer centre	60	1	150	150
5	HoD Room		1	20	20
6	Staff Room		13	10	130
7	Tutorial room	60	1	70	70
8	Office Room			30	30
9	Store Room			30	30
10	Common Room		4	15	60
<b>Total Space Required</b>					<b>1640</b>

**Total space required = 2520 sqm**

**B.E Bio Medical Engineering curriculum has the following 11 lab courses apart from project work**

Devices and circuits lab, Computer Practices Lab, Sensors and Measurements lab, Bio Medical Instrumentation Lab, Integrated Circuits Lab, Microcontrollers and Interfacing Lab, Digital Signal

Processing Lab, Diagnostic and Therapeutic Lab, Biochemistry and Human Physiology  
Lab, Pathology and Microbiology lab, Medical Image Processing Lab

**Qualification and number of posts required for B.E Bio Medical Engineering**

Designation	Number of posts required	Qualifications		
		Under graduate	Post graduate	Ph.d
<b>ASSISTANT PROFESSOR</b> <b>(9 Posts)</b>	4	B.E . Bio Medical Engg./ B.E Medical Electronics	M.E Medical Electronics/ M.E Bio Medical Engg.	--
	2	B.E ECE/B.E Electronics and Instrumentation	M.E Medical Electronics/ M.E Bio Medical Engg.	--
	1	B.E Computer Science and Engg.	M.E Bio Medical Engg.	--
	2	BSc	M.Sc in Anatomy/Physiology, MSc in Biochemistry / Pathology / Microbiology	--
<b>ASSOCIATE PROFESSOR</b> <b>(3 Posts)</b>	1	B.E . Bio Medical Engg./ B.E Medical Electronics	M.E Medical Electronics/ M.E Bio Medical Engg.	BME
	2	B.E Bio Medical Engg./ B.E Medical Electronics/ B.E ECE/ B.E Electronics and Instrumentation/ B.E in Computer Science& Engg.	M.E Medical Electronics/ M.E Bio Medical Engg.	BME
<b>PROFESSOR</b> <b>(1 Post)</b>	1	B.E . Bio Medical Engg./ B.E Medical Electronics/ B.E ECE/B.E Electronics and Instrumentation	M.E Medical Electronics/ M.E Bio Medical Engg.	Bio Medical Engg.



**Qualification and number of posts required for M.E Medical Electronics**

Designation	Number of posts required	Qualifications		
		Undergraduate	Post graduate	Ph.d
<b>ASSISTANT PROFESSOR</b> <b>(2 Posts)</b>	1	B.E . Bio Medical Engg./ B.E Medical Electronics	M.E Medical Electronics/ M.E Bio Medical Engg.	--
	1	B.E ECE/B.E Electronics and Instrumentation	M.E Medical Electronics/ M.E Bio Medical Engg.	--
<b>ASSOCIATE PROFESSOR</b> <b>(1 Post)</b>	1	B.E . Bio Medical Engg./ B.E Medical Electronics/ B.E ECE/B.E Electronics and Instrumentation	M.E Medical Electronics/ M.E Bio Medical Engg.	Bio Medical Engineering
<b>PROFESSOR</b> <b>(1 Post)</b>	1	B.E . Bio Medical Engg./ B.E Medical Electronics/ B.E ECE/B.E Electronics and Instrumentation	M.E Medical Electronics/ M.E Bio Medical Engg.	Bio Medical Engineering

**Qualification and number of posts required for M.E Bio Medical Engineering**

Designation	Number of posts required	Qualifications		
		Undergraduate	Post graduate	Ph.d
<b>ASSISTANT PROFESSOR</b> (2 Posts)	1	B.E . Bio Medical Engg./ B.E Medical Electronics	M.E Medical Electronics/ M.E Bio Medical Engg.	---
	1	B.E Electronics and Instrumentation ECE/B.E	M.E Medical Electronics/ M.E Bio Medical Engg.	---
<b>ASSOCIATE PROFESSOR</b> (1 Post)	1	B.E . Bio Medical Engg./ B.E Medical Electronics/ B.E ECE/B.E Electronics and Instrumentation	M.E Medical Electronics/ M.E Bio Medical Engg.	Bio Medical Engineering
<b>PROFESSOR</b> (1 Post)	1	B.E . Bio Medical Engg./ B.E Medical Electronics/ B.E ECE/B.E Electronics and Instrumentation	M.E Medical Electronics/ M.E Bio Medical Engg.	Bio Medical Engineering

**TOTAL NUMBER OF POSTS REQUIRED FOR THE PROPOSED NEW DEPARTMENT OF MEDICAL ELECTRONICS ENGINEERING**

DESIGNATION	NUMBER OF POSTS REQUIRED
ASSISTANT PROFESSOR	13
ASSOCIATE PROFESSOR	5

PROFESSOR	3
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**NON - TEACHING STAFF (ADMINISTRATIVE AND TECHNICAL)**  
**PROPOSAL FOR DEPARTMENT OF MEDICAL ELECTRONICS ENGINEERING**  
**EXPECTED FINANCIAL COMMITMENT**

**NON RECURRING EXPENDITURE:**

**i) Building construction:**

Requested area	Approximate expenditure
2520 sq.m	Rs.5.25 crore (Civil+ Electrical + all amenities)

**RECURRING EXPENDITURE :**

Category	Field of specialization	Number of posts required	Qualification
SUPERINTENDENT	AS PER UTY NORMS	1	AS PER UTY NORMS
ASSISTANT	AS PER UTY NORMS	2	AS PER UTY NORMS
TECHNICAL STORE KEEPER	BIOMEDICAL / ECE	1	AS PER UTY NORMS
LAB ASSISTANT	BIOMEDICAL / ECE/ LIFE SCIENCES	5	AS PER UTY NORMS
OFFICE ASSISTANT	AS PER UTY NORMS	1	AS PER UTY NORMS
PROFESSIONAL ASSISTANT	BIOMEDICAL / ECE	3	AS PER UTY NORMS

**A: i) Salary to the Teaching Staff**

Designation	No. of posts requested	Pay band +AGP In Rs.	Salary at present (At minimum basic pay) in Rs.	Total per month in Rs.	Total per year in Rs.
Professor	3	(37400 – 67000)+10000	104962	314886	3778632
Associate Professor	5	(37400-67000)+ 9000	102832	514160	6169920
Assistant Professor	13	(15600-39100) + 6000	49708	646204	7754448
<b>Total</b>					<b>1,77,03,000</b>

**i) Salary to the Teaching Staff for 5 years :**

Designation	No. of posts requested	2 <sup>nd</sup> Year	3 <sup>rd</sup> Year	4 <sup>th</sup> Year	5 <sup>th</sup> Year
Professor	3	3857112	3968424	4083048	4201200
Associate Professor	5	6347760	6530940	6719580	6913920
Assistant Professor	13	7969728	8191404	8419632	8654880
<b>Total</b>		<b>18174600</b>	<b>18690768</b>	<b>19222260</b>	<b>1,97,70,000</b>

**ii) Calculation of salary with the average pay in the pay band**

Designation	No. of posts requested	Avg. pay +AGP in Rs.	Salary at present (At avg. basic pay) in Rs.	Total per month in Rs.	Total per year in Rs.
Professor	3	52200+10000	136486	409458	4913496
Associate Professor	5	52200+9000	134356	671780	8061360
Assistant Professor	13	27350+6000	74735	971555	11658660
<b>Total</b>					<b>2,46,33,516</b>

**B. i) Salary to the Non Teaching Staff**

Designation	No. of posts requested	Pay band +GP In Rs.	Salary at present (At minimum basic pay) in Rs.	Total per month in Rs.	Total per year in Rs. (without HRA +CCA)
Superintendent	1	(9300-34800)+4800	30033+HRA+CCA	30033+HRA+CCA	360396
Steno Gr III	1	(5200-20200)+2800	17040+HRA+CCA	17040+HRA+CCA	204480
Junior Assistant	1	(5200-20200)+2400	16188+HRA+CCA	16188+HRA+CCA	194256
Technical Store Keeper	1	(9300-34800)+4300	28968+HRA+CCA	28968+HRA+CCA	347616
MOG 'B'	3	(5200-20200)+2000	15336+HRA+CCA	46008+HRA+CCA	552096
Lab Assistant	2	(5200-20200)+2400	16188+HRA+CCA	32376+HRA+CCA	388512
Junior Technical Assistant	3	(5200-20200)+2600	16614+HRA+CCA	49842+HRA+CCA	598104
Office Assistant	1	(4800-10000)+1300	12933+HRA+CCA	12933+HRA+CCA	155196
Sweeper	1	(4800-10000)+1300	12993+HRACCA	12993+HRACCA	155196
<b>Total</b>					<b>29,55,846</b>

**ii) Calculation of salary with the average pay in the pay band**

Designation	No. of posts requested	Avg. pay+GP In Rs.	Salary at present (At avg. basic pay) in Rs.	Total per month in Rs.	Total per year in Rs. (without HRA +CCA)
Superintendent	1	22050+4800	57190+HRA+CCA	57190+HRA+CCA	686280
Steno Gr III	1	12700+2800	33015+HRA+CCA	33015+HRA+CCA	396180
Junior Assistant	1	12700+2400	32163+HRA+CCA	32163+HRA+CCA	385956
Technical Store Keeper	1	22050+4300	56125+HRA+CCA	56125+HRA+CCA	673500
MOG 'B'	3	12700+2000	31311+HRA+CCA	93933+HRA+CCA	1127196
Lab Assistant	2	12700+2400	32163+HRA+CCA	64326+HRA+CCA	771912

Junior Technical Assistant	3	12700+2600	32589+HRA+CCA	97767+HRA+CCA	1173204
Office Assistant	1	7400+1300	18531+HRA+CCA	18531+HRA+CCA	222372
Sweeper	1	7400+1300	18531+HRA+CCA	18531+HRA+CCA	222372
<b>Total</b>					<b>56,58,972</b>

**This proposal is placed before the members for kind consideration and approval.**

**Item No.18.05.02 Gian Programme :**

The Convenor of DCC placed a proposal of organizing the GIAN Programme in the department for approval. The Committee members carefully considered the proposal and approved.

The department is in the process of organizing GIAN programme by inviting Prof. **Arogyaswami J. Paulraj** from Stanford University. This is for the kind consideration and approval of the members.

**Global Initiative of Academic Network**  
(Faculty from outside India only can use this format)

Name of Faculty : **Arogyaswami J. Paulraj**

Affiliation : Stanford University

Address : Room 232, Packard Building  
350 Serra Mall, MC 9510  
Stanford, CA 94305-9510  
Fax: +1 (650) 723-8473  
Email : [apaulraj@stanford.edu](mailto:apaulraj@stanford.edu)

Course Title : **MIMO Wireless**

Broad Area : **Wireless Communication**

**Item No.18.05.03 Electronic Museum**

A museum to highlight the historic developments and evolution of Electronics and Communication is planned to be established in the free space available in the Ground Floor of the ECE Department.

**Item No.18.05.04 NBA Accreditation**

The department is contemplating to apply for Accreditation of NBA for the Courses offered in the ECE Department.

**Section – 6**

**Any other Item – NIL**



**Dr.S.MUTTAN  
CONVENOR**



**Dr.P.V.RAMAKRISHNA  
MEMBER**



**Dr.Y.V.RAMANA RAO  
MEMBER**



**Dr.S.SHENBAGADEVI  
MEMBER**



**Dr.M.MEENAKSHI  
MEMBER**



**Dr.M.A.BHAGYAVENI  
MEMBER**



**Dr.V.JEYALAKSHMI  
MEMBER**



**Dr.P.SAKTHIVEL  
MEMBER**



**Dr.M.SASIKALA  
MEMBER**



**Dr.O.UMAMAHESWARI  
MEMBER**



**Dr.M.KANNAN  
MEMBER  
(MIT)**



**Dr.K.LATHA  
MEMBER  
(DEEE)**

**Item No.18.03.03 Activities Organized / Proposed**

The Convenor informed the members about the following activities in the department subsequent to the previous meeting and the activities proposed to organize in the department.

1. Guest Lecture is arranged to ECE students by Dr.N.Ramanathan, Scientist, DRDO (Retd.) on 24.02.2015.
2. Guest Lecture on “Higher Studies in Poland” delivered by Prof. Marcin on 29.01.2016. Prof.Marcin along with his team visited the department.
3. Short term Training Programme on “Prototyping Tools and Testbed Creation for 5G Wireless Communication” is planned to be conducted during 2-6, March 2016 by Dr.M.meenakshi, Professor, ECE.
4. VISION’16 an Inter-college Technical Symposium is proposed to be held on March 19-20, March 2016.

**Item No.18.03.04 Conferences/seminar/symposium/workshops attended by the faculty members**

Sl. No.	Name of the Staff and Designation	Names of Conferences / Seminars / Symposia / Workshops	Duration	Venue
1.	Dr.M.Meenakshi Professor	National Communication Conference 2015	February 28 to March 2, 2015	IIT, Bombay
	Dr.M.A.Bhagyaveni	Workshops on IoT-ToT	2 Days (26-11-15 to 27-11-15)	ECE, Anna University
		International conference on Next generation computing and communication Technologies	2 Days (22-23) April 2015	Ai-Riga, Dubai
2.	Dr.V.Jeyalakshmi Professor	Workshop on Wireless Networks and Security.	24.02.2015	CSE,CEG, Anna University
		Course on Advance in Databases and Data mining	16.2.15 to 1.3.15	Anna University
		Short term Course on Algorithm and Game Theory	10.3.2015 to 14.3.2015	IIT Guwahati



3.	Dr.P.Sakthivel Associate Professor	Short Term Course on Modeling, Simulation and Characterization of Nano Transistors	26.10.2015 to 30.10.2015	IIT Kanpur
		Short Term Course on Statistical Analysis for Engineering Applications	21.12.2015 to 25.12.2015	NIT Hamirpur
4.	Dr. K. Gunaseelan Assistant Professor (Sr.Gr)	2 <sup>nd</sup> IEEE International Conference on Innovations in Information, Embedded and Communication Systems (ICIIECS'15)	19 <sup>th</sup> & 20 <sup>th</sup> March,2015	Department of ECE, Karpagam College of Engineering Coimbatore, Tamil Nadu
		3 <sup>rd</sup> International Conference on Signal Processing, Communication and Networking (ICSCN 2015)	26 <sup>th</sup> – 28 <sup>th</sup> , March 2015	Department of EE & AU-KBC Research Centre, MIT Campus, AU
5.	Dr.J.Kamala Assistant Professor	IEEE International Conference on Industrial Instrumentation and Control (ICIC2015) Analysis of Different Fly back Converter Topologies	3 Days( May 28-30, 2015)	College of Engg. Pune,
6.	Dr.V.Jeyalakshmi, Professor	National Conference on Recent Innovations in Science Engineering and Technology	03.05.2015	IRAJ Research Forum, Chennai
		Two Days Workshop on Recent Research Techniques in Next Generation Wireless Technologies	21st and 22.08.2015	ECE,CEG, Anna University
7.	Mrs.T.Laxmikandan (Assistant Professor Sr.Gr)	Workshops on IoT-ToT	2 Days (26-11-15 to 27-11-15)	ECE, Anna University
8.	Dr.T.Manimakalai (Assistant Professor Sr.Gr)	Workshops on IoT-ToT	2 Days ( 26-11-15 to 27-11-15 )	ECE, Anna University

**Item No.18.03.05 J.C.Bose Block – Infrastructure facilities**

The Committee thanked the Vice-Chancellor and the Estate Officer for the following infrastructure facilities rendered to the J.C.Bose Block.

1. Networking / Internet facility for J.C.Bose block – RCC – Rs.13,00,000/-..
2. Intercom telephone facility for J.C.Bose block – RCC - Rs.8,65,000/-.
3. Establishment of Faculty rooms in the ground floor & second floor of J.C.Bose block – Civil & electrical works – Estate office.
4. Purchase of wooden Executive staff table, Executive staff chairs & Computer table for the Professor rooms in the ground floor & second floor of J.C.Bose block – TANSI.
5. Laboratory work tables for all the laboratories (except 3<sup>rd</sup> floor) of J.C.Bose block – Estate office.
6. Wooden shoe rack for the laboratories of J.C.Bose block – Estate office. Wooden Book rack for the Professor rooms in the ground floor & second floor of J.C.Bose block – Estate office.
7. Providing UPS output power supply arrangements to all the laboratories of J.C.Bose block & Mini-auditorium – Electrical work - Estate office.
8. R.O.Water Purifier Plant for J.C.Bose block – Overhead charges.
9. Vertical blinds for Professor rooms in the ground floor & second floor of J.C.Bose block – Overhead charges.
10. Purchase of 5 Nos. of LCD multimedia projector – DGS & D rate contract. Purchase of split AC units for 1<sup>st</sup> floor & 2<sup>nd</sup> floor laboratories of J.C.Bose block.

The Convenor also listed the following works and purchases under progress as on February 2016 to the Committee and he assured that the works will be carried out with the co-operation of the Estate Office as early as possible.

1. Renovation of Medical Electronics Lab & VLSI Lab (2<sup>nd</sup> floor east wing of ECE main block) – Civil & Elect. works – Estate office.
2. Creation of 4 Nos. of Associate Professor Room at 2<sup>nd</sup> floor east wing of ECE main block. - Civil & Elect. works – Estate office.
3. Extension of Integrated Electronics Lab in 3<sup>rd</sup> floor terrace of ECE main block. - Civil works – Estate office.
4. Modernization of R & D Lab (Sponsored projects) in the 3<sup>rd</sup> floor (east wing) of J.C.Bose block - Civil & Elect. Works – Estate office.
5. Creation of a mini-conference hall in the P.G.Research Centre at 3<sup>rd</sup> floor (west wing) of J.C.Bose block – TANSI.
6. Erection of modular work table in the P.G.Research Centre at 3<sup>rd</sup> floor (west wing) of J.C.Bose block – TANSI.
7. Purchase of 3 Nos. of 20kVA online UPS (one in each floor) for J.C.Bose block – DGS & D rate contract.
8. Recruitment of a Clerical Assistant & Professional Assistant on temporary basis – Under progress.
9. Installation of Public Addressing System for Vivekananda Auditorium Rs.50Lakhs.
10. AMC for split AC units for 1<sup>st</sup> floor laboratories of ECE main block.

**Item No.18.03.06      Budget and List of equipments purchased**

The budget allocation amount spent by the Department of ECE for the period 2015-16 are presented by the Convenor. The list of equipments and softwares purchased and the items to be purchased under various funding agencies are also presented by the Convenor.

**Expenditure Statement 2015-16**

<b>M.H.No</b>	<b>Head of Account</b>	<b>Budget Amount (Rs)</b>	<b>Expenditure (Rs)</b>	<b>Committed (Rs)</b>	<b>Balance (Rs)</b>
4.2.37	Department of Electronics and Communication Engineering	27,50,000	17,00,000	-	10,50,000
4.2.32	Upscaling of Post Graduate Research Center with High Tech Laboratories in the Dept. of ECE	1,10,000,00	55,00,000	55,00,000	Nil
5.6	Development of Infrastructure in University Departments	50,75,000	-	50,75,000	Nil
DST Purse Phase II Program	Networking and Computational facilities	65,69,000	25,48,000	40,21,000	

**UNIVERSITY GRANTS COMMISSION**

Item of expenditure	Total grant approved (Rs.)	Actual grant received (Rs.)	Actual expenditure incurred in 2014-15 (Rs.)	Balance Amount available as on 1.4.2015 (Col.3-Col.4) (Rs.)	Estimated expenditure during 2015 - 2016	Remarks
Multimedia System : 5 Clients	2,00,000	2,00,000	1,91,540	8,460	-	Purchase Completed
High End Server : 1	2,50,000	2,50,000	2,50,000	-	-	Purchase Completed
Indus Camera : 1	9,00,000	9,00,000	17,885	8,82,115	5,36,719	Advertisement charges Rs.17,885/- paid, Equipment Expenditure committed.
Data Acquisition System : 1	1,50,000	1,50,000	-	1,50,000	1,49,310	Expenditure committed.
RF Signal Generator (Upto 3/6 GHz) and Accessories : 1	20,00,000	20,00,000	19,27,800	72,200	-	Purchase Completed
Building (upgradation/ extension)	5,00,000	-	-	-	5,00,000	Lab space identified False ceiling and creation of a mini conference hall in the west wing of third floor J.C.Bos block
<b>Total</b>	40,00,000	35,00,000	23,87,225	11,12,775	11,86,029	-

**Statement of Actual Expenditure during 2014 – 2015 and estimated expenditure for 2015-16**

**NON-RECURRING ITEMS :** (As approved by UGC)

**Total Expenditure under Non Recurring : Rs. 23,87,225 /=**

**RECURRING ITEMS :** (As approved by UGC)

Item of expenditure	Total Amount Sanctioned (Rs.)	2 <sup>nd</sup> installment of Grant received (Rs.)	Actual expenditure in 2014-15 (Rs.)	Balance Amount available (col.3- col 4) (Rs.)	Estimated expenditure during 2015 – 2016 (Rs.)
Contingency/Working expenses	2,00,000	40,000	39,615	385	50,000
Consumables/Accessories/Fabrication Charges	10,00,000	2,00,000	1,99,970	30	3,00,000
Travel/Field facilities	1,50,000	30,000	-	30,000	60,000
Seminars ( 2 only)	1,50,000	75,000	69,469	5,531	
Advisory Committee meetings	3,00,000	60,000	60,000	-	70,000
Books and Journals	2,00,000	40,000	39,930	70	60,000
Project Fellow (1)	Actuals	-	-	-	6,00,000 (2 yrs x 12 x 25,000)
<b>Total</b>	20,00,000	4,45,000	4,08,984	36,016	11,40,000

**Total Expenditure under Recurring : Rs. 4,08,984 /=**

**Grand Total (Recurring + Non-Recurring): Rs.27,96,209 /=**

**MAJOR HEAD : DST PURSE PHASE II PROGRAM**  
**SUB HEAD : Networking and Computational facilities**  
**Equipment Purchase Status**

Sl.No.	Equipment	Amount sanctioned (Rs.)	Present Status
1.	IR Camera for biomedical application	5.5 Lakhs	VC approval obtained , open tender floated, TC, PC and IA approval obtained. PO Placed by Registrar, Item received and Bill submitted to IA and Remarks obtained. Bill submitted
2.	Maple Sim (10 users)	-	PURCHASE Dropped
3.	EMG and Gait Analysis System	12.0 Lakhs	VC Approval Obtained, e-tender floated, TC , PC and IA approval obtained, Re appropriation of Budget obtained., PO placed by Registrar, LC Opened
4.	Sensors for Sensors and Measurement Lab (Thermistors, Photo electric Transducers, Strain gage, LVDT, Thermo-couple, RTD, Piezo electric Transducer)	2.0 Lakhs	Specification finalized, Tenders received. PC approval obtained, PO placed.
5.	FPGA Software development tool (25 user) with partial reconfiguration (1user)	2.08 Lakhs	VC approval obtained TC approval obtained. PO placed by CPC, item supplied, bill to be passed.
6.	Medium Capacity development board for the Xilinx with extensible processing platform with inbuilt ARM processor (6 Nos)	1.3 Lakhs	Tenders obtained, PC approval obtained, PO Placed, item received.
7.	A Complete digital circuit development board for floating point computation compatible with all Xilinx (6 Nos)	0.9 Lakhs	Bill to be passed
8.	Image Sensor with high definition video interfaces	2.0 Lakhs	Tender obtained (proprietary), TC and PC approval obtained, PO

			Placed.
9.	FPGA Evaluation Kit includes all the basic components of hardware that allows scaling and customization with daughter cards. (2 Nos.)	2.2 Lakhs	Tender obtained (proprietary), TC and PC approval obtained, PO Placed.
10.	A Kit to experimentally test and verify analog design circuits (5Nos)	0.81 Lakhs	Purchase completed, Bill submitted for Rs. 71,740/-
11.	A Software for ASIC design (25 Users)	3.0 Lakhs	VC approval obtained TC approval obtained. Po placed by CPC, item supplied, bill to be passed
12.	Vector Network Analyzer Frequency of operation - 20GHz or more, Support for Time domain analysis - 1 unit	31.5 Lakhs	VC Approval Obtained, e-tender floated, TC , PC and IA approval obtained, Re appropriation of Budget obtained., PO placed by Registrar. LC opened
13.	FPGA based Software Defined Radio Kit and Accessories High Density High Performance FPGA Board with associated I/O and measurement points, Multiple RF daughter card and slots- 2 Units	2.4 Lakhs	Purchase completed, Bill submitted for Rs.2,39,794/-
<b>Total Amount Sanctioned</b>		<b>65,69,000/-</b>	

**MAJOR HEAD : Upscaling of Post Graduate Research Center with High  
Tech Laboratories in the Dept. of ECE**

<b>Sl. No.</b>	<b>Description of the Item sanctioned</b>	<b>Amount Sanctioned (Rs.)</b>	<b>Status</b>
1.	Cadence Software – Add-on bundle - 4 years License PG Bundle – 20 users and Research Bundle -10 users	20 Lakhs	Purchase process initiated (Corrections in quotation needed)
2.	Mentor Graphics Software – 3 years License, 50 Users	10 Lakhs	Quotations for Revised options requested
3.	High end FPGA Boards with ARM and DSP Cores	10 Lakhs	<b>5 lakhs purchase completed</b>  5 lakhs under process
4.	Thermal Infrared Imaging System	7 Lakhs	PO released Waiting for item and bill
5.	Biometric Workstation	6 Lakhs	To process Modules to be identified (Dr.M.Sasikala)
6.	Wireless EMG, Biomechanical sensors and acquisition system	11 lakhs	LC opened
7.	Musculoskeletal Modelling and Analysis Software	8 Lakhs	PC along with Special Committee convened PO to be released
8.	Optical Simulation Software – “VPI Transmission Maker Optical Systems”	15 lakhs	Completed
9.	Software defined Radio Platforms	9 lakhs	Bill submitted
10.	CST Microwave Studio Simulator – 5 year License	6 lakhs	Forwarded to RCC (Quoted in USD)
TOTAL AMOUNT		102 Lakhs	
Furniture		20 Lakhs	Status yet to be known



**Item No.18.03.07 Deity Scholarships :**

The Convenor described the members about the Deity Scholarships in the department and the candidates selected under Visveswaraya Ph.D Scheme.

The Visveswaraya Ph.D Scheme for Electronics & IT is sponsored by the Department of Electronics and Information Technology (Deity), Government of India. The fellowship for full time Ph.D students is Rs.31,500/- for first two years and Rs.35,000/- for 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> year (revised amount), an annual contingency grant of Rs.30,000/- and reimbursement of rent (ROR) as per the terms and conditions.

The full time candidates selected under the Scheme from Department of Electronics and Communication Engineering, CEG Campus are:

<b>Reg.No.</b>	<b>Name</b>	<b>Supervisor</b>
1525419593	ARIFA ANWAR	Dr.D.SRIDHARAN
1524419618	V.PREETHISRI	Dr.P.NIRMALKUMAR

**Item No.18.03.08 Additional Directors / Deputy Directors**

The Convenor expressed his congratulations for the staff members who have been performing additional duties as Additional Directors and Deputy Controller of Examinations. He also made a request to them while performing other duties also take care of their own department responsibilities.

1. Dr. S. Muttan – Additional Director, Centre for Constituent Colleges
2. Dr. G. Geetha – Centre for Academic Courses
3. Dr. S. Nirmala Devi – Centre for Distance Education
4. Dr. P. Sakthivel – Associate NCC Officer, NCC Navy
5. Dr. M. Sasikala – Centre for Student Affairs
6. Dr. V. Jawahar Senthil Kumar – Assistant Executive Engineer  
(Electrical), Estate Office
7. Dr. P. Nirmal Kumar – Centre for Distance Education
8. Dr. S. Poonguzhali – Deputy Controller of Examinations

## **Item No.18.03.09      Minutes of Department meeting**

The Convenor explained the members about the gist of the faculty meeting held on 17.02.2016,

A department meeting was held on 17.02.2016 and the following are the salient points discussed in detail:

### **I.      General :**

Attendance – Biometric System – Biometric system was installed in the department from the 1<sup>st</sup> of February. The HOD thanked all the members of the staff for extending full support in its implementation. The time table, allocation of faculty, allocation lab duties, key duties and other related activities were discussed. Further, each non-teaching administrative and technical staff were requested to give their opinions and inputs for development of the department. Mr.Manikandan was requested to visit all the labs and assess their current condition and put up a note to HOD for further action.

### **II.     Faculty and research activities :**

Room allocation for faculty : The faculty were allotted new rooms created in the J.C.Bose Building. The non-teaching staff were also allotted to various new labs in the J.c.Bose building. Further, all the teaching fellows and ph.D. Scholars were also given spaces with adequate facility.

The subject allocation, additional responsibilities held by the faculty of the department, their visits abroad, research activities, Conferences attended, invited lectures, CBCS system and other related items were also discussed.

Database of student and faculty- its creation, updation and maintenance  
Website updation.

### **III.    Non-teaching staff :**

Allocation of responsibilities for non-teaching administrative, technical and Professional Assistants were discussed in detail and the Foreman was requested to prepare a status report on the manpower requirements of the department.

### **IV.    Students :**

Students Feedback  
Students Programmes

### **V      Status of all Purchases :**

DST SAP  
DST PURSE  
Departmental budget -- allocation and expenditure review  
New proposals and purchase

**Item No.18.03.10 Duties and responsibilities of Professional Assistants**

There are eight numbers of Professional Assistants available in the department. The duties and responsibilities of Non-teaching administrative staff along with the Professional Assistants have been identified and are placed before DCC for information.

**Group-I**

<b>Sl.No.</b>	<b>Name of Tech. Assistants / Professional Assistants assigned</b>	<b>Workload allotted</b>
1.	Mrs.M.Bhavani	1. Distribution of grade sheets / provisional certificates / degree certificates (Regular, Part-time, Passed out)
2.	Mrs.J.Geetha	2. Attendance Maintenance (Full time and Part-time)
3.	Clerical Assistant	3. CL and CPL Register Maintenance
4.	Mr.S.L.Ravi	4. Bill settlement for Canteen, Stationeries, Petrol and diesel for DG Set. 5. Salary claims for Teaching Fellows and Professional Assistants 6. Advance bill settlement for Conference and Workshops 7. Bills for purchaser of books for Library 8. Biometric Attendance print out 9. Issue of cheques,HOD Account maintenance  11. Bill settlement for Overhead charges and contingency items 12. All Registers (Bill Register, Appropriation Register, Sanction Register etc.,) Maintenance

**Group-II****Workload details of Mrs.S.Syath Ali, Stenographer Gr.II**

<b>Sl. No.</b>	<b>Name of Tech.Assistants / Professional Assistants assigned</b>	<b>Workload allotted</b>
1.	Mrs.R.Subageetha	1. Student data base
2.	Mrs.R.Mettilda Mercy	2. Staff data base
3.	Ms.Munavar jahan	3. Web page maintenance
4.	Ms.G.Gomathy	4. Prevention of Attendance list preparation
		5. Report preparation for UGC/NAAC/NIRF
		6. Break of study / rejoining- coordinating the students
		7. DCC meeting co-ordination and preparation of minutes
		8. Preparation of expert lists for academic audit
		9. All works like drafting reply and sending letters related to the department as and when assigned by the HOD.
		10. Assistance in conducting all department meetings, class committee meetings, Purchase Committee meetings.
		11. Focusing all telephone calls received from Dean's Office/Registrar's Office /ACOE's Office/ University Offices and taking action as well as urgent and ordinary.
		12. Preparation of all meeting minutes
		13. Issue of all department circulars
		14. Maintenance of Canteen Book
		15. Arranging guest lectures and coordination

**Group-III****Stores / Purchase Co-ordination**

<b>Sl.No.</b>	<b>Name of Tech. Assistants / Professional Assistants assigned</b>	<b>Workload allotted</b>
1.	Mr.Gokul	1. Purchase File Assistance
2.	Mr.Devanathan	2. Stock Verification
		3. Stock data base
		4. Condemnation
		5. Scanning of all purchase files
		6. Purchase Committee Co-ordination
		7. Technical Committee Co-ordination
		8. Lab Consumables requirements and bill processing
		9. Issue of Lab consumables
		10. Issue Register
		Maintenance
		11. Computer Consumables, Cartridges, Toner requirements and Bill processing

**Group-IV**

<b>Sl.No.</b>	<b>Name of Tech. Assistants / Professional Assistants assigned</b>	<b>Workload allotted</b>
1.	Mr.S.Chandru	1. Time Table assistance
2.	Ms.Lalitha	2. PG Chief Superintendent assistance
		3. Workshop / FDP / Conference assistance
		4. Servers Maintenance
		5. Laboratory assistance
		6. Teaching aids (LCD, OHP) assistance
		7. Lab equipment maintenance assistance
		8. Assisting guest lectures

**Group-V**

<b>Sl.No.</b>	<b>Name of Tech. Assistants / Professional Assistants assigned</b>	<b>Workload allotted</b>
1.	Mr.S.Babu	1. Networking / Internet / Wi-Fi facility
		2. Auditorium Co-ordination
		3. Desktop Computers, Laptops, Printer Maintenance
		4. Notice Board / e-Notice Board Maintenance
		5. Surveillance System maintenance

## Section – 4

### **Ratification of action taken**

#### **Item No.18.04.01      Special Elective**

The modified syllabus for Ph.D. Scholars for the subject Free Space Optical Networks submitted by Dr.M.Meenakshi, Professor, ECE has been approved by the Director, Academic Courses and is placed before DCC for ratification. The Committee ratified the action.

#### **FI9100**

#### **FREE SPACE OPTICAL NETWORKS**

**Objective :** To introduce wireless Gigabit technology by means of optical wireless communications

**Outcome :** Students can understand the deployment of free space optics.

#### **Unit I:**

**9**

#### **Introduction**

Introduction: Propagation of light in unguided media - laser beam characteristics -atmospheric effects on optical signals - coding for atmospheric optical propagation - LIDAR.

#### **Unit II:**

**9**

#### **FSO Transceiver Design**

Light Sources: Modulators - photo detectors and receivers - optical amplification – optical signal to noise ratio - acquisition, pointing and tracking - adaptive and active optics – laser safety - node housing and mounting.

#### **Unit III:**

**9**

#### **Point to Point FSO Systems**

Simple PtP Design: Transponder nodes - hybrid FSO and RF - FSO point to multipoint – FSO point to mobile; Ring FSO Systems: Ring topologies and service protection - ring nodes with add drop - concatenated rings - ring to network connectivity.

#### **Unit IV: Mesh FSO Systems**

**9**

FSO Nodes for Mesh Topology: Hybrid mesh FSO with RF - hybrid FSO fiber networks; WDM Mesh FSO: DWDM and CWDM optical channels - WDM FSO links - WDM mesh FSO networks - service protection in mesh FSO networks.

#### **Unit V:**

#### **FSO Network Security and Applications**

**9**

Cryptography: Security levels - security layers - FSO inherent security features; FSO Specific Applications: FSO networks for highway assisted communications - mesh FSO in disaster areas - visual light communication.

**TOTAL HOURS : 45**

## References :

1. Stamatios V. Kartalopoulos, "Free Space Optical Networks for Ultra-Broad Band Services", IEEE Press, 2011.
2. Arun K. Majumdar and Jennifer C. Ricklin, "Free-Space Laser Communications: Principles and Advances", Springer, 2008.
3. Olivier Bouchet, Herve Sizun, Christian Boisrobert and Frederique De Fornel, "Free Space Optics: Propagation and Communication", John Wiley and Sons, 2010.
4. Heinz Willebrand and Baksheesh S. Ghuman, "Free Space Optics: Enabling Optical Connectivity in Today's Networks", Sams Publishing, 2002.

## SECTION – 5

### Discussion and Considerations

#### **Item No.18.05.01 Proposal for manpower both teaching and non-teaching**

The Convenor explained about the manpower needed to meet out the workload of the department by way of filling up the vacancy arises due to retirement etc. and placed before the Committee. Taking into consideration the need of permanent teaching, administrative and non-teaching technical staff, the Committee approved the proposal.

#### **I.(i) Faculty required for (B.E.ECE)**

Total number of students in 4 years	= 720
Total Faculty Required with the ratio of ( 1: 15 )	= 48
H&S Faculty (25%)	= 12
Number faculty required for the Department	= (48-12) = 36

**Professor: Associate Professor: Assistant Professor**

**=4 : 8: 24 faculty members**

(Ratio of 1 : 2 : 6 )

#### **(ii) Faculty required for (M.E Applied Electronics)**

Professor	- 1
Associate Professor	-1
Assistant Professor	- 2
Total requirement	: 4