

## CHAITANYA BHARATHI INSTITUTE OF TECHNOLOGY (A), HYDERABAD

## Departmental Committees - Constitution and Responsibilities DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING COURSE EXPERT GROUP (CEG) BE (ECE) R-22

### **Objective:**

To contribute to the effective implementation of pedagogical approaches and assessment tools identified by PAQIC, DAB and other regulatory bodies.

### **Composition:**

Course experts from the specified set of courses chaired by senior faculty among them.

Meeting Frequency: Min. 3 times in a semester.

Beginning of the semester, after the first Class Test, after external examinations results are published (for results analysis, computation of CO attainment) and also whenever required.

**Tenure:** Three years

### Quorum: 60%

### **Roles and Responsibilities:**

- 1. Defining, Reviewing and Reframing the Course Outcomes based on Blooms Taxonomy for all the specified Courses.
- 2. Framing of Course Articulation matrix (CO-PO mapping)
- 3. Computation of CO attainments
- 4. Design of assessment tools suitable for the specified courses, Results analysis and preparing the action plan for improvement of Results
- 5. Conducting Course End Survey, analysis and identify actions to be taken for improving pedagogical approaches.
- 6. Identifying Curriculum gaps by observing CO-PO attainment levels of previous batches
- 7. Question paper validation to ensure the desired standard from outcome attainment perspective as well as learning levels perspective.
- 8. Setting course wise CO attainment targets before the beginning of the semester
- 9. Maintenance of Course Files
- 10. Preparing Action plans for improvement and corrective measures
- 11. Prepare and submit periodic reports (Before the commencement and at the end of each semester) to the Program Assessment Quality Improvement Committee (PAQIC) about the activities carried out.

#### **Deliverables:**

Submit Reports to PAQIC on Effectiveness of TLP in terms of:

- 1. Revision of Course Outcomes
- 2. Course Outcome attainment
- 3. Gaps identified, actions taken and their effectiveness
- 4. Setting course wise CO attainment targets
- 5. Suggestions for subsequent Curriculum Revision

### I. CEG-1 (Electronics):

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	III	22EC C01	Electronic Devices	
2.	III	22EC C05	Electronic Devices Lab	
3.	IV	22EC C07	Analog Circuits	Dr. ASR (Chairman)
4.	IV	22EC C12	Analog Circuits Lab	Dr. PNS, Sri. NJMR, Dr. TAB, Smt. BN,
5.	V	22EC C18	Linear and Digital Integrated Circuits	Sri TS, Sri. PCS, Sri ECS, Dr. DND, Smt. GC and Dr. MVS
6.	V	22EC C21	Linear and Digital Integrated Circuits Lab	

### II. CEG – 2 (RF& Microwaves):

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	III	22EC C02	EM waves and Transmission Lines	
2.	IV	22EC C08	Antennas and Wave Propagation	
3.	V	22EC E05	Software Defined Radio	Dr.NVKR (Chairman)
4.	VII	22EC E35	RF and Millimetre Wave Circuit Design	Dr ADS, Dr.PNS, Dr ASR,
5.	VI	22EC E23	Green Communication	Dr VKM, Dr. MLNC,
6.	VI	22EC E17	Microwave Engineering	Smt. KSRSJ, Dr. KS, Sri TS,
7.	VI	22EC C26	Mobile Communication and MW Engineering Lab	and Dr DSR
8.	VII	22EC E29	Global Navigation Satellite Systems	1

### III. CEG -3 (NW, Instrumentation and Controls):

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	III	22EC C03	Network Analysis and Synthesis	Dr KSR (Chairman)
2.	III	22EC C06	Network Analysis and Synthesis Lab	Dr VKM, Sri MVNB,
3.	IV	22EC C09	Control Systems	Dr MRR, Sri TS, Sri MZJ, Dr
4.	V	22EC E10	Sensing techniques and Sensor systems	KSK, and Smt. JM

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	III	22EC C04	Signals and Systems	
2.	IV	22EC C14	Modelling and Simulation Lab	
3.	V	22EC C17	Digital Signal Processing	Dr DKR (Chairman), Dr CVN,
4.	V	22EC C20	Digital Signal Processing Lab	Dr PNS, Dr KSN (Adj. Prof), Dr
5.	V	22EC E03	Signal Detection Techniques	KV, Dr KSR, Sri MVNB, Smt. AS,
6.	V	22EC E09	Biomedical Instrumentation and Signal processing	Dr. TAB, Sri PCS, Dr. GVPK, Smt NDL, Dr. DND, Smt JM, Sri PR,
7.	VI	22EC E15	Adaptive signal processing	Dr CHNV, Dr SSP, Dr. MVS and
8.	VI	22EC E21	Image and Video Processing	Dr MRKN
9.	VII	22EC E27	DSP Processors and Architectures	
10.	VII	22EC E33	Speech and Audio Processing	

# IV. CEG -4 (Signal Processing):

# V. CEG – 5 (Communications):

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	IV	22EC C11	Probability Theory and Stochastic Process	
2.	V	22EC C15	Analog and Digital Communication	Dr VKM (Chairman),
3.	V	22EC C19	Analog and Digital Communication Lab	Dr DKR, Dr ADS, Dr
4.	V	22EC E02	Fibre Optic Communication	ASR, Dr SR, Dr AV,
5.	V	22EC E08	Mathematical modelling of communication systems	Sri MVNB, Smt. KSRSJ, Dr KS, Smt. BN,
6.	VI	22EC E14	Coding Theory and Techniques	and Dr CHNV
7.	VI	22EC E20	Radar and Satellite Communication	
8.	VI	22EC C23	Mobile Communication and Networks	
9.	VII	22EC E26	5G Communications	

# VI. CEG - 6 (VLSI):

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	IV	22EC C10	Digital System Design	
2.	IV	22EC C13	Digital System Design Lab	Dr BKR (Chairman),
3.	V	22EC E01	VLSI Technology	Dr SR, Dr MLNC, Dr KSR,
4.	V	22EC E07	CMOS Analog and Digital IC Design	Dr MRR, Sri AKK, Sri NJMR,
5.	VI	22EC C24	VLSI Design	Sri. PCS, Sri MZJ, Sri. ECS, Dr
6.	VI	22EC C27	VLSI Design Lab	PAK and Smt. GC
7.	VI	22EC E13	CMOS Data Converters	
8.	V	22EC E11	Introduction to MEMS	
9.	VI	22EC E19	CPLD and FPGA Architectures	

10.	VII	22EC E25	CAD for VLSI Verification
11.	VII	22EC E28	Fundamentals of SoC Design
12.	VII	22EC E31	Design for Testability

# VII. CEG – 7 (Embedded Systems):

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	V	22EC C16	Computer Architecture and Microprocessors	
2.	V	22EC E04	Embedded C Programming	Dr. PS (Chairman),
3.	VI	22EC C22	Microcontrollers	Dr KSN (Adj. Prof), Dr PA Dr KSR, Sri NJMR, Smt. NDL,
4.	VII	22EC C30	IoT and Applications	Dr. GMR, Sri MZJ, Smt. JM,
5.	VI	22EC C25	Microcontrollers Lab	Dr SSP, Smt. DS, and Smt.
6.	VII	22EC C32	IoT Lab	GC
7.	VI	22EC E16	Real Time Operating Systems	30
8.	VI	22EC E22	Embedded Systems	

# VIII. CEG – 8 (Computer Networks):

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	VII	22EC C29	Computer Networks	Dr AV (Chairman),
2.	VII	22EC C31	Computer Networks Lab	Dr. GVPK, Dr KSK, Dr MRKN, Dr DSR
3.	VII	22EC E32	Wireless Sensor Networks	and Dr DBR
4.	VII	22EC E36	Network Security	

# IX. CEG – 9 (Seminars, Project and Internships):

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	III	22EC I01	MOOCs/Training/Internship	Dr PNS (Chairman),
2.	V	22EC I02	Industrial/Rural Internship/ Mini project	Dr NVKR, Dr ADS, Dr
3.	VI	22ECIC1/22EC	Industry oriented open course / Theme	CVN, Dr KV, Dr KSN
5.	V I	C28	based project	(Adj. Prof), Dr. BKR, Dr
4.	VII	22EC C33	Project: Part-1	AV, Dr VKM, Dr MLNC,
5.	VII	22EC I03	Industrial Internship	Dr KSR, Smt. AS, Dr. PS,
6.	VIII	22EC C34	Technical Seminar	Dr. GMR, Dr. KS, Sri ECS,
7.	VIII	22EC C35	Project Part-2	Dr KSK, Dr SSP and Dr DSR.

S.no	Semester	Course Code	Name of the Course	Course Expert Group Chairman and members
1.	V	22EC E06	Artificial Intelligence and Machine learning	Dr KS (Chairman),
2.	V	22EC E12	Fundamentals of Cloud Computing	Dr PNS, Dr. GVPK, Sri PR,
3.	VI	22EC E18	Cryptography and Blockchain Technology	Dr MBC, Dr SSP, Dr DSR,
4.	VI	22EC E24	Data Analytics for Signal Processing	Smt. AS, Dr. GMR and Smt.
5.	VII	22EC E30	Pattern Recognition using Machine Learning	GC
6.	VII	22EC E34	Linux and Scripting Languages	

## X CEG - 10 (Software Related Courses):

Overall Coordinators of CEG groups: Sri. M.V. Nagabhushanam and Smt. K.S.R.S. Jyothsna