



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

COURSE STRUCTURE AND SYLLABUS

For

B. TECH ELECTRONICS AND COMMUNICATION ENGINEERING

(Applicable for batches admitted from 2019-2020)



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III Year – I Semester

S. No.	Course	Category	L	T	P	Credits
1	Linear Integrated Circuits and Applications	PC	3	0	0	3
2	Microprocessor and Microcontrollers	PC	3	0	0	3
3	Digital Communications	PC	3	0	0	3
4	Electronic Measurements & Instrumentation	PC	3	0	0	3
5	Professional Elective (PE 1)	PE	3	0	0	3
6	Linear Integrated Circuits and Applications - Lab	LC	0	0	3	1.5
7	Digital Communications Lab	LC	0	0	3	1.5
8	Microprocessor and Microcontrollers - Lab	LC	0	0	3	1.5
9	Mini Project with Hardware Development	PR	0	0	3	1.5
10	Essence of Indian Traditional Knowledge	MC	3	0	0	0
			Sub-Total			21

III Year – IISemester

S. No.	Course	Category	L	T	P	Credits
1	Wired and Wireless Transmission Devices	PC	3	0	0	3
2	VLSI Design	PC	3	0	0	3
3	Digital Signal Processing	PC	3	0	0	3
4	Professional Elective (PE2)	PE	3	0	0	3
5	Open Elective (OE1)	OE	3	0	0	3
6	Internet of Things	PC	3	0	0	3
7	VLSI Lab	LC	0	0	3	1.5
8	Digital Signal Processing Lab	LC	0	0	3	1.5
9	Intellectual Property Rights (IPR) & Patents	MC	3	0	0	0
			Sub-Total			21



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IV Year – I Semester

S. No.	Course	Category	L	T	P	Credits
1	Microwave and Optical Communication Engineering	PC	3	0	0	3
2	Data Communications & Computer networks	PC	3	0	0	3
3	Digital Image and Video Processing	PC	3	0	0	3
4	Professional Elective (PE3)	PE	3	0	0	3
5	Professional Elective (PE4)	PE	3	0	0	3
6	Internet of Things Lab	LC	0	0	3	1.5
7	Microwave and Optical Communication Engineering LAB	LC	0	0	3	1.5
8	Project - Part I	PR	0	0	6	3
			Sub-Total			21

IV Year – II Semester

S. No.	Course	Category	L	T	P	Credits
1	Professional Elective (PE5)	PE	3	0	0	3
2	Open Elective (OE2)	OE	3	0	0	3
3	Project - Part II	PR	0	0	18	9
			Sub-Total			15
			Total			160



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PROFESSIONAL ELECTIVES 1:

1. Information Theory & Coding
2. Digital System Design using HDL
3. Data structures and Algorithms
4. Soft computing techniques and Python programming
5. Simulation & Mathematical Modeling

PROFESSIONAL ELECTIVES 2:

1. Cellular & Mobile Communication
2. Digital IC Design
3. Business Intelligence & Analytics
4. Pattern Recognition
5. Robotics and Automation

PROFESSIONAL ELECTIVES 3:

1. Communication Standards and Protocols
2. Analog IC Design
3. Smart Sensors
4. Advanced Digital Signal Processing
5. Augmented Reality

PROFESSIONAL ELECTIVES 4:

1. Software Radio
2. Low power VLSI Design
3. Embedded Systems
4. DSP processors and Architectures
5. Multi Media Communication

PROFESSIONAL ELECTIVES 5:

1. Wireless Communication
2. VLSI Testing & Testability
3. Machine Learning & Artificial Intelligence
4. Speech Processing
5. Industrial Internet of Things



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OPEN ELECTIVES FOR ECE:

Open Elective 1:

1. DataMining
2. PowerElectronics
3. MEMS and itsapplications
4. Artificial NeuralNetworks

Open Elective 2:

1. 3D Printing
2. Block chainTechnology
3. Cyber Security &Cryptography

OPEN ELECTIVES OFFERED BY ECE:

- OE 1 Principles of communication
OE 2 Embedded Systems