



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY: KAKINADA
KAKINADA – 533 003, Andhra Pradesh, India

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

COURSE STRUCTURE & SYLLABUS M.Tech ECE
VLSI & Embedded System, Embedded System & VLSI, VLSI Design &
Embedded System, Embedded System & VLSI Design
Programmes

(Applicable for batches admitted from 2019-2020)



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I Semester

S.No	Course No	Course Name	P.Os	Category	L	T	P	Credits
1	PC	RTL Simulation and Synthesis with PLDs			3	0	0	3
2	PC	Microcontrollers and Programmable Digital Signal Processors			3	0	0	3
3	PE	1. Digital Signal and Image Processing 2. Parallel Processing 3. VLSI signal processing			3	0	0	3
4	PE	1. Programming Languages for Embedded Systems 2. System Design with Embedded Linux 3.CAD of Digital System			3	0	0	3
5		Research methodology and IPR			2	0	0	2
6	Lab 1	RTL Simulation and Synthesis with PLDs Lab			0	0	4	2
7	Lab 2	Microcontrollers and Programmable Digital Signal Processors Lab			0	0	4	2
8	Aud 1	Audit course-1			2	0	0	0
Total								18

II Semester

S.No	Course No	Course Name	P.Os	Category	L	T	P	Credits
1	PC	Analog and Digital CMOS VLSI Design			3	0	0	3
2	PC	Real Time Operating Systems			3	0	0	3
3	PE	1. Memory Architectures 2. SoC Design 3.Low power VLSI Design			3	0	0	3
4	PE	1.Communication Buses and Interfaces 2.Network Security and Cryptography 3.Physical design automation			3	0	0	3
5	Lab 1	Analog and Digital CMOS VLSI Design Lab			0	0	4	2
6	Lab 2	Real Time Operating Systems Lab			0	0	4	2
7	MP	Mini Project			0	0	4	2
8	Aud 2	Audit Course – 2			2	0	0	0
Total								18

*Students be encouraged to go to Industrial Training/Internship for at least 2-3 weeks during semester break.



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III Semester*

S.No	Course No	Course Name	P.Os	Category	L	T	P	Credits
1	PE	1.IOT and its Applications 2.Hardware Software co-design 3.Artificial Intelligence			3	0	0	3
2	OE	1. Business Analytics 2. Industrial Safety 3. Operations Research 4. Cost Management of Engineering Projects 5. Composite Materials 6. Waste to Energy			3	0	0	3
3	Dissertation	Dissertation Phase -I /Industrial Project (to be continued and evaluated next semester)			0	0	20	10 [#]
Total								16

*Evaluated and Displayed in IV Semester Marks list.

*Students going for Industrial Project/Thesis will complete these courses through MOOCs

IV Semester

S.No	Course No	Course Name	P.Os	Category	L	T	P	Credits
1	Dissertation	Project/ Dissertation Phase-II (continued from III semester)			0	0	32	16
Total								16

Audit Course 1& 2

1. English for Research Paper Writing
2. Disaster Management
3. Sanskrit for Technical Knowledge
4. Value Education
5. Constitution of India
6. Pedagogy Studies
7. Stress Management by Yoga
8. Personality Development through Life Enlightenment Skills