




JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
Kakinada-533003, Andhra Pradesh (India)

Program wise Curriculum Analysis of (R20)

Program Code	Program Name	No of Courses having focus on			Total Courses	Percentage
		Employability	Entrepreneurship	Skill development		
1A02	B.Tech - EEE	14	1	26	97	43


Coordinator


HOD
Professor & Head
Dept. of Elec. & Electronics Engg.
University College of Engg.
J.N.T. University Kakinada
KAKINADA-533 003.


REGISTRAR
J.N.T. University Kakinada
Kakinada-533003



JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA
Kakinada-533003, Andhra Pradesh (India)

Course wise Curriculum Analysis(R20)

Program Code: 1A02

Program Name: B-TECH

Year: 1

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
1101	Mathematics – I (Calculus)			
1102	Mathematics – II (Linear Algebra and Numerical Methods)			
1103	Communicative English			yes
1104	Programming for Problem Solving Using C	yes		
1105	Thermal and Hydro Prime Movers			
1106	English Communications Skills Lab			Yes
1107	Electrical Engineering Workshop Lab			Yes
1108	Programming for Problem Solving Using C Lab	yes		
1109	Physical Fitness Activities			yes
	Total	2	0	4



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Course wise Curriculum Analysis(R20)

Program Code: 1A02

Program Name: B.Tech

Year: 1

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
1201	Mathematics – III (Transforms, PDE and Vector Calculus)			
1202	Applied Physics			
1203	Data Structures Through C	yes		
1204	Electrical Circuit Analysis –I			
1205	Engineering Drawing			Yes
1206	Thermal and Hydro Prime Movers Lab			Yes
1207	Applied Physics Laboratory			yes
1208	Data Structures through C Lab	yes		
1209	Applied Physics Virtual Laboratory			yes
1210	Constitution of India			
1211	Engineering Exploration Project- Design Thinking	yes		
	Total	3	0	4



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Program Code: 1A02

Program Name: B.Tech

Year: 2

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
2101	Mathematics – IV (Complex Variable and Statistical Methods)	Yes		
2102	Electronic Devices and Circuits			
2103	Electrical Circuit Analysis –II			
2104	DC Machines and Transformers	yes		
2105	Electro Magnetic Fields			
2106	DC Machines and Transformers Lab			yes
2107	Electrical Circuits Lab			yes
2108	Electronic Devices and Circuits lab			yes
2109	Skill oriented course- Design of Electrical Circuits using Engineering Software Tools			yes
2110	Essence of Indian Tradition Knowledge			
	Total	2	0	5



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Program Code: 1A02

Program Name: B.Tech -

Year: 2

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
2201	Python Programming	Yes		
2202	Digital Electronics	yes		
2203	Power System-I			
2204	Induction and Synchronous Machines			
2205	Managerial Economics & Financial Analysis		yes	
2206	Python Programming Lab	yes		
2207	Induction and Synchronous Machines Lab			yes
2208	Digital Electronics Lab			Yes
2209	Soft skill course- Employability Skills			Yes
	Total	3	1	3
	Minors Course*			
	Honors Course*			



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Program Code: 1A02

Program Name: B.Tech

Year: 3

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
3101	Power Systems-II			
3102	Power Electronics			
3103	Control Systems			
3104	Open Elective- I/ Job Oriented Elective-I 1. Renewable Energy Sources 2. Energy Auditing, Conservation and Management 3. Optimization Techniques 4. Basics of Control Systems	yes	yes	
3105	Professional Elective – I 1. Switchgear and Protection 2. Utilization of Electrical Energy 3. High Voltage Engineering 4. Renewable and Distributed Energy Technologies			
3106	Control Systems Lab			yes
3107	Power Electronics Lab			
3108	Skill advanced course- Courses offered by Siemens Centre of excellence : AUTOMATION LAB- Basics of PLC, Basics of SCADA/ ELECTRICAL & ENERGY STUDIES LAB- Basics of Low Voltage Switchgear,Basics of Induction Motor/ PROCESS INSTRUMENTATION LAB- Basics of Process Instrumentation			yes
3109	Environmental Science			

3110	Summer Internship 2 Months (Mandatory) after second year (to be evaluated during V semester)			yes
	TOTAL	1	1	3
	Minors Course*			
	Honors Course*			



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Course wise Curriculum Analysis(R20)

Program Code: 1A02

Program Name: B.Tech

Year: 3

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
3201	Microprocessors and Microcontrollers	yes		
3202	Electrical Measurements and Instrumentation			
3203	Power System Analysis			
3204	Professional Elective – II 1. AI Applications in Electrical Engineering 2. Flexible Alternating Current Transmission Systems 3. Electrical Distribution Systems 4. Electric Drives			
3205	Open Elective –II/ Job Oriented Elective-II 1. Neural Networks and Fuzzy Logic 2. Basics of Power Systems and Power Quality 3. Basics of Electrical Measurements 4. Indian Electricity Act-2003	yes		
3206	Electrical Measurements and Instrumentation Lab			yes
3207	Microprocessors and Microcontrollers Lab			yes

3208	Power Systems and Simulation Lab			Yes
3209	Skill advanced course- High Voltage Lab			Yes
3210	Research Methodology			
	TOTAL	2	0	4
	Minors Course*			
	Honors Course*			



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Course wise Curriculum Analysis(R20)

Program Code: 1A02

Program Name: B.Tech

Year: 4

Semester: 1

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
4101	Professional Elective – III 1. Digital Signal Processing 2. Linear IC Applications 3. Programmable Logic Controllers and Applications 4. Optimization Techniques			
4102	Professional Elective – IV 1. Object Oriented Programming through Java 2. Data Base Management Systems 3. Cloud Computing 4. Operating Systems			
4103	Professional Elective – V 1. Power System Operation and Control 2. Switch Mode Power Conversion 3. Advanced Control Systems 4. IoT Applications in Electrical Engineering			
4104	Open Elective- III /Job Oriented Elective-III 1. Basics of Microprocessors and Microcontrollers 2. Fundamentals of utilization of Electrical Energy 3. Electrical Estimation and Costing 4. Introduction to Internet of Things	yes		
4105	Open Elective-IV /Job Oriented Elective-IV 1. Concepts of Power System Engineering 2. Fundamentals of Electric Vehicles 3. Introduction to Machine Learning	yes		

	4. Introduction to Smart Grid			
4106	Universal Human Values-2: Understanding Harmony			
4107	Skill advanced course- IoT Applications in Electrical Engineering			Yes
4108	Industrial / Research Internship 2 Months(Mandatory) after third year (to be evaluated during VII Semester)			yes
	TOTAL	3	0	2
	Minors Course*			
	Honors Course*			



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Course wise Curriculum Analysis(R20)

Program Code: 1A02

Program Name: B.Tech

Year: 4

Semester: 2

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
1	Project work, seminar and internship in industry (6 Months)			Yes
	TOTAL	0	0	1

HSMC : Humanities and Social Science Including Management Courses

BSC : Basic Science Courses

ESC : Engineering Science Courses

PCC : Professional Core Courses

PEC : Professional Elective Courses

OEC : Open Elective Courses

PROJ : Internship, Seminar, Project Work

MC : Mandatory Courses

SC : Skill Oriented Courses


Coordinator

Chairman, Board of Studies