



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

Program wise Curriculum Analysis of (R19)

Program Code	Program Name	No of Courses having focus on			Total Courses	Percentage
		Employability	Entrepreneurship	Skill development		
03	B.TECH-ME	35	6	27	104	41

NM
Coordinator

[Signature]
HOD
HEAD
Mechanical Engineering Department
University College of Engineering
J.N.T. University Kakinada
KAKINADA

[Signature]
REGISTRAR
J.N.T. University Kakinada
Kakinada-533003



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

Course wise Curriculum Analysis(R19)

Program Code: 03

Program Name:B.Tech -ME

Year: I

Semester: I

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R19BS1101	Mathematics-I (Calculus)			
R19HS1101	Engineering Physics			
R19PC1102	Engineering Mechanics			
R19ES1101	Problem Solving and Programming using C	YES		
R19ES1103	Engineering Graphics			
R19HS1102	Workshop Practice Lab			YES
R19BS1103	Engineering Physics Lab			YES
R19BS1205	Physics Virtual Lab			YES
R19ES1104	Problem Solving and Programming using C lab			YES
R19MC1101	Constitution of India(AICTE Mandate Course)			yes
R19AC	Physical Fitness Activities			yes
	Total	1		6



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Course wise Curriculum Analysis(R19)

Program Code: 03

Program Name:B.Tech - ME

Year: I

Semester: II

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R19BS1201	Mathematics-II			
R19BS1202	Engineering Chemistry			
R19HS1203	Communicative English			
R19ES1201	Basic Electrical & Electronics Engineering	yes		
R19BS1204	Engineering Chemistry Lab			yes
R19ES1202	Computer Aided Engineering Drawing			Yes
R19BS1205	Basic Electrical Engineering Lab			Yes
R19BS1206	Basic Electronics Engineering Lab			Yes
R19HS1204	English communication skills Lab – I			Yes
R19MC1201	Constitution of India			
R19MC1202	PE&HV			
Total		1		5



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Program Code: 03

Program Name: B.Tech - ME

Year: II

Semester: I

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R19BS2101	Mathematics-III(Vectorcalculus,Transforms and PDE)			
R19ME2102	Mechanics of Solids			
R19ME2103	Materials Science & Engineering	Yes		
R19ME2104	Production Technology			
R19ME2105	Thermodynamics			
R19ME2106	Machine Drawing			
R19ME2107	Materials Testing Lab	Yes		Yes
R19ME2108	Production Technology Lab			Yes
R19MS2109	Advanced Communication skills Lab			Yes
R19PROJ2101	Socially Relevant Project			
	Total	02		3



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Year: II

Semester: II

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R19BS2201	Mathematics – IV (Complex variables and statistical methods)			
R19ME2202	Kinematics of Machinery			
R19ME2203	Applied Thermodynamics-I			
R19ME2204	Fluid Mechanics & Hydraulic Machines			
R19ME2205	Metal Cutting & Machine Tools		Yes	
R19ME2206	Design of Machine Members-I			
R19ME2207	Fluid Mechanics & Hydraulic Machines Lab			Yes
R19ME2208	Machine Tools Lab			Yes
R19DTPROJ2201	Engineering Exploration Project-Design Thinking (15 hours per Semester)			
R19MC2201	Essence of Indian Traditional Knowledge			
Total			1	2



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Program Code: 03

Program Name: B.Tech - ME

Year: III

Semester: I

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R19ME3101	Dynamic Of Machinery			
R19ME3102	Design of Machine Members-II			
R19ME3103	CAD\CAM	YES		
R19ME3104	Applied Thermodynamics-II			
R19ME3105A	Unconventional Machining Processes	YES		
R19ME3105B	Refrigeration & Air Conditioning	YES		
R19ME3105C	Industrial Robotics			
R19ME3105D	MOOCs (NPTEL/ Swayam) Course (12 Week duration)			
R19ME3106	Applied Thermodynamics Lab			YES
R19ME3107	Theory of Machines lab			YES
				YES
	Total	3		3



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Course wise Curriculum Analysis(R19)

Program Code: 03

Program Name: B.Tech - ME

Year: III

Semester: II

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R19ME3201	Operations Research			
R19ME3202	Heat Transfer			
R19ME3203	Finite Element Methods			
R19OE3204A	Green Engineering Systems			
R19OE3204B	Optimization Techniques	yes		
R19OE3204C	Operations Management	yes		
R19OE3204D	Nano Technology	yes		
R19ME3205A	Additive Manufacturing	yes		
R19ME3205B	Automobile Engineering	yes	yes	
R19ME3205C	Control Systems	yes		
R19ME3205D	MOOCs (NPTEL/Swayam) Course (12Week duration)			
R19ME3206A	Mechanical Vibrations	yes		
R19ME3206B	Advanced Mechanics of Solids	yes		
R19ME3206C	Production Planning Control	yes		
R19ME3206D	MOOCs (NPTEL/Swayam) Course (12 Week duration)	yes		
R19ME3207	Heat Transfer Lab			yes
R19ME3208	CAM & CAE Lab			yes
R19ME3209	Employability Skills -2			yes
Total		10	1	3

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY KAKINADA**

Kakinada-533003, Andhra Pradesh (India)

Course wise Curriculum Analysis(R19)

Program Code: 03

Program Name: B.Tech - ME

Year: IV

Semester: I

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R19ME4101	Mechanical Measurements & Metrology			
R19ME4102	Managerial Economics and Financial Accounting			
R19ME4103A	Automation in Manufacturing	yes		
R19ME4103B	Power Plant Engineering	yes		
R19ME4103C	Tribology	yes		
R19ME4103D	Condition Monitoring	yes		
R19ME4103E	MOOCs (NPTEL/Swayam) Course (12Week duration)			
R19ME4104A	Advanced Manufacturing Processes	yes		
R19ME4104B	Mechatronics	yes		
R19ME4104C	Computational Fluid Dynamics	yes		
R19ME4104D	Noise & Vibration control	yes		
R19ME4104E	MOOCs (NPTEL/Swayam) Course (12Week duration)	yes		
R19OE4105A	Robotics	yes	yes	
R19OE4105B	Foundations of Mechanical Engineering			
R19OE4105C	Computational Methods in Engineering			
R19OE4105D	MaterialsTechnology			
R19OE4106	Measurements & Metrology Lab			yes
R19OE4107	Simulation Lab			yes
R19OE4108	Project-I			yes
R19PROJ-4109	Summer Internship			yes
	Total	10	1	4



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Program Code: 03

Program Name: B.Tech -ME

Year: IV

Semester: II

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
R19ME4201A	Non Destructive Evaluation	yes		
R19ME4201B	Gas Dynamics and Jet Propulsion	yes		
R19ME4201C	Industrial Hydraulics and Pneumatics	yes		
R19ME4201D	Statistical Quality Control	yes		
R19ME4201E	Industrial Safety Engineering via MOOCs (NPTEL/Swayam) (12 Week MOOC Course)			
R19ME4202A	Mechanics of Composites	yes		
R19ME4202B	Nanomaterials	yes		
R19ME4202C	Renewable Energy Sources	yes		
R19ME4202D	Reliability Engineering	yes		
R19ME4202E	Product Design and Manufacturing via MOOCs (NPTEL/Swayam) (12 Week MOOC Course)			
R19ME4203A	3D-Printing Technologies		yes	
R19ME4203B	Smart Materials		yes	
R19ME4203C	Hybrid Vehicles		yes	
R19PROJ4204	Project-II			yes
	TOTAL	8	3	1