

Kakinada-533003, Andhra Pradesh (India)

#### Program wise Curriculum Analysis of (R20)

Program	Program Name No of Courses having focus on		No of Courses having focus on		No of Courses having focus on		Total Courses	Б
Code		Employability	Entrepreneurship	Skill development		Percentage		
03	B.TECH-ME	8	1	okiii developiilent				
15	M.TECH-MD		4	27	68	57		
04	M.TECH-CAD/CAM	3	1	8	20	70		
W-7	MILECH-CADICANI	3	1	8	20			
					03	60		

Coordinator

HOD/Directors > Walversity College of Raginsoria; J.N.T. University Kakinads

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: 03

Program Name:B.Tech -ME

Year: I

Course	Course name	Employability	Entrepreneurship	Skill development
code		(Yes/No)	(Yes/No)	(Yes/No)
BSC-1	Mathematics-I (Calculus)	(163/110)	(103/110)	(TES/NO)
BSC-2	Engineering Physics			
ESC-1	Engineering Mechanics			
ESC-2	Problem Solving and Programming using C	YES		<del></del>
ESC-3	Engineering Graphics			
ESC- L1	Workshop Practice Lab			YES
BSC- L1	Engineering Physics Lab			YES
BSC-L2	Physics Virtual Lab			YES
ESC -L2	Problem Solving and Programming using C lab			YES
MC -1	Constitution of India(AICTE Mandate Course)			123
				<del></del>
	Total	1		4



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#### Course wise Curriculum Analysis(R20)

Program Code: 03

Program Name:B.Tech - ME

Year: I

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
BSC-3	Mathematics-II (Linear Algebra and Numerical Methods)	(17-1-7	(105)1107	(163/140)
BSC-4	Engineering Chemistry			
HSC-1	Communicative English	Yes		
ESC-4	Basic Electrical & Electronics Engineering	103		
ESC-5	Thermodynamics		<del> </del>	
HSC-L1	English communication Skills Lab			
BSC-L3	Engineering Chemistry Lab			Yes
ESC-L3	Basic Electrical& Electronics Engineering Lab			Yes
MC-2	Physical Fitness Activities	<del></del>		Yes
MC-3	Engineering Exploration Project			Yes
				Yes
	Total	1		5





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#### Course wise Curriculum Analysis(R20)

Program Code: 03

Program Name:B.Tech - ME

Year: I

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
BSC-3	Mathematics-II (Linear Algebra and Numerical Methods)	(105/110/	(103/110/	(105/140)
BSC-4	Engineering Chemistry			
HSC-1	Communicative English	Yes		
ESC-4	Basic Electrical & Electronics Engineering			
ESC-5	Thermodynamics			
HSC-L1	English communication Skills Lab			Yes
BSC-L3	Engineering Chemistry Lab			Yes
ESC-L3	Basic Electrical& Electronics Engineering Lab			Yes
MC-2	Physical Fitness Activities			Yes
MC-3	Engineering Exploration Project			Yes
	Total	1		5



Kakinada-533003, Andhra Pradesh (India)

#### Course wise Curriculum Analysis(R20)

Program Code: 03

Program Name:B.Tech - ME

Year: II

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
BSC-5	Mathematics-III (Transforms, PDE and Vector Calculus)		(1.55)1.15/	(103/110)
PCC-1	Mechanics of Solids	-		
PCC-2	Production Technology			
PCC-3	Fluid Mechanics & Hydraulic Machines	<del></del>		
PCC-4	Kinematics of Machinery			
PCC-L1	Machine Drawing			
PCC-L2	Production Technology Lab			Yes
PCC-L3	Fluid Mechanics and Hydraulic Machines lab	·		Yes
SOC-1	Computer Aided Drafting and Modeling Lab			Yes
MC-4	Essence of Indian Traditional Knowledge (AICTE Mandate Course)			162
	Total			3



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#### Course wise Curriculum Analysis(R20)

Program Code: 03

Program Name:B.Tech - ME

Year: II

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
BSC-6	Mathematics-IV (Complex Variables and Statistical Methods)	(100)	(105/110)	(163/140)
ESC-6	Materials Science & Engineering			
PCC-5	Dynamics of Machinery			
PCC-6	Thermal Engineering-I			
HSC-2	Managerial Economics & Financial Accounting		Yes	
PCC-L4	Theory of Machines Lab		163	Yes
PCC-L5	Thermal Engineering Lab			
ESC-L4	Materials Testing lab	!		Yes
SOC-2	Numerical Simulation Lab			Yes
		<u> </u>		Yes
	Total	<u> </u>	1	4



Kakinada-533003, Andhra Pradesh (India)

### Course wise Curriculum Analysis(R20)

Program Code: 03

Program Name:B.Tech - ME

Year: III

Course code	Course name	Employability (Yes/No)	Entrepreneurship	Skill developmen
PCC-7	Thermal Engineering-II	(Tes/NO)	(Yes/No)	(Yes/No)
PCC-8	Design of Machine Members-I			
PCC-9	Metal Cutting & Machine Tools			
OE-1	Green Engineering Systems     Industrial Management     Nano Technology	Yes		
PE-1	1. Finite Element Methods 2. Industrial Robotics 3. Advanced Materials 4. Renewable Energy Sources 5. Mechanics of Composites 6. MOOCs (NPTEL/ Swayam) Course (12 Week duration)		Yes	
PCC-L6	Machine Tools Lab			Yes
PCC-L7	CAM & CAE Lab			Yes
SOC-3	ADVANCED COMMUNICATION SKILLS LAB			
MC - 5	Environmental Science			Yes
	Evaluation of Summer Internship, completed after II B.Tech II Semester			Yes Yes

Total	1	1	5



Kakinada-533003, Andhra Pradesh (India)

### Course wise Curriculum Analysis(R20)

Program Code: 03

Program Name:B.Tech - ME

Year: III

		rear. m	semester:	II
Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill developmen
PCC-10	Heat Transfer	(133,113)	(103/110)	(Yes/No)
PCC-11	Design of Machine Members-II			
PCC-12	Mechanical Measurements & Metrology			
PE-2	Automobile Engineering     CAD/CAM	Yes		3-3-3
	Advanced Mechanics of Solids     Statistical Quality Control			
	Industrial Hydraulics and Pneumatics     MOOCs (NPTEL/ Swayam) Course (12 Week duration)			
OE-2	Industrial Robotics	Yes		
	Essentials of Mechanical Engineering			
	3. Advanced Materials			
PCC-L8	Heat Transfer Lab			Yes
PCC-L9	simulation Lab			
PCC-L10	Measurements& Metrology Lab			Yes
SOC-4	Python Programming Lab			Yes
MC - 6	Research Methodology			Yes
			Yes	
	Total	2	1	4



Kakinada-533003, Andhra Pradesh (India)

### Course wise Curriculum Analysis(R20)

Program Code: 03

Program Name:B.Tech - ME

Year: IV

Course name	F 1 1 100		
	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill developmen
Mechanical Vibrations		(163/140)	(Yes/No)
Operations Research	163		
Unconventional Machining Processes			
Computational Fluid Dynamics		1	
5. Gas Dynamics and Jet Propulsion			
6. MOOCs (NPTEL/Swayam) Course (12 Week duration)			
Automation in Manufacturing	Vec		
Power Plant Engineering	163	[2]	
5. Condition Monitoring			
6. MOOCs (NPTEL/Swayam) Course (12 Week duration)			
Advanced Manufacturing Processes	Voc		
2. Mechatronics	163		
3. Refrigeration & Air-Conditioning			
4. Additive Manufacturing			
5. Non Destructive Evaluation			
6. MOOCs (NPTEL/Swayam) Course (12 Week duration)			
Additive manufacturing			
2. Mechatronics			
3. Finite Element Methods			
1 Optimization To 1 in			
1. Optimization Techniques			
2. Computer Graphics			
3. Total Quality Management			
Universal Human Values: Understanding Harmony			
	2. Operations Research 3. Unconventional Machining Processes 4. Computational Fluid Dynamics 5. Gas Dynamics and Jet Propulsion 6. MOOCs (NPTEL/Swayam) Course (12 Week duration) 1. Automation in Manufacturing 2. Power Plant Engineering 3. Tribology 4. Production Planning Control 5. Condition Monitoring 6. MOOCs (NPTEL/Swayam) Course (12 Week duration) 1. Advanced Manufacturing Processes 2. Mechatronics 3. Refrigeration & Air-Conditioning 4. Additive Manufacturing 5. Non Destructive Evaluation 6. MOOCs (NPTEL/Swayam) Course (12 Week duration) 1. Additive manufacturing 2. Mechatronics 3. Finite Element Methods 1. Optimization Techniques 2. Computer Graphics	2. Operations Research 3. Unconventional Machining Processes 4. Computational Fluid Dynamics 5. Gas Dynamics and Jet Propulsion 6. MOOCs (NPTEL/Swayam) Course (12 Week duration)  1. Automation in Manufacturing 2. Power Plant Engineering 3. Tribology 4. Production Planning Control 5. Condition Monitoring 6. MOOCs (NPTEL/Swayam) Course (12 Week duration)  1. Advanced Manufacturing Processes 2. Mechatronics 3. Refrigeration & Air-Conditioning 4. Additive Manufacturing 5. Non Destructive Evaluation 6. MOOCs (NPTEL/Swayam) Course (12 Week duration)  1. Additive manufacturing 2. Mechatronics 3. Finite Element Methods  1. Optimization Techniques 2. Computer Graphics 3. Total Quality Management	2. Operations Research 3. Unconventional Machining Processes 4. Computational Fluid Dynamics 5. Gas Dynamics and Jet Propulsion 6. MOOCs (NPTEL/Swayam) Course (12 Week duration) 1. Automation in Manufacturing 2. Power Plant Engineering 3. Tribology 4. Production Planning Control 5. Condition Monitoring 6. MOOCs (NPTEL/Swayam) Course (12 Week duration) 1. Advanced Manufacturing Processes 2. Mechatronics 3. Refrigeration & Air-Conditioning 4. Additive Manufacturing 5. Non Destructive Evaluation 6. MOOCs (NPTEL/Swayam) Course (12 Week duration) 1. Additive manufacturing 5. Non Destructive Evaluation 6. MOOCs (NPTEL/Swayam) Course (12 Week duration) 1. Additive manufacturing 2. Mechatronics 3. Finite Element Methods  1. Optimization Techniques 2. Computer Graphics 3. Total Quality Management

	SOC-5	Mechatronics Lab				
		Evaluation of Summer Internship completed after III B.Tech II				Yes
		Semester				Yes
l			Total	3	1	2



Kakinada-533003, Andhra Pradesh (India)

### Course wise Curriculum Analysis(R20)

Program Code: 1A02

Program Name: B.Tech

Year: IV

Semester: II

Course code	Course name	Employability (Yes/No)	Entrepreneurship (Yes/No)	Skill development (Yes/No)
	Project work(6 Months)		,	YES
7	TOTAL			1

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