

**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE, WARANGAL - 15**

*(An Autonomous Institute under Kakatiya University, Warangal)*

**SCHEME OF INSTRUCTIONS & EVALUATION FOR B.TECH. 4-YEAR DEGREE PROGRAMME**

**BRANCH : COMMON FOR ALL BRANCHES**

**SEMESTER : FIRST**

S. No.	Course Code	Course Name	Periods			Credits (C)	Evaluation Scheme				
			L	T	P		CIE			ESE	Total Marks
							TA	MSE	Total		
1	U14MH101	Engineering Mathematics-I	3	1	-	4	15	25	40	60	100
2	U14CS102	Programming in C	3	1	-	4	15	25	40	60	100
3	U14PH103	Engg. Physics /	3	1	-	4	15	25	40	60	100
	U14CH103	Engg. Chemistry	3	1	-	4	15	25	40	60	100
4	U14MH104	English for Communication /	2	2	-	3	15	25	40	60	100
	U14ME104	Engineering Drawing	2	4	-	4	15	25	40	60	100
5	U14EI105	Basic Electronics Engg. /	3	-	-	3	15	25	40	60	100
	U14EE105	Basic Electrical Engg.	3	-	-	3	15	25	40	60	100
6	U14ME106	Basic Mechanical Engg.	3	-	-	3	15	25	40	60	100
	U14CE106	Basic Engg. Mechanics	3	1	-	4	15	25	40	60	100
7	U14CS107	Programming in "C" Lab	-	-	3	2	40	-	40	60	100
8	U14PH108	Engg. Physics Lab /	-	-	3	2	40	-	40	60	100
	U14CH108	Engg. Chemistry Lab	-	-	3	2	40	-	40	60	100
9	U14ME109	Engg. Workshop Practice /	-	-	3	2	40	-	40	60	100
	U14CH109	Environmental Studies #	2	-	-	2	15	25	40	60	100
10	U14EA110	EAA: Physical Education & NSS #	-	-	2	1	100	-	100	-	100
<b>Total</b>			<b>17/ 19</b>	<b>5/ 8</b>	<b>11/ 8</b>	<b>28/ 30</b>					<b>1000</b>

**Note:** L - Lectures; T- Tutorials; P - Practicals; CIE - Continuous Internal Evaluation; TA - Teachers Assessment; MSE - Mid Semester Examination; ESE - End Semester Examination; EAA - Extra Academic Activity;

# indicates Mandatory Course

**Student Contact Hours / Week :** Stream - I = 33 (periods/week); Stream-II = 35 (periods/week)

**Total Credits (C) :** Stream - I = 28 Credits; Stream-II = 30 Credits

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**SCHEME OF INSTRUCTIONS & EVALUATION FOR B.TECH. 4-YEAR DEGREE PROGRAMME**

**BRANCH :** COMMON FOR ALL BRANCHES

**SEMESTER :** SECOND

S. No.	Course code	Course Name	Periods			Credits (C)	Evaluation Scheme				
			L	T	P		CIE			ESE	Total Marks
							TA	MSE	Total		
1	U14MH201	Engineering Mathematics-II	3	1	-	4	15	25	40	60	100
2	U14CS202	Object Oriented Programming through C++	3	1	-	4	15	25	40	60	100
3	U14CH203	Engg. Chemistry /	3	1	-	4	15	25	40	60	100
	U14PH203	Engg. Physics	3	1	-	4	15	25	40	60	100
4	U14ME204	Engineering Drawing /	2	4	-	4	15	25	40	60	100
	U14MH204	English for Communication	2	2	-	3	15	25	40	60	100
5	U14EE205	Basic Electrical Engg. /	3	-	-	3	15	25	40	60	100
	U14EI205	Basic Electronics Engg.	3	-	-	3	15	25	40	60	100
6	U14CE206	Basic Engg. Mechanics	3	1	-	4	15	25	40	60	100
	U14ME206	Basic Mechanical Engg.	3	-	-	3	15	25	40	60	100
7	U14CS207	Object Oriented Programming (OOP) Lab	-	-	3	2	40	-	40	60	100
8	U14CH208	Engg. Chemistry Lab /	-	-	3	2	40	-	40	60	100
	U14PH208	Engg. Physics Lab	-	-	3	2	40	-	40	60	100
9	U14CH209	Environmental Studies #	2	-	-	2	40	-	40	60	100
	U14ME209	Engg. Workshop Practice	-	-	3	2	15	25	40	60	100
10	U14EA210	EAA: Physical Education & NSS #	-	-	2	1	100	-	100	-	100
<b>Total</b>			<b>19/17</b>	<b>8/5</b>	<b>8/11</b>	<b>30/28</b>					<b>1000</b>

*Note:* L - Lectures; T- Tutorials; P - Practicals; CIE - Continuous Internal Evaluation; TA - Teachers Assessment;

MSE - Mid Semester Examination; ESE - End Semester Examination; EAA - Extra Academic Activity;

# indicates Mandatory Course

**Student Contact Hours / Week :** Stream - I = 35 (periods/week); Stream- II = 33 (periods /week)

**Total Credits (C) :** Stream - I = 30 Credits; Stream -II = 28 Credits

**KAKATIYA INSTITUTE OF TECHNOLOGY & SCIENCE: WARANGAL-15**

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**SCHEME OF INSTRUCTION AND EVALUATION**

**III SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**MECHANICAL ENGINEERING**

S. No.	Course Category	Course Code	Course Name	Periods			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	BS	U14MH301	Engineering Mathematics-III	3	1	-	4	15	25	40	60	100
2	ES	U14CE310	Mechanics of Fluids	3	1	-	4	15	25	40	60	100
3	PC	U14ME302	Material Science and Metallurgy	3	1	-	4	15	25	40	60	100
4	PC	U14ME303	Mechanics of Solids	3	1	-	4	15	25	40	60	100
5	PC	U14ME304	Manufacturing Processes	3	1	-	4	15	25	40	60	100
6	PC	U14ME305	Machine Drawing	2	4	-	4	15	25	40	60	100
7	PC	U14ME306	Material Science and Metallurgy Laboratory	-	-	3	2	40	-	40	60	100
8	ES	U14CE311	Mechanics of Fluids Laboratory	-	-	3	2	40	-	40	60	100
<b>Total</b>				<b>17</b>	<b>9</b>	<b>6</b>	<b>28</b>	<b>170</b>	<b>150</b>	<b>320</b>	<b>480</b>	<b>800</b>
9	MC	U14MH309	Soft and Interpersonal Skills	-	-	2	1	100	-	100	-	100

**Student Contact Hours / Week : 34**

**Total Credits : 28**

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**SCHEME OF INSTRUCTION AND EVALUATION**

**IV SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**MECHANICAL ENGINEERING**

S. No.	Course Category	Course Code	Course Name	Periods			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	BS	U14MH401	Engineering Mathematics-IV	3	1	-	4	15	25	40	60	100
2	ES	U14ME402	Thermodynamics	3	1	-	4	15	25	40	60	100
3	PC	U14ME403	Design of Machine Elements -I	3	1	-	4	15	25	40	60	100
4	PC	U14ME404	Machine Tool Technology	3	1	-	4	15	25	40	60	100
5	PC	U14ME405	Computer Aided Design and Graphics	3	1	-	4	15	25	40	60	100
6	ES	U14EE412	Basic Electrical and Electronics Engineering Laboratory	-	-	3	2	40	-	40	60	100
7	PC	U14ME406	Manufacturing Technology Laboratory	-	-	3	2	40	-	40	60	100
8	PC	U14ME407	Computer Aided Design and Graphics Laboratory	-	-	3	2	40	-	40	60	100
<b>Total</b>				<b>15</b>	<b>5</b>	<b>9</b>	<b>26</b>	<b>195</b>	<b>125</b>	<b>320</b>	<b>480</b>	<b>800</b>
9	MC	U14MH409	Compliance with Current English	-	-	2	1	100	-	100	-	100
10	MC#	U14CH209	Environmental Studies	2	-	-	2	15	25	40	60	100

**Student Contact Hours / Week : 31+2#**

**Total Credits : 26**

**# For lateral entry students only**

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**SCHEME OF INSTRUCTION AND EVALUATION**

**V SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**MECHANICAL ENGINEERING**

S. No.	Course Category	Course Code	Course Name	Periods			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	PC	U14ME501	Internal Combustion Engines	3	1	-	4	15	25	40	60	100
2	PC	U14ME502	Design of Machine Elements -II	3	1	-	4	15	25	40	60	100
3	PC	U14ME503	Production and Operation Management	3	1	-	4	15	25	40	60	100
4	PC	U14ME504	Metrology and Instrumentation	3	1	-	4	15	25	40	60	100
5	PC	U14ME505	Kinematics of Machinery	3	2	-	4	15	25	40	60	100
6	PC	U14ME506	Applied Thermodynamics	3	1	-	4	15	25	40	60	100
7	PC	U14ME507	Fuels and Internal Combustion Engines Laboratory	-	-	3	2	40	-	40	60	100
8	PC	U14ME508	Metrology and Instrumentation Laboratory	-	-	3	2	40	-	40	60	100
9	PR	U14ME509	Seminar	-	-	-	1	100	-	100	-	100
<b>Total</b>				<b>18</b>	<b>7</b>	<b>6</b>	<b>29</b>	<b>270</b>	<b>150</b>	<b>420</b>	<b>480</b>	<b>900</b>

**Student Contact Hours / Week : 31**

**Total Credits : 29**

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**VI SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**MECHANICAL ENGINEERING**

S. No.	Course Category	Course Code	Course Name	Periods			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	OE	U14OE601	Open Elective-I	4	-	-	4	15	25	40	60	100
2	PC	U14ME602	Heat Transfer	3	1	-	4	15	25	40	60	100
3	PC	U14ME603	Principles of Metal Cutting	3	1	-	4	15	25	40	60	100
4	PC	U14ME604	Dynamics of Machinery	3	1	-	4	15	25	40	60	100
5	PE	U14ME605	Professional Elective-I	4	-	-	4	15	25	40	60	100
6	PC	U14ME606	Heat Transfer Laboratory	-	-	3	2	40	-	40	60	100
7	PC	U14ME607	Principles of Metal Cutting Laboratory	-	-	3	2	40	-	40	60	100
8	PC	U14ME608	Computer Aided Analysis Laboratory	-	-	3	2	40	-	40	60	100
9	PR	U14ME609	Mini Project	-	-	-	2	100	-	100	-	100
<b>Total</b>				<b>17</b>	<b>3</b>	<b>9</b>	<b>28</b>	<b>295</b>	<b>125</b>	<b>420</b>	<b>480</b>	<b>900</b>

**Student Contact Hours / Week : 29**

**Total Credits : 28**

**Open Elective-I**

OE 601 A – Disaster Management

OE 601 B – Project Management

OE 601 C – Professional Ethics in Engineering

OE 601 D – Rural Technology and Community Development

**Professional Elective- I (Design Engineering Stream)**

ME 605 A :Finite Element Methods

ME 605 B :Mechanical Vibrations and Condition Monitoring

ME 605 C :Composite Materials

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**SCHEME OF INSTRUCTION AND EVALUATION**

**VII SEMESTER OF 4-YEAR B.TECH DEGREE PROGRAMME**

**MECHANICAL ENGINEERING**

S. No.	Course Category	Course Code	Course Name	Periods			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	OE	U14OE701	Open Elective-II	4	-	-	4	15	25	40	60	100
2	PC	U14ME702	Turbo Machines	3	1	-	4	15	25	40	60	100
3	PC	U14ME703	Refrigeration and Air Conditioning	3	1	-	4	15	25	40	60	100
4	PE	U14ME704	Professional Elective - II	4	-	-	4	15	25	40	60	100
5	PE	U14ME705	Professional Elective - III	4	-	-	4	15	25	40	60	100
6	PC	U14ME706	Turbo Machines Laboratory	-	-	3	2	40	-	40	60	100
7	PC	U14ME707	Dynamics of Machinery Laboratory	-	-	3	2	40	-	40	60	100
8	PR	U14ME708	Major Project Work <i>Phase-I</i>	-	-	7	4	100	-	100	-	100
<b>Total</b>				<b>18</b>	<b>2</b>	<b>13</b>	<b>28</b>	<b>255</b>	<b>125</b>	<b>380</b>	<b>420</b>	<b>800</b>

**Student Contact Hours / Week : 33**

**Total Credits : 28**

**Open Elective-II:**

OE 701 A- Operations Research

OE 701 B- Management Information Systems

OE 701 C- Entrepreneurship Development

OE 701 D- Forex and Foreign Trade

**Professional Elective:-III**

ME 705 A- Fuels and Combustion

ME 705 B- Total Quality Management

ME 705 C- Fundamental Principles of Engineering Design

ME 705 D- Automobile Engineering

**Professional Elective- II (Production Engineering Stream):**

ME 704 A- Modern Machining Processes

ME 704 B- System Simulation

ME 704 C- Design for Manufacturing and Assembly

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**MECHANICAL ENGINEERING**

S. No.	Course Category	Course Code	Course Name	Periods			Credits	Evaluation Scheme				
				L	T	P		CIE			ESE	Total Marks
								TA	MSE	Total		
1	HS	U14MH801	Management, Economics & Accountancy	3	1	-	4	15	25	40	60	100
2	PC	U14ME802	Computer Integrated Manufacturing Systems	3	1	-	4	15	25	40	60	100
3	PE	U14ME803	Professional Elective - IV	4	-	-	4	15	25	40	60	100
4	PE	U14ME804	Professional Elective - V	4	-	-	4	15	25	40	60	100
5	PC	U14ME805	Computer Integrated Manufacturing Systems Laboratory	-	-	3	2	40	-	40	60	100
6	PC	U14ME806	Energy Engineering Laboratory	-	-	3	2	40	-	40	60	100
7	PR	U14ME807	Major Project Work <i>Phase-II</i>	-	-	13	7	40	-	40	60	100
<b>Total</b>				<b>14</b>	<b>2</b>	<b>19</b>	<b>27</b>	<b>180</b>	<b>100</b>	<b>280</b>	<b>420</b>	<b>700</b>

**Student Contact Hours / Week : 35**

**Total Credits : 27**

**Professional Electives - IV (Thermal Engineering Stream):**

**ME 803 A- Power Plant Engineering**

**ME 803 B- Computational Fluid Dynamics**

**ME 803 C- Design of Thermal Equipment**

**Professional Electives - V:**

**ME 804 A- Renewable Energy Sources**

**ME 804 B- Additive Manufacturing**

**ME 804 C- Robotics**

**ME 804 D- Materials Technology**