

**Scheme for B.Tech.- P&IE (Effective from 15-16 with Proposed Credits)  
THEORY & PRACTICAL**

Sem	Codes	Proposed Scheme- PIE -UTD	Internal	External	Max Marks	Contact hours/week				Credits
						L	T	P	Total	
<b>III</b>	3PIU1	Mechanics of Solid	50	100	150	3	0	0	3	3
	3PIU2	Material Science & Engineering	50	100	150	3	0	0	3	3
	3PIU3	Engineering Thermodynamics	50	100	150	3	1	0	4	3
	3PIU4	Foundry & Welding Technology	50	100	150	3	0	0	3	3
	3PIU5	Fluid Engineering	50	100	150	3	0	0	3	3
	3PIU6	Advanced Engineering Mathematics - 1	50	100	150	3	1	0	4	3
	3PIU7	Production Practice - I	50	25	75	0	0	3	3	2
	3PIU8	Introduction to Mechanical Engineering Lab.	50	25	75	0	0	3	3	2
	3PIU9	Material science & Testing Lab.	35	15	50	0	0	2	2	1
	3PIU10	Fluid Mechanics Lab.	35	15	50	0	0	2	2	1
	3PIU11	Professional Skill workshop	35	15	50	0	0	2	2	1
3PIUDC	Discipline & Extra Curricular activity			50	0	0	0	0	1	
		<b>Sub- Total</b>			<b>1250</b>	<b>18</b>	<b>2</b>	<b>12</b>	<b>32</b>	<b>26</b>
Sem	Codes	Proposed Scheme- PIE -UTD	Internal	External	Max Marks	Contact hours/week				Credits
						L	T	P	Total	
<b>IV</b>	4PIU1	Design of Machine Element - I	50	100	150	3	1	0	4	3
	4PIU2	Work System Design & Ergonomics	50	100	150	3	0	0	3	3
	4PIU3	Theory of Machines	50	100	150	3	0	0	3	3
	4PIU4	Machining Sciences	50	100	150	3	0	0	3	3
	4PIU5	Industrial Management	50	100	150	3	0	0	3	3
	4PIU6	Advanced Engineering Mathematics - 2	50	100	150	3	1	0	4	3
	4PIU7	Production Practice - II	50	25	75	0	0	3	3	2
	4PIU8	Production Engineering Drawing	50	25	75	0	0	3	3	2
	4PIU9	Theory of Machines Lab.	35	15	50	0	0	2	2	1
	4PIU10	Work System Design Lab.	35	15	50	0	0	2	2	1
	4PIU11	Business communication skills	35	15	50	0	0	2	2	1
4PIUDC	Discipline & Extra Curricular activity			50	0	0	0	0	1	
		<b>Sub- Total</b>			<b>1250</b>	<b>18</b>	<b>2</b>	<b>12</b>	<b>32</b>	<b>26</b>

Sem	Codes	Proposed Scheme- PIE -UTD	Internal	External	Max Marks	Contact hours/week				Credits
						L	T	P	Total	
V	5PIU1	Thermal Engineering	50	100	150	3	1	0	4	3
	5PIU2	Quality Control & Reliability Engineering	50	100	150	3	0	0	3	3
	5PIU3	Design of Machine Element - II	50	100	150	3	1	0	4	3
	5PIU4	Measurement and Metrology	50	100	150	3	0	0	3	3
	5PIU5	Principles of Machine Tools	50	100	150	3	0	0	3	3
	5PIU6.1	CNC Machines & Programming	50	100	150	3	0	0	3	3
	5PIU6.2	Management Information system (MIS)								
	5PIU6.3	Statistics for Decision Making								
	5PIU6.4	Renewable Energy Systems								
	5PIU7	Thermal Engineering lab	50	25	75	0	0	3	3	2
	5PIU8	Machine Tool Design Sessional	50	25	75	0	0	3	3	2
	5PIU9	Metrology Lab.	35	15	50	0	0	2	2	1
	5PIU10	Quality Control Lab.	35	15	50	0	0	2	2	1
	5PIU11	Professional Ethics & Disaster Management	35	15	50	0	0	2	2	1
5PIUDC	Discipline & Extra Curricular activity			50	0	0	0	0	1	
		<b>Sub- Total</b>			<b>1250</b>	<b>18</b>	<b>2</b>	<b>12</b>	<b>32</b>	<b>26</b>
Sem	Codes	Proposed Scheme- PIE -UTD	Internal	External	Max Marks	Contact hours/week				Credits
						L	T	P	Total	
VI	6PIU1	Tool Engineering	50	100	150	3	1	0	4	3
	6PIU2	Operations Research	50	100	150	3	0	0	3	3
	6PIU3	Micro & Nano Manufacturing	50	100	150	3	0	0	3	3
	6PIU4	Total Quality Management	50	100	150	3	0	0	3	3
	6PIU5	Facility Planning	50	100	150	3	1	0	4	3
	6PIU6.1	Data Analytics	50	100	150	3	0	0	3	3
	6PIU6.2	Computer Aided Design and Graphics								
	6PIU6.3	Managerial accounting, Finance & Economics								
	6PIU6.4	Design and Manufacturing of Plastic Products								
	6PIU7	Metal cutting Lab.	50	25	75	0	0	3	3	2
	6PIU8	Industrial Engineering Lab-I	50	25	75	0	0	3	3	2
	6PIU9	Operations Research Lab.	35	15	50	0	0	2	2	1
	6PIU10	Statistical lab	35	15	50	0	0	2	2	1
	6PIU11	Capacity Building Lab	35	15	50	0	0	2	2	1
6PIUDC	Discipline & Extra Curricular activity			50	0	0	0	0	1	
		<b>Sub- Total</b>			<b>1250</b>	<b>18</b>	<b>2</b>	<b>12</b>	<b>32</b>	<b>26</b>

Sem	Codes	Proposed Scheme- PIE -UTD	Internal	External	Max Marks	Contact hours/week				Credits
						L	T	P	Total	
VII	7PIU1	Metal Forming Processes	50	100	150	3	1	0	4	3
	7PIU2	Operational Planning & Control	50	100	150	3	1	0	4	3
	7PIU3	Advance Manufacturing Methods	50	100	150	3	0	0	3	3
	7PIU4	Computer Integrated Manufacturing	50	100	150	3	0	0	3	3
	7PIU5	Modelling & Simulation	50	100	150	3	0	0	3	3
	7PIU6.1	Supply Chain Management	50	100	150	3	0	0	3	3
	7PIU6.2	Maintenance Management								
	7PIU6.3	Rapid Prototyping								
	7PIU6.4	Advanced Welding Technology								
	7PIU7	Metal Forming & Tool Design Lab.	50	25	75	0	0	3	3	2
	7PIU8	CAM & Industrial Engineering Lab	50	25	75	0	0	3	3	2
	7PIU9	Simulation Lab.	35	15	50	0	0	2	2	1
	7PIU10	Project stage-1	35	15	50	0	0	2	2	1
	7PIU11	Practical training & industrial visit	35	15	50	0	0	2	2	1
7PIUDC	Discipline & Extra Curricular activity			50	0	0	0	0	1	
		<b>Sub- Total</b>			<b>1250</b>	<b>18</b>	<b>2</b>	<b>12</b>	<b>32</b>	<b>26</b>

Sem	Codes	Proposed Scheme- PIE -UTD	Internal	External	Max Marks	Contact hours/week				Credits
						L	T	P	Total	
VIII		<b>Option-A</b>								
	8PIUA1	New Enterprise and Innovation Management	50	100	150	3	1	0	4	3
	8PIUA2	Product Development and Launching	50	100	150	3	0	0	3	3
	8PIUA3	Non-Destructive Evaluation and Testing	50	100	150	3	0	0	3	3
	8PIUA4	Enterpreneurship lab	50	25	75	0	0	3	3	2
	8PIUA5	Advance software Lab	50	25	75	0	0	3	3	2
	8PIUA6	Project Stage-2	250	125	375	0	0	12	12	8
	8PIUA7	Seminar	150	75	225	0	0	4	4	4
8PIUDC	Discipline & Extra Curricular activity			50	0	0	0	0	1	
		<b>Sub- Total</b>			<b>1250</b>	<b>9</b>	<b>1</b>	<b>22</b>	<b>32</b>	<b>26</b>

