

**M.Tech. (Pulp and Paper Engineering)****Program Elective Courses**

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
1.	PPL-501	Process Equipment and Design	PEC	3	3	0	0	3	0
2.	PPL-502	Pulp Mill Calculations	PEC	3	3	0	0	3	0
3.	PPL-503	Paper Mill Calculations	PEC	3	3	0	0	3	0
4.	PPL-504	Chemical Recovery Process Calculations	PEC	3	3	0	0	3	0
5.	PPL-505	Secondary Fiber Processing	PEC	3	3	0	0	3	0
6.	PPL-506	Bio-Process and its Application	PEC	3	3	0	0	3	0
7.	PPL-507	Electro kinetics in Paper Making	PEC	3	3	0	0	3	0
8.	PPL-508	Coated and Specialty Papers	PEC	3	3	0	0	3	0
9.	PPL-509	Risk Analysis and Management in Industry	PEC	3	3	0	0	3	0
10.	PPL-510	System Closure	PEC	3	3	0	0	3	0
11.	PPL-511	Advanced Paper and Packaging Materials Characterization	PEC	3	3	0	0	3	0
12.	PPL-512	Papermaking Chemistry	PEC	3	3	0	0	3	0
13.	PPL-513	Process Integration in Pulp and Paper Industry	PEC	3	3	0	0	3	0
14.	PPL-514	Environmental Management	PEC	3	3	0	0	3	0
15.	PPL-515	Printing Operations	PEC	3	3	0	0	3	0
16.	PPL-516	Packaging Papers and Boards	PEC	3	3	0	0	3	0

**M.Tech. (Pulp and Paper Engineering)**

**Science, Technology, and Advanced Research-tools Basket**

<b>Teaching Scheme</b>					<b>Contact Hours/Week</b>			<b>Exam Duration</b>	
<b>S.No.</b>	<b>Subject Code</b>	<b>Course Title</b>	<b>Subject Area</b>	<b>Credits</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Theory</b>	<b>Practical</b>
1.	PPT-501	Pulp, Paper & Packaging	STAR	3	3	0	0	3	0
2.	PPT-502	Environmental Control	STAR	3	3	0	0	3	0

**M.Tech. (Packaging Technology)****Program Elective Courses**

Teaching Scheme					Contact Hours/Week			Exam Duration	
S.No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical
1.	PPL-517	Smart Packaging	PEC	3	3	0	0	3	0
2.	PPL-518	Robotics and Automated Packaging	PEC	3	3	0	0	3	0
3.	PPL-519	Distribution Packaging Dynamics	PEC	3	3	0	0	3	0
4.	PPL-520	Sustainable Packaging and Life Cycle Assessment	PEC	3	3	0	0	3	0
5.	PPL-521	Hazardous Material Packaging	PEC	3	3	0	0	3	0
6.	PPL-522	Industrial Packaging	PEC	3	3	0	0	3	0
7.	PPL-523	Lamination and Functional Coatings	PEC	3	3	0	0	3	0
8.	PPL-524	Nanotechnology Application in Packaging	PEC	3	3	0	0	3	0
9.	PPL-525	Economics in Packaging	PEC	3	3	0	0	3	0
10.	PPL-526	Advanced Packaging Materials Characterization	PEC	3	3	0	2/2	3	0
11.	PPL-527	Business Law	PEC	3	3	0	0	3	0
12.	PPL-528	Logistics and Supply Chain Management	PEC	3	3	0	0	3	0
13.	PPL-529	Industrial Design	PEC	3	3	0	0	3	0
14.	PPL-530	Printing Technology	PEC	3	3	0	0	3	0
15.	PPL-531	Advanced Numerical Methods and Statistics	PEC	3	3	0	0	3	0

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1.	PPT-501	Pulp, Paper & Packaging	STAR	3	3	0	0	3	0
2.	PPT-502	Environmental Control	STAR	3	3	0	0	3	0