

**PROGRAM** : M.Tech. (Solid State Electronic Materials)  
**DEPARTMENT** : Department of Physics

Teaching Scheme				Contact Hours/Week			Exam Duration (Hrs.)		Relative Weights (%)					
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
<b>1<sup>st</sup> Year</b>				<b>I Semester (Autumn)</b>										
1.	PHN-701	Numerical Analysis and Computational Techniques	PCC	3	2	0	2	3	3	10-25	25	15-25	30-40	0
2.	PHN-703	Fabrication and Characterization Techniques	PCC	3	3	0	0	3	0	20-35	0	20-30	40-50	0
3.	PHN-707	Laboratory Work in Solid State Electronic Materials	PCC	3	0	0	6	0	6	0	50	0	0	50
4.	PHN-709	Semiconductor Device Physics	PCC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
5.	PHN-xxx	Programme Elective –I (Group A)	PEC	4	-	-	-	-	-	-	-	-	-	-
		<b>Sub Total</b>		<b>17</b>										
				<b>II Semester (Spring)</b>										
1.	PHN-704	Advance Characterization Techniques	PCC	4	3	0	3	3	0	10-25	25	15-25	30-40	0
2.	PHN-xxx	Programme Elective-II (Group B)	PEC	-	-	-	-	-	-	-	-	-	-	-
3.	PHN-xxx	Programme Elective-III (Group B)	PEC	-	-	-	-	-	-	-	-	-	-	-
4.	PHN-xxx	Programme Elective-IV (Group B)	PEC	-	-	-	-	-	-	-	-	-	-	-
5.	PHN-700	Seminar	SEM	2	-	-	-	-	-	-	-	-	-	-
		<b>Sub Total</b>		<b>18</b>										
<b>2<sup>nd</sup> Year</b>				<b>III Semester (Autumn)</b>										
1.	PHN-701A	Dissertation Stage-I	DIS	12	-	-	-	-	-	-	-	-	100	-
2.	PHN-700A	Industrial/Lab Training	ILT	2	-	-	-	-	-	-	-	-	-	-
		<b>Sub Total</b>		<b>14</b>										
				<b>IV Semester (Spring)</b>										
1.	PHN-701B	Dissertation Stage-II	DIS	18	-	-	-	-	-	-	-	-	100	-
		<b>Sub Total</b>		<b>18</b>										
		<b>TOTAL CREDITS</b>		<b>67</b>										

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**List of PECs**

Teaching Scheme				Contact Hours/Week				Exam Duration (Hrs.)		Relative Weights (%)				
S. No.	Subject Code	Course Title	Subject Area	Credits	L	T	P	Theory	Practical	CWS	PRS	MTE	ETE	PRE
<b>Group-A</b>														
1.	PHN-715	Analog Integrated Circuit Design	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
2.	PHN-717	Digital Signal Processing	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
3.	PHN-713	Optical Electronics	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
<b>Group-B</b>														
1.	PHN-718	Thin Film Technology	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
2.	PHN-708	Materials for Renewable Energy and Storage	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
3.	PHN-722	Functional Properties of Materials & Devices	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
4.	PHN-721	Nanoscience and Nanotechnology	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
5.	PHN-723	Engineered materials for Device Application	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
6.	PHN-724	Semiconductor Micro-electronic Technology	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
7.	PHN-725	Nano-electronics and -photonics	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
8.	PHN-726	Solar Photovoltaic and Energy Storage	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
9.	PHN-727	Advance Fuel Cell and Battery Technology	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
10.	PHN-728	MEMS and NEMS	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0

11.	PHN-729	Advanced Ceramics and Composites	PEC	4	3	1	0	3	0	20-35	0	20-30	40-50	0
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