



<b>Course:</b> M.Tech	<b>Name of Faculty:</b> Priyanka Raghuthaman
<b>Topic:</b> ELE 3211 RF MEMS	<b>Semester:</b> II
<b>Lecture Hall:</b>	<b>Timings:</b> as per CBCS

<i>Week and date</i>	<i>Lecture topics</i>	<i>Assignments</i>	<i>Remarks</i>
<b>03-JAN-17</b>	Intro to RF MEMS		<b>OUTLINE OF THE COURSE AND LAB EXPERIMENTS</b>
<b>04-JAN-17</b>	<b>Start of Module 1 RF MEMS relays and switches</b>		
<b>05-JAN-17</b>	<b>M1: RF MEMS relays and switches.</b> Introduction		
<b>09-JAN-17</b>	<b>M1:</b> Switch parameters.		
<b>10-JAN-17</b>	<b>M1:</b> Switch parameters.	<b>Assignment 1</b>	<b>Topics Will be given after the particular session.</b>
<b>11-JAN-17</b>	<b>M1:</b> Actuation mechanisms		
<b>12-JAN-17</b>	<b>M1:</b> Actuation mechanisms		
<b>16-JAN-17</b>	<b>M1:</b> Bistable relays and micro actuators		
<b>17-JAN-17</b>	<b>M1:</b> Bistable relays and micro actuators		
<b>18-JAN-17</b>	<b>M1:</b> Dynamics of switching operation	<b>Assignment 1</b>	<b>Submission Date</b>
<b>19-JAN-17</b>	<b>M1:</b> Dynamics of switching operation		
<b>23-JAN-17</b>	<b>Start of Module 2 MEMS inductors and capacitors</b>		
<b>24-JAN-17</b>	<b>M2: MEMS inductors and capacitors M2:</b> Micromachined inductor.		
<b>25-JAN-17</b>	<b>M2:</b> Micromachined inductor.		
<b>30-JAN-17</b>	<b>M2:</b> Effect of inductor layout <b>M2:</b> Modeling and design issues of planar inductor.		
<b>31-JAN-17</b>	<b>M2:</b> Effect of inductor layout		
<b>01-FEB-17</b>	<b>M2:</b> Modeling and design issues of planar inductor		
<b>02-FEB-17</b>	<b>M2:</b> Modeling and		

	design issues of planar inductor		
<b>6th FEB 17</b>	<b>Series Exam I</b>		<b>ELE 3201</b>
<b>7th FEB 17</b>			<b>ELE 3202</b>
<b>8th FEB17</b>			<b>ELE 3204</b>
<b>9th FEB 17</b>			<b>ELE 3208/3211</b>
<b>10th FEB 17</b>			<b>ELE 3207/3209</b>
<b>13-FEB-17</b>	<b>M2:</b> Gap tuning and area tuning capacitors	<b>Assignment 2</b>	
<b>14-FEB-17</b>	<b>M2:</b> Gap tuning and area tuning capacitors		
<b>15-FEB-17</b>	<b>Start of Module 3 Micromachined RF filters.</b>		
<b>16-FEB-17</b>	<b>M3:</b> Modeling of mechanical filters.		
<b>20<sup>th</sup> FEB 17</b>	<b>M3:</b> Modeling of mechanical filters		<b>Result Publication Series Exam I</b>
<b>27<sup>th</sup> FEB 17 TO 3<sup>rd</sup> March 17</b>	<b>Seminar</b>		
<b>06-MAR-17</b>	<b>M3:</b> Electrostatic comb drive..		
<b>07-MAR-17</b>	<b>M3:</b> Electrostatic comb drive.		
<b>08-MAR-17</b>	<b>M3:</b> Electrostatic comb drive.		
<b>09-MAR-17</b>	<b>M3:</b> Micromechanical filters using comb drives	<b>Assignment 2</b>	<b>Submission Deadline</b>
<b>13-MAR-17</b>	<b>M3:</b> Micromechanical filters using comb drives		
<b>14-MAR-17</b>	<b>M3:</b> Electrostatic coupled beam structures		
<b>15-MAR-17</b>	<b>Start of Module 4 MEMS phase shifters.</b> Types.Limitations.		
<b>16-MAR-17</b>	<b>M4:</b> Switched delay lines. Micromachined transmission lines.		
<b>20-MAR-17</b>	<b>M4:</b> Coplanar lines. Micromachined directional coupler and mixer		
<b>21-MAR-17</b>	<b>Start of Module 5 Micromachined antennas.</b>		

<b>22-MAR-17</b>	<b>M5: Microstrip antennas</b> – design parameters.		
<b>23-MAR-17</b>	<b>M5: Micromachining</b> to improve performance.		
<b>27<sup>TH</sup> MAR17</b>	<b>Series Exam II</b>		<b>ELE 3201</b>
<b>28<sup>TH</sup> MAR 17</b>			<b>ELE 3202</b>
<b>29<sup>TH</sup> MAR 17</b>			<b>ELE 3204</b>
<b>30<sup>TH</sup> MAR17</b>			<b>ELE 3208/3211</b>
<b>31<sup>ST</sup> MAR 17</b>			<b>ELE 3207/3209</b>
<b>03-APR-17</b>	<b>M5: Reconfigurable antennas</b>		
<b>04-APR-17</b>	<b>Review on Select Topics as per Request from Students</b>		
<b>05-APR-17</b>	<b>Review on Select Topics as per Request from Students</b>		
<b>06-APR-17</b>	<b>Review on Select Topics as per Request from Students</b>		
<b>6<sup>TH</sup> APRIL17</b>			<b>Result Publication</b>
<b>7<sup>TH</sup> APRIL 17</b>			<b>End of Semester Classes</b>