

Department of Electronics & Instrumentation Engineering  
National Institute of Technology Silchar

**Course Structure for M. Tech  
in Instrumentation Engineering**  
Effective from Academic Year 2016-17

<b>Semester I</b>						
<i>Subject Code</i>	<i>Subject</i>		L	T	P	C
EI 5001	Numerical Analysis & Statistical Signal Processing		3	0	0	6
EI 5002	Advanced Instrumentation		3	0	0	6
EI 5003	Industrial Process Control		3	0	0	6
EI 5004	Advanced Instrumentation and Control Lab		0	0	2	2
EI xxxx	Elective I		3	0	0	6
EI xxxx	Elective II		3	0	0	6
		Total	15	0	2	32
<b>Semester II</b>						
<i>Subject Code</i>	<i>Subject</i>		L	T	P	C
EI 5011	Modern Analytical Instrumentation		3	0	0	6
EI 5012	Modern Control Theory		3	0	0	6
EI 5013	Advanced Digital Signal Processing		3	0	0	6
EI 5014	Design and Fabrication Lab		0	0	2	2
EI xxxx	Elective III		3	0	0	6
EI xxxx	Elective IV		3	0	0	6
		Total	15	0	2	32
<b>Semester III</b>						
<i>Subject Code</i>	<i>Subject</i>		L	T	P	C
EI 5021	Project Part I		0	0	10	10
		Total	0	0	10	10
<b>Semester IV</b>						
<i>Subject Code</i>	<i>Subject</i>		L	T	P	C
EI 5031	Project Part II		0	0	24	24
		Total	0	0	24	24

<b>Semester I</b>		<b>Elective I</b>					
<i>Subject Code</i>	<i>Subject</i>		L	T	P	C	
EI 5041	Biomedical Signal Processing		3	0	0	6	
EI 5042	Smart Sensors		3	0	0	6	
EI 5043	Optimization Techniques		3	0	0	6	
EI 5044	Data Acquisition and Signal Conditioning		3	0	0	6	
EI 5045	Analog Signal Processing		3	0	0	6	
EI 5046	Design of Analog and Mixed Signal Circuits		3	0	0	6	
EI 5047	Advanced Sensing Techniques		3	0	0	6	

(Chairman)

(Secretary)

(Member)

(Member)

(Member)

EI 5048	MEMS		3	0	0	6
<b>Semester I</b>	<b>Elective II</b>					
<i>Subject Code</i>	<i>Subject</i>		L	T	P	C
EI 5051	Instrumentation and SCADA		3	0	0	6
EI 5052	PC Based Instrumentation		3	0	0	6
EI 5053	Industrial Instrumentation		3	0	0	6
EI 5054	Intelligent Instrumentation		3	0	0	6
EI 5055	Power Plant Instrumentation		3	0	0	6
EI 5056	Computer Controlled Processes		3	0	0	6
EI 5057	Modern Biomedical Instrumentation		3	0	0	6
EI 5058	IC Technology & applications		3	0	0	6
<b>Semester II</b>	<b>Elective III</b>					
<i>Subject Code</i>	<i>Subject</i>		L	T	P	C
EI 5061	Analog and Digital VLSI Design		3	0	0	6
EI 5062	Logic & Distributed Control Systems		3	0	0	6
EI 5063	Digital Control System		3	0	0	6
EI 5064	Nanotechnology		3	0	0	6
EI 5065	Adaptive Control		3	0	0	6
EI 5066	Statistical Signal Processing		3	0	0	6
EI 5067	Renewable Energy Sources		3	0	0	6
EI 5068	Instrumentation & Automation		3	0	0	6
EI 5069	Virtual Instrumentation		3	0	0	6
<b>Semester II</b>	<b>Elective IV</b>					
<i>Subject Code</i>	<i>Subject</i>		L	T	P	C
EI 5071	Digital Image Processing		3	0	0	6
EI 5072	Industrial Data Communication		3	0	0	6
EI 5073	Environmental Pollution Control		3	0	0	6
EI 5074	Estimation and Identification		3	0	0	6
EI 5075	Precision Instrumentation		3	0	0	6
EI 5076	Robotics and Automation		3	0	0	6
EI 5077	Human Computer Interface and BCI		3	0	0	6
EI 5078	Fibre Optics and LASER Instrumentation		3	0	0	6
EI 5079	Piping and Instrumentation		3	0	0	6
EI 5080	Microcontroller & Embedded System		3	0	0	6