

# Branch Code: EE1

## M.Tech. in ELECTRICAL ENGINEERING STREAM: COMMUNICATIONS AND SIGNAL PROCESSING

### Semester 1

S.No	Course No	Course Name	L	T	E	P	O	C
1		MTech core I <sup>^</sup>	4	0	0	0	8	12
2		MTech core II <sup>^</sup>	4	0	0	0	8	12
3		MTech core III <sup>^</sup>	4	0	0	0	8	12
4		MTech core IV <sup>^</sup>	4	0	0	0	8	12
		<b>Total</b>	<b>16</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>32</b>	<b>48</b>

<sup>^</sup> Total number of core credits must be at least 48. Core courses are to be taken from the following basket of core courses (courses can be added to this basket with HOD approval):

No.	Course No.	Title	L	T	E	P	O	C
1	EE5110	Probability Foundations for Electrical Engineers	4	0	0	0	8	12
2	EE5120	Applied Linear Algebra I for EE	4	0	0	0	8	12
3	EE5130	Digital signal processing	4	0	0	0	8	12
4	EE5151	Communication techniques	4	0	0	0	8	12
5	EE5140	Digital modulation and coding	4	0	0	0	8	12
6	EE5150	Communication Networks	4	0	0	0	8	12
7	EE5505	Wave propagation in communications	3	0	0	0	6	9
8	EE5500	Introduction to photonics	4	0	0	0	8	12
9	EE5142	Introduction to Information Theory and Coding	3	1	0	0	8	12
10	EE5153	Foundations of Optical Networking	4	0	0	0	8	12

### Semester 2

S.No	Course No	Course Name	L	T	E	P	O	C
1		Electives**	0	0	0	0	0	0

### SUMMER

S.No	Course No	Course Name	L	T	E	P	O	C
1	EE6901	Project I	0	0	0	0	25	25

### Semester 3

S.No	Course No	Course Name	L	T	E	P	O	C
1	EE6902	Project II	0	0	0	0	30	30
2		Electives**						

### Semester 4

S.No	Course No	Course Name	L	T	E	P	O	C
1	EE6903	Project III	0	0	0	0	30	30
		<b>Total</b>						<b>30</b>

Semester	I	II	Summer	III	IV	Total
<b>Credits</b>	<b>48</b>	<b>0**</b>	<b>25</b>	<b>30**</b>	<b>30</b>	<b>190</b>

\*\* Indicated credits are only for core programme. In addition, **57 credits of electives** have to be taken. Of these 57 elective credits, 45 credits of electives have to be taken from Elec. Engg. (or equivalent) at the 5000 level or higher, and 12 credits can be taken in any department at the 5000 level or higher. All elective lab courses will also be eligible. Courses from the core basket can also be taken as electives after the minimum requirement for core courses are satisfied.

The EE Department proposes to split the M.Tech project into two phases --- Project Phase-1 carrying 55-credits (to be carried out usually over the summer and the odd semester), and Project Phase-2 carrying 30-credits (to be carried out in the even semester).

Project Phase-1 is mandated for all students. On the other hand, Project Phase-2, which is the continuation of Phase-1, can be pursued only if it is approved by the evaluation committee.

At the end of Project Phase-1, the student should submit a report and make a presentation. The committee will then recommend whether or not the student is eligible to pursue Project Phase-2. If the student is not found eligible, additional course work has to be done so as to meet the total credit requirements for obtaining the M.Tech degree.