

**EE6 - M.Tech. in ELECTRICAL ENGINEERING**  
**STREAM: Integrated Circuits & Systems**  
**2018 Batch**

**Semester 1**

S.No	Course No	Course Name	L	T	E	P	O	C
1	EE5310	Analog Electronic Circuits	4	0	0	0	8	12
2	EE5311	Digital IC Design	4	0	0	0	8	12
3		Elective Courses						**
		<b>Total</b>						<b>24**</b>

**Semester 2**

S.No	Course No	Course Name	L	T	E	P	O	C
		Elective Courses						**

**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

**Semester 4**

S.No	Course No	Course Name	L	T	E	P	O	C
1	EE6903	Project III	0	0	0	0	30	30

Semester	I	II	Summer	III	IV	Total
<b>Credits</b>	<b>24**</b>	<b>0**</b>	<b>25</b>	<b>30**</b>	<b>30</b>	<b>190</b>

\*\* Only core credits are shown. In the EE6 curriculum, **81 credits of electives** have to be taken. Of these 81 credits, 48 credits of electives have to be taken from the specified basket of EE6 electives, and 24 credits can be taken from any course in Elec. Engg. (or equivalent) at the 5000 level or higher. All elective lab courses will also be eligible. All course credits should be finished in the first two semesters. EE6 students will be allowed to register only for project credits in the second year (including summer between second and third semesters).

*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.*

**Elective courses in the EE6 area are to be taken from the following basket of courses (courses can be added to this basket with HOD approval):**

- 1) EE5130 Digital Signal Processing
- 2) EE5410 Introduction to DSP
- 3) EE5110 Probability Foundations for Electrical Engineers
- 4) EE5330 Computer-Aided Design and Analysis of Digital ICs
- 5) EE5331 DSP Architectures & Embedded Systems
- 6) EE5332 Mapping Signal Processing Algorithms to DSP Architectures
- 7) EE5320 Analog IC Design
- 8) EE5321 Active Filter Design
- 9) EE5323 Advanced Electrical Networks
- 10) EE5325 Power Management Integrated Circuits
- 11) EE5350 Linear algebra techniques for data analysis and modelling
- 12) EE6320 RF Integrated Circuits
- 13) EE6321 VLSI Data Conversion Circuits
- 14) EE6322 VLSI Broadband Communication Circuits
- 15) EE6323 Wireless System Design
- 16) EE6324 Phase-Locked Loops
- 17) EE6325 Advanced Power Management Systems
- 18) EE6350 Analysis of noise in systems
- 19) EE6360 Advanced topics in VLSI
- 20) EE6361 Advanced topics in VLSI
- 21) EE7301 Directed Study on Research Topics
- 22) CS6330 Digital System Testing & Testable Design
- 23) CS6230 CAD for VLSI
- 24) EE5313 Semiconductor Device Modelling
- 25) EE5200 Power converter analysis and design
- 26) EE5140 Digital modulation and coding
- 27) EE6402 Biomedical Electronic Systems
- 28) EE6402 Transducers for Instrumentation
- 29) EE5401 Measurements and Instrumentation
- 30) EE5203 Switched mode power conversion