

Syllabus Structure (ECE)

Total Credit: 40

Semester 1			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Applied Mathematics	Core	3	2-1-0
2	Applied Physics	Core	4	2-1-1
3	Electronics Devices and Circuits	Core	4	2-1-1
4	Electrical Engineering	Core	4	2-1-1
5	Non-Technical Subject*	Core	2	1-1-0
6	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
7	Electronics Workshop	Core	2	0-0-2
Semester 2			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Basics of Information Technology	Core	3	1-1-1
2	Introduction to Programming	Core	3	0-1-2
3	Digital System Design	Core	4	2-1-1
4	Electronics Measurement & Instrumentation	Core	3	1-1-1
5	Non-Technical Subject from the Baskets*	Core	2	1-1-0
6	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
7	Mini Project-I	Core	4	0-0-4

*Non-technical subject should be chosen from the different baskets

#Community Services through a FAP recognized organization

Total Credit: 80

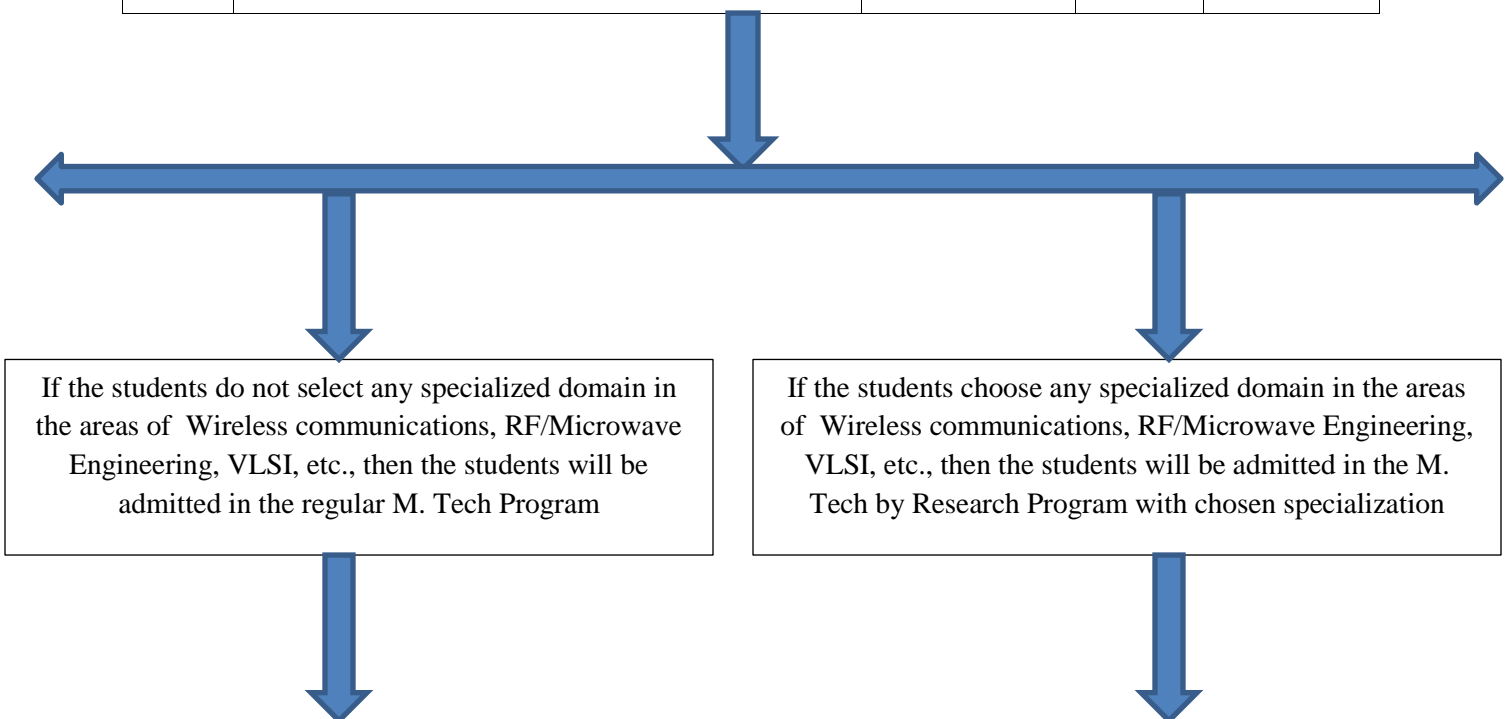
Semester 3			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Micro Processor Interface and Programming	Core	3	1-1-1
2	Continuous and Discrete Signals and Systems	Core	4	2-1-1
3	Electromagnetic Field and Waves	Core	3	2-1-0
4	Analog Electronics	Core	4	2-1-1
5	Data Structures	Core	3	1-1-1
6	Non-Technical Subject from the Baskets*	Core	2	1-1-0
7	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
Semester 4			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Digital Communications	Core	4	2-1-1
2	Integrated Circuit Technology	Core	3	2-1-0
3	Antenna and Wave Propagation	Core	3	2-0-1
4	Control Systems	Core	3	1-1-1
5	Non-Technical Subject from the Baskets*	Core	2	1-1-0
6	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
7	Mini Project-II	Core	4	0-0-4

Total Credit: 120

Semester 5			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Power Electronics	Core	2	1-0-1
2	Digital IC Design	Core	3	2-0-1
3	Digital Signal Processing	Core	3	2-0-1
4	Computer Networks	Core	3	1-1-1
5	Microwave Engineering	Core	4	2-1-1
6	SMT Workshop (or equivalent)		1	0-0-1
7	Non-Technical Subject from the Baskets*	Core	3	2-1-0
8	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
Semester 6			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
	Any one specialized module (with 3 subjects + 1 project/ Independent Study/ Industrial Project, etc.) may be chosen in the fields of	Core	16	8-4-4
1	Module-1: Wireless Communication Systems			
2	Module-2: RF and Microwave Engineering			
3	Module-3: Data Science			
4	Module-4: Embedded Systems			
5	Any other as may be floated by PI			
6	Non-Technical Subject from the Baskets*	Core	3	2-1-0
7	Sports/Arts/Languages/Community Services#	Core	1	0-0-1

Total Credit: 160

Semester 7			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
	Any one specialized module (with 3 subjects + 1 project/ Independent Study/ Industrial Project, etc.) may be chosen in the fields of	Core	16	8-4-4
1	Module-1: VLSI Design and fabrication			
2	Module-2: Cyber Physical Systems			
3	Module-3: Recent Wireless Communication Technologies			
4	Module-4: Photonics			
5	Any other as may be floated by PI			
6	Non-Technical Subject from the Baskets*	Core	3	2-1-0
7	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
Semester 8			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Non-Technical Subject from the Baskets* (two courses may be offered of 3 credits each with proportion 2-1-0)	Core	6	4-2-0
2	Sports/Arts/Languages/Community Services#	Core	2	0-0-2
3	Major Project (Thesis)	Core	12	0-0-12



Total Credits: 192

Semester 9			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Advance Mathematics	Core	3	2-1-0
2	Programming for Engineering Applications	Core	3	0-1-2
3	Introduction to Microelectronics	Core	4	3-0-1
4	Advance Communication Engineering	Core	3	2-1-0
5	Digital System Design	Core	4	2-1-1
6	Non-Technical Subject from the Baskets*	Core	2	1-1-0
7	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
Semester 10			Total Credit: 12	
1	Elective-1	Core	3	2-1-0
2	Elective-2	Core	3	2-0-1
3	Non-Technical Subject from the Baskets* OR Sports/Arts/Languages/Community Services#	Core	2	1-1-0
4	Major Project-I	Core	4	0-0-4

Total Credits: 192

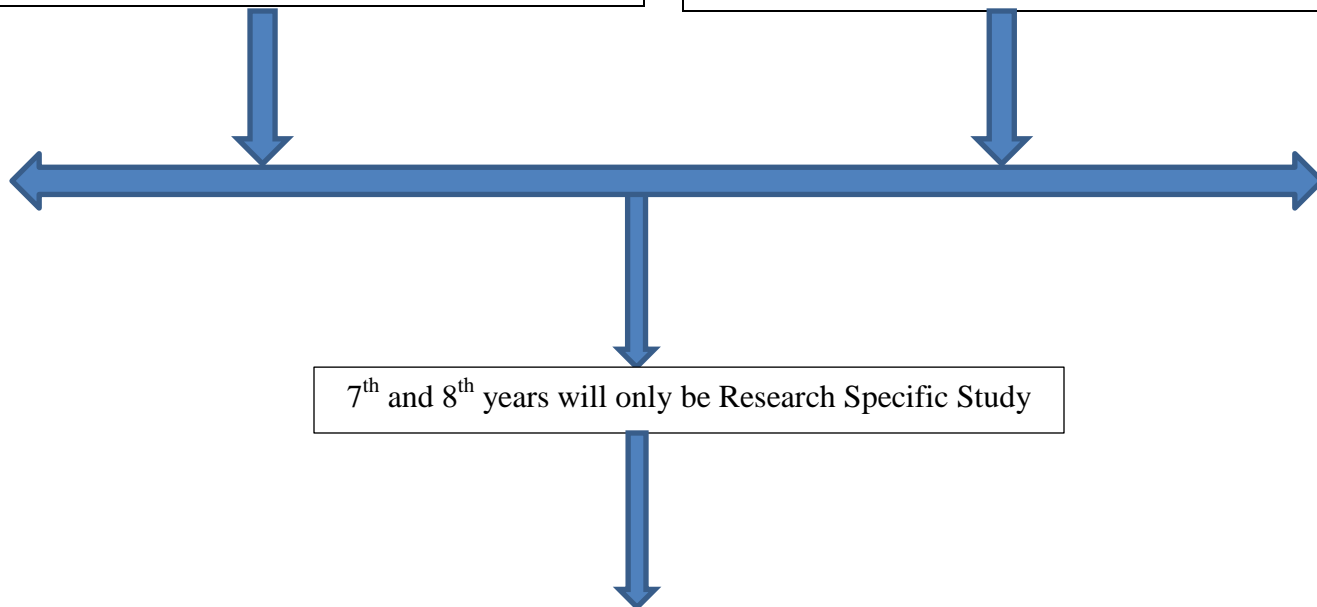
Semester 9			Total Credit: 20	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	As decided by the Faculty Supervisor according to the specialized domain		17	9-4-4
2	Non-Technical Subject from the Baskets*	Core	2	1-1-0
3	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
Semester 10			Total Credit: 12	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	As decided by the Faculty Supervisor according to the specialized domain		10	4-1-5
2	Non-Technical Subject from the Baskets* OR Sports/Arts/Languages/Community Services#	Core	2	1-1-0

Total Credits: 225 + 2Research Credits (RC)

Semester 11			Total Credit: 18	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Elective-1	Elective	3	2-1-0
2	Research Methodology	Core	3	2-1-0
3	Independent Study	Elective	3	0-1-2
4	Major Project-II	Core	6	0-0-6
5	Non-Technical Subject from the Baskets*	Core	2	1-1-0
6	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
Semester 12			Total Credit: 15	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Thesis	Core	12	0-0-12
2	Non-Technical Subject from the Baskets*	Core	2	1-1-0
3	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
2RC can be earned by conferences/journals publication patent/copyright filing/earning, Academia/Consultancy externally/self-funded Project, etc., during the academic year.				

Total Credits: 225 + 2RC

Semester 11			Total Credit: 18	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	As decided by the Faculty Supervisor		12	2-2-8
2	Research Methodology	Core	3	2-1-0
3	Non-Technical Subject from the Baskets*	Core	2	1-1-0
4	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
Semester 12			Total Credit: 15	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Thesis	Core	12	0-0-12
2	Non-Technical Subject from the Baskets*	Core	2	1-1-0
3	Sports/Arts/Languages/Community Services#	Core	1	0-0-1
2RC can be earned by conferences/journals publication patent/copyright filing/earning, Academia/Consultancy externally/self-funded Project, etc., during the academic year.				



Total Credit: 250 + 5RC

7th Year			Total Credit: 25	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Research Progress Colloquium-I	Core	5	0-0-5
2	Research Problem Specific Course (NPTEL, MOOC, etc.)	Core	12	4-2-6
3	Teaching cum Research Assistantship	Core	8	0-0-8

Total 5RC (3RC during this academic year+ 2RC of 6th year) can be earned by conferences/journals publication patent/copyright filing/earning, Academia/Consultancy externally/self-funded Project, etc.

Total Credit: 260 + 12RC

8th Year			Total Credit: 10	
S. No.	Course Name	Core/Elective	Credit	L-T-P
1	Research Progress Colloquium-II	Core	4	0-0-4
2	PhD Thesis Open Seminar	Core	6	0-0-6

Total 12RC (7RC during this academic year+ 5RC of 6th and 7th years) can be earned by conferences/journals publication patent/copyright filing/earning, Academia/Consultancy externally/self-funded Project, etc.