Indian Institute of Technology Tirupati

Dual Degree (B.Tech. & M.Tech) Curriculum : Signal Processing and Communication from Academic Year 2018-2019 onwards

Semester-I

S.No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	ES103M/ EA101M	Introduction to Programming/ Engineering Drawing	BET/ BES	2-0-3-4 1-0-3-3	ES1101/ EA1101	14 4
2.	CY101L/ CY102L	Physical and Theoretical Chemistry/ Organic and Inorganic Chemistry	SCY	2-1-0-3	CY1101/ CY1202	4 4
3.	ES101M	Concepts in Engineering and Design	BET	1-0-2-2	ID1101	4
4.	MA101L	Calculus	SMA	3-1-0-4	MA1101	4
5.	PH101L	Introduction to Classical Mechanics	SPH	2-1-0-3	PH1101	4
6.	PH103P/ CY103P	Physics Laboratory/ Chemistry Laboratory	SPH/ SCY	0-0-3-2	PH1103/ CY1204	4 4
7.	EA102P	Workshop-I	BES	0-0-3-2	EA1103	4
8.	HS10XN	Language Course (Pass/Fail)	HPF	2-0-0-2	HS110X	
Total Credits					**22/21**	

Approved Language Courses

Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
HS101N	Proficiency in English	HPF	2-0-0-2	HS1101	4
HS102N	Basic Course in German			HS1103	6
HS103N	Basic Course in Japanese			HS1105	6
HS104N	Basic Course in Sanskrit			HS1107	6
HS105N	Basic Course in Spanish Language			HS1109	9

Semester-II

S.No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	ES103M/ EA101M	Introduction to Programming/ Engineering Drawing	BET/ BES	2-0-3-4 1-0-3-3	ES1101/ EA1101	14 4
2.	CY101L/ CY102L	Physical and Theoretical Chemistry/ Organic and Inorganic Chemistry	SCY	2-1-0-3	CY1101/ CY1202	4 4
3.	ES102L	Basic Electrical Engineering	BET	3-1-0-4	ES1201	8
4.	MA102L	Differential Equations and Matrices	SMA	3-1-0-4	MA1202	4
5.	PH102L	Introduction to Electrodynamics and Quantum Mechanics	SPH	2-1-0-3	PH1202	4
6.	PH103P/ CY103P	Physics Laboratory/ Chemistry Laboratory	SPH/SCY	0-0-3-2	PH1103/ CY1204	4 4
7.	EA103P	Workshop-II	BES	0-0-3-2	EA1202	4
Total Credits					**21/22**	

Dual Degree (B.Tech. & M.Tech) Curriculum : Signal Processing and Communication
from Academic Year 2018-2019 onwards

Semester-III

S. No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	ES202L/ ES203L	Ecology and Environment/ Life Sciences	BET/ SLS	2-0-0-2 2-0-0-2	ES2103/ BS2101	8 9
2.	EE206L	Digital Systems	PMT	3-1-0-4	CS/EE2101	8
3.	EE206P	Digital Systems Laboratory	PML	0-0-3-2	CS/EE2191	8
4.	EE201L	Electrical Circuits and Networks	PMT	3-1-0-4	EE2202	8
5.	ES201L	Engineering Mechanics	BET	3-1-0-4	ES2101	4
6.	HSE1	Humanities Elective-1	HSS	3-0-0-3		
7.	MA201L	Linear Algebra	SMA	3-0-0-3	MA2021	12
Total Credits				**22**		

Semester-IV

S.No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	EE205L	Signals and Systems	PMT	3-1-0-4	EE2103	8
2.	EE202M	Solid State Devices	PMT	3-0-2-4	EE2204	8
3.	EE306M	Principles of Measurement	PMT	3-0-2-4	EE3204	8
4.	EE203L	Engineering Electromagnetics	PMT	3-1-0-4	EE2208	16
5.	ES202L/ ES203L	Ecology and Environment/ Life Sciences	BET/ SLS	2-0-0-2 2-0-0-2	ES2103/ BS2101	8 9
6.	HSE2	Humanities Elective-2	HSS	3-0-0-3		
7.	MA204L	Probability and Statistics	SMA	3-0-0-3	MA2023	9
Total Credits				**24**		

Rev. 20-Jul-22

Dual Degree (B.Tech. & M.Tech) Curriculum : Signal Processing and Communication
from Academic Year 2018-2019 onwards

Semester-V

S. No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	EE301L	Analog Circuits	PMT	3-1-0-4	EE3101	8
2.	EE302L	Electrical Machines	PMT	3-1-0-4	EE3103	8
3.	EE303L	Control Engineering	PMT	3-1-0-4	EE3105	8
4.	EE204M	Digital Signal Processing	PMT	3-1-2-5	EE2206	8
5.	EE301P	Analog Circuits Laboratory	PML	0-0-3-2	EE3191	8
6.	EE302P	Electrical Machines Laboratory	PML	0-0-3-2	EE3193	8
7.	FRE1	Free Elective-1	FRE	3-0-0-3		
Total Credits				**24**		

Semester-VI

S.No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	EE305L	Power Systems	PMT	3-1-0-4	EE3202	8
2.	EE304L	Communication Systems	PMT	3-1-0-4	EE3107	8
3.	DPE1	Department Elective-1	PMT	3-0-0-3		
4.	DPE2	Department Elective-2	PMT	3-0-0-3		
5.	HSE3	Humanities Elective-3	HSS	3-0-0-3		
6.	EE403P	Control and Automation Laboratory	PML	0-0-3-2	EE4191	12
SUMMER						
7.	EE391G	Industrial/Research Internship	PIT	- - - 2	IT3202	1
Total Credits				**21**		

Rev. 20-Jul-22

Dual Degree (B.Tech. & M.Tech) Curriculum : Signal Processing and Communication
from Academic Year 2018-2019 onwards

Semester-VII

S. No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	EE527L	Advanced Signal Analysis and Processing	PMT	3-0-0-3	EE5101	12
2.	EE523L	Wireless Communication	PMT	3-0-0-3	EE5103	11
3.	EE493N	Industrial Lecture	PIL	1-0-0-1	IL4101	1
4.	DPE5	Department Elective 3	PMT	3-0-0-3		
5.	FRE3	Free Elective 3	FRE	3-0-0-3		
6.	FRE4	Free Elective 4	HSS	3-0-0-3		
7.	EE403P	Control and Automation Laboratory	PML	0-0-3-2	EE4191	12
8.	EE527P	Advanced Signal Analysis and Processing Laboratory	PML	0-0-3-2	EE5191	12
9.	EE523P	Wireless Communication Laboratory	PML	0-0-3-2	EE5193	11
Total Credits				**22**		

Semester-VIII

S. No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	EE509L	Communication Networks	PMT	3-0-0-3	EE5022	5
2.	EE513L	Statistical Signal Processing	PMT	3-0-0-3	EE5204	6
3.	DPE4	Department Elective 4	PMT	3-0-0-3		
4.	DPE5	Department Elective 5	PMT	3-0-0-3		
5.	FRE5	Free Elective 5	FRE	3-0-0-3		
6.	EE509P	Communication Networks Laboratory	PML	0-0-3-2	EE5292	8
7.	EE554P	Image Processing Laboratory	PML	0-0-3-2	EE5193	5
8.	HS401L	Professional Ethics	HPE	2-0-0-2	HS4202	7
Total Credits				**21**		

Rev. 20-Jul-22

Dual Degree (B.Tech. & M.Tech) Curriculum : Signal Processing and Communication
from Academic Year 2018-2019 onwards

Semester-IX

S. No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	DPE6	Department Elective 6	PMT	3-0-0-3		
2.	EE693G	Seminar	PMT	- - - 1	EE6110	4
3.	EE691G	Project Phase - I	PMP	- - - 10	EE6150	4
Total Credits				**14**		

Semester-X

S. No.	Course Code	Course Name	Category	L-T-P-C	Course Code (prior to Jul 2022)	Senate
1.	EE692G	Project Phase - II	PMP		EE6250	- - - 15
Total Credits				**15**		

TOTAL CREDITS: 205