Curriculum for Dual Degree

B.Tech in Electronics and Communication Engineering and M.Tech in Communication Systems

From The Academic Year 2023

(Approved in Senate 51)

Indian Institute of Information Technology Design and Manufacturing, Kancheepuram

Chennai-600 127

		Semester 1					
S.No	Course Code	Course Name	Category	L	T	P	C
1	MA1000	Calculus	BSC	3	1	0	4
2	PH1000	Engineering Electromagnetics	BSC	3	0	0	3
3	EC1000	Electrical Circuits for Engineers	BEC	3	1	0	4
4	CS1000	Problem Solving and Programming	BEC	3	0	0	3
5	ME1000	Materials for Engineers	BEC	3	0	0	3
6	DS1000	Foundation for Engineering and Product Design	DSC	1	2	0	3
7	PH1001	Engineering Electromagnetics Practice	BSC	0	0	3	1.5
8	CS1001	Problem Solving and Programming Practice	BEC	0	0	3	1.5
9	HS1000	Effective Language and Communication Skills	HSC	1	0	2	2
10	NC1000	NSO Semester 1	NC	0	0	2	0
	NC1002	NCC Semester 1					
	NC1004	SSG Semester 1					
							25
		Semester 2					
S.No	Course Code	Course Name	Category	L	T	P	C
1	MA1001	Differential Equations	BSC	3	1	0	4
2		Science Elective Course 1	SEC	3	1	0	4
3	ME1001	Engineering Graphics	BEC	2	0	4	4
4	CS1002	Elementary Data Structures and Logical Thinking	ITC	3	0	0	3
5	DS1001	Sociology of Design	DSC	1	2	0	3
6	ID1000	Design and Manufacturing Lab	ITC	0	0	2	1
7	EC1001	Digital Circuits	PCC	3	1	0	4
8	CS1003	Elementary Data Structures and Logical Thinking Practice	ITC	0	0	4	2
9	NC1001	NSO Semester 2	NC	0	0	2	0
	NC1003	NCC Semester 2					
	NC1005	SSG Semester 2					
10	NC1008	Earth, Environment and Design	NC	1	0	0	0
							25
		Semester 3					
S.No	Course Code	Course Name	Category	L	T	P	C
1		Science Elective Course 2	SEC	3	1	0	4
2	DS2000	Systems Thinking for Design	DSC	1	2	0	3
3	EC2000	Solid State Electronic Devices	PCC	3	1	0	4
4	EC2001	Network Theory	PCC	3	1	0	4
5	EC2002	Signals and Systems	PCC	3	1	0	4
6	EC2003	Microprocessors and Microcontrollers	PCC	2	0	3	3.5
7	EC2004	Digital Circuits Practice	PCC	0	0	3	1.5
8	NC2000	Indian Constitution, Essence of Indian Traditional Knowledge	HSC	1	0	0	0
							24
		Semester 4					
S.No	Course Code	Course Name	Category	L	T	P	C
1		Science Elective Course 3	SEC	3	1	0	4
2	DS2001	Smart Product Design	DSC	1	2	0	3
3	EC2007	Digital Signal Processing	PCC	3	1	0	4
4	EC2008	Electromagnetic Waves	PCC	3	1	0	4
5	EC2009	Analog Circuits	PCC	3	1	0	4
6	EC2010	Sensing and Instrumentation Practice	PCC	1	0	3	2.5
7	EC2011	Embedded Systems Practice	PCC	1	0	3	2.5
8	NC2001	Human Values and Stress Management	NC	1	0	0	0
							24

S.No	Course Code	Course Name	Category	L	T	P	C
		Semester 5					
1	CS3006	Introduction to Data Science for Engineers	ITC	3	0	2	4
2	DS3000	Entrepreneurship and Management Functions	DSC	1	2	0	3
3	EC3000	Control Systems	PCC	3	1	0	4
4	EC3001	Communication Systems	PCC	3	1	0	4
5		Professional Elective Course 1	PEC	3	1	0	4
6	EC3002	Digital Signal Processing Practice	PCC	0	0	3	1.5
7	EC3003	Analog Circuits Practice	PCC	0	0	3	1.5
8	NC3000	Professional Ethics and Organizational Behaviour	NC	1	0	0	0
							22

S.No	Course Code		Category	L	T	P	C
		Semester 6					
1	DS3001	Prototyping and Testing	DSC	1	2	0	3
2	EC3004	Digital Communication	PCC	3	1	0	4
3		Professional Elective Course 2	PEC	3	1	0	4
4		Free Elective Course 1	ELC	3	1	0	4
5		Free Elective Course 2	ELC	3	1	0	4
6	EC3005	Communication Systems Practice	PCC	0	0	2	1
7	HS3000	Professional Communication	HSC	1	0	2	2
8	NC3001	Intellectual Property Rights	NC	1	0	0	0
							22

S.No	Course Code		Category	L	T	P	C
		Semester 7					
1	EC5028	Mathematics for Communication	PCC	3	1	0	4
2	EC5029	Modelling and Simulation	PCC	2	0	4	4
3	EC5030	Data Communication Networks	PCC	3	1	0	4
4	EC5031	Wireless Communication	PCC	3	1	0	4
5	EC5032	Data Communication Networks Practice	PCC	0	0	4	2
6	EC5033	Wireless Communication Practice	PCC	0	0	4	2
7		Free Elective Course 3	ELC	3	1	0	4
							24

S.No	Course Code		Category	L	T	P	C
		Semester 8					
1		Free Elective Course 4	ELC	3	1	0	4
2		Professional Elective Course 3	PEC	3	1	0	4
3		Professional Elective Course 4	PEC	3	1	0	4
4		Professional Elective Course 5	PEC	3	1	0	4
5		Professional Elective Course 6	PEC	3	1	0	4
							20

S.No	Courses Codes	Course Name	Category	L	T	P	C
		Semester 9					
1	EC6006	DD-EC-CMS- Project Phase I (May-June) (Internship)	PCD	0	0	8	4
2	EC6007	DD-EC-CMS-Project Phase II (Aug – Nov)	PCD	0	0	12	6
							10

S.No	Courses Codes	Course Name	Category	L	T	P	C
		Semester 10					
1	EC6008	DD-EC-CMS- Project Phase III (Dec – May)	PCD	0	0	20	10
							10

$ All NC courses are Pass/Fail courses for which the letter grade H/L shall be awarded.

1. Professional Elective Course is an elective course offered or prescribed by the parent department. Free Elective Course is an elective course offered by any department, including the parent department. For example: - A ME student, based on his/her choice, can register the elective course offered by ME department or CSE department as free elective course.

2. 3 Months internship is mandatory, however, the curriculum offers the flexibility to carry out 3-12 Months internship with the approval of the parent department. To satisfy the minimum credit requirement, students opting for long term internship (More than 3 months) are expected to advance a few elective courses and credit a few courses from NPTEL. In line with the guidelines approved by the Senate (Senate 46-07), a B.Tech/DD student can earn a maximum of 9 credits from NPTEL Courses. For all successfully completed NPTEL Courses, the letter grade "H" (Pass) will be awarded and credits of such courses will not be accounted for CGPA calculation.

Semester wise Credit Distribution												
	Semester											
Category	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	Total	%
Basic Science Course (BSC)	8.5	4	0	0	0	0	0	0	0	0	12.5	6.07
Science Elective Course (SEC)	0	4	4	4	0	0	0	0	0	0	12	5.83
Basic Engineering Course (BEC)	11.5	4	0	0	0	0	0	0	0	0	15.5	7.52
Design Course (DSC)	3	3	3	3	3	3	0	0	0	0	18	8.74
IT Skill Course (ITC)	0	6	0	0	4	0	0	0	0	0	10	4.85
Professional Core Course (PCC)	0	4	17	17	11	5	16	0	0	0	74	35.92
Professional Elective Course (PEC)	0	0	0	0	4	4	4	16	0	0	24	11.65
Elective Course (ELC)	0	0	0	0	0	8	4	4	0	0	16	7.77
Humanities and Social Science Course (HSC)	2	0	0	0	0	2	0	0	0	0	4	1.94
Professional Career Development (PCD)	0	0	0	0	0	0	0	0	10	10	20	9.71
Total	25	25	24	24	22	22	24	20	10	10	206	100
	25	50	74	98	120	142	166	186	196	206		