

Indian Institute of Information Technology Design and Manufacturing Kurnool

B.Tech (ECE)

Course Structure

I-Year I-Semester

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	DS101	Differential and Integral Calculus	BSC	3	0	3
2	DS102	Engineering Mechanics	BSC	3	0	3
3	CS101 EC101	Problem Solving and Computer Programming (or) Basic Electrical and Electronics Engineering	BEC	3	0	3
			BEC	3	0	3
4	ME101 ME102	Concepts in Engineering Design (or) Science and Engineering of Materials	DES	3	0	3
			BEC	3	0	3
5	DS103 DS11x	Technical and Professional Communication (or) Humanities Course 1	HMC	2	2	3
			HMC	2	0	2
6	DS12x DS104	Humanities Course 2 (or) Earth, Environment and Design	DES	2	0	0
			DES	2	0	0
7	ME103	Engineering Graphics	DES	0	3	2
8	DS105	Engineering Mechanics Practice	BSC	0	3	2
9	DS106	Measurement and Data Analysis	BSC	0	3	2
10	CS102 ME104	Problem Solving and Computer Programming Practice (or) Engineering Skills Practice	BEC	0	3	2
			BEC	0	3	2
Total				16	14	23
				16	14	22

List of courses in Humanities elective – 1

- 1) Design History (DS111)
- 2) History of Science and Technology in India (DS112)

List of Courses in Humanities elective – 2

- 1) Professional Ethics for Engineers (DS121)
- 2) Universal Human Values (DS122)

I-Year II-Semester

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	DS107	Differential Equations	BSC	3	0	3
2	DS108	Engineering Electromagnetics	BSC	3	0	3
3	EC101 CS101	Electrical and Electronics Engineering (or) Problem Solving and Computer Programming Basic	BEC	3	0	3
			BEC	3	0	3
4	ME102 ME101	Science and Engineering of Materials (or) Concepts in Engineering Design	BEC	3	0	3
			DES	3	0	3
5	DS11x DS103	Humanities Course 1 (or) Technical and Professional Communication	HMC	2	0	2
			HMC	2	2	3
6	DS104 DS12x	Earth, Environment and Design (or) Humanities Course 2	DES	2	0	0
			DES	2	0	0
7	ME105	Design Realization	DES	0	3	2
8	DS109	Engineering Electromagnetics Practice	BSC	0	3	2
9	ME104 CS102	Engineering Skills Practice (or) Problem Solving and Computer Programming Practice	BEC	0	3	2
			BEC	0	3	2
10	ME106	Industrial Design Sketching	BEC	0	3	2
Total				16	14	22
				16	14	23

II-Year I-Semester

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	EC201	Signals and Systems	PEC	3	0	3
2	EC202	Electronic Devices	PEC	3	0	3
3	EC203	Digital Logic Circuits	PEC	3	0	3
4	CS210	Fundamentals of Data structures and Algorithms	PEC	3	0	3
5	DS201	Linear Algebra	PEC	3	0	3
6	DS202	Sociology of Design	DES	2	0	2
7	EC204	Digital Logic Circuits Practice	PEC	0	3	2
8	CS211	Fundamentals of Data structures and Algorithms Practice	PEC	0	3	2
Total				17	6	21

II-Year II-Semester

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	EC251	Digital Signal Processing	PEC	3	0	3
2	EC252	Analog Circuits	PEC	3	0	3
3	EC253	Power Electronics	PEC	3	0	3
5	DS204	Probability Theory and Statistics	BSC	3	0	3
4	DS205	Engineering Economics	HMC	3	0	3
6	EC254	Digital Signal Processing Practice	PEC	0	3	2
7	EC255	Analog Circuits Practice	PEC	0	3	2
8	EC256	Electrical Drives Practice	PEC	1	3	3
Total				16	9	22

III-Year I-Semester

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	EC301	Micro Processors and Microcontrollers	PEC	3	0	3
2	EC302	Analog and Digital Communication Techniques	PEC	3	0	3
3	EC303	Control Systems	PEC	3	0	3
4	EC304	Transmission Lines, Waveguides, and Antennas	PEC	3	0	3
5	DS301	Entrepreneurship and Management Functions	HMC	2	0	2
6	EC305	Micro Processors and Microcontrollers Practice	PEC	0	3	2
7	EC306	Analog and Digital Communication Techniques Practice	PEC	0	3	2
8	EC307	Transmission Lines, Waveguides, and Antennas Practice	PEC	0	3	2
9	EC308	Sensing and Instrumentation Practice	PEC	1	3	3
Total				15	12	23

III-Year II-Semester

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	EC351	VLSI System Design	PEC	3	0	3
2	EC352	Wireless Communication	PEC	3	0	3
3	EC353	Information Theory and Coding	PEC	3	0	3
4	ECXXX	Departmental Elective - I	PEC	3	0	3
5	ECXXX	Departmental Elective - II	PEC	3	0	3
6	EC354	Embedded Systems Practice (Project based learning)	PEC	1	3	3
7	EC355	Electronic Manufacturing and Prototyping	PEC	1	3	3
8	EC356	VLSI System Design Practice	PEC	0	3	2
Total				17	9	23

IV-Year I-Semester

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	EC401	Internship	PCD	N A	N A	5
2	EC402	Mechanical Design for Electronic Systems	PEC	3	0	3
3	EC449	Project – Phase 1	DES	0	5	5
Total				3	5	13

IV-Year II-Semester

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	ECXXX	Departmental Elective-III	PEC	3	0	3
2	XXXXX	Free Elective	PEC	3	0	3
3	XXXXX	Design Elective	PEC	3	0	3
4	EC499	Project – Phase 2	PCD	0	10	10
Total				9	10	19

HMC: Humanities & Management Courses

BSC: Basic Science Courses (Physics/ Chemistry/Mathematics / Life Science)

BEC: Basic Engineering Courses

PEC: Professional Engineering Courses ELE Elective

PCD: Professional / Career Development (Industrial Lecture / Internships/Projects)

DES: Design Courses

I: Number of theory hours per week

P: Number of practice hours per week

List of Departmental Electives for III and IV Year (VI and VIII Semesters)

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	EC361	Antenna Design	PEC	3	0	3
2	EC362	Numerical Techniques in Electromagnetics	PEC	3	0	3
3	EC363	RF and Microwave Integrated Circuits	PEC	3	0	3
4	EC364	Electromagnetic Interference and Compatibility	PEC	3	0	3
5	EC365	Analog and Mixed Signal Circuit Design	PEC	3	0	3
6	EC366	Testing and Testability	PEC	3	0	3
7	EC371	Reliable Digital Communication System Design	PEC	3	0	3
8	EC372	Satellite Communication	PEC	3	0	3
9	EC373	Software Defined Radio	PEC	3	0	3
10	EC374	Cognitive Communication Networks	PEC	3	0	3
11	EC375	MIMO Communication Systems	PEC	3	0	3
12	EC376	Detection and Estimation Theory	PEC	3	0	3

List of Free Electives for IV Year (VII and VIII Semesters)

Sl. No.	Course Code	Course Name	Category Code	I	P	No. of Credits
1	EC461	Electric Vehicle Technology	PEC	3	0	3
2	EC462	Design of IoT System	PEC	3	0	3
3	EC463	Data Communication and Networking	PEC	3	0	3
4	EC464	Navigation System	PEC	3	0	3