National Institute of Technology, Jamshedpur
Department of Electronics & Communication Engineering

Course Structure for M.Tech in Communication Systems Engineering

SEMESTER I

Subject Code	Subject	L	T	P	Cr
EC4101	Adaptive Signal Processing	3	0	2	4
EC4102	Advanced Digital Communication	4	0	0	4
EC4103	Computer Communication Networks	3	0	2	4
EC4104	Wireless Communication Systems	4	0	0	4
EC41XX	**Elective-1**	4	0	0	4
EC4105	Software Lab using MATLAB	0	0	2	2
				Total	**22**

Elective-1

1. **Computational Intelligence (EC4106)**
2. Computer Vision **(EC4107)**
3. RF and Microwave Integrated Circuits **(EC4108)**
4. Underwater Communication **(EC4109)**

SEMESTER II

Subject Code	Subject	L	T	P	Cr
EC4210	Detection and Estimation Theory	3	0	2	4
EC4211	Information Theory and Coding	4	0	0	4
EC4212	Satellite and Radar Communication	4	0	0	4
EC4213	Advanced Optical communication	3	0	2	4
EC42XX	**Elective-2**	4	0	0	4
EC4214	Communication System Design Laboratory (MATLAB, C, SCILAB)	0	0	2	2
				Total	**22**

Elective-2

1. Architecture of Digital Signal Processing **(EC4215)**
2. Antenna Theory **(EC4216)**
3. Wireless Sensor Network **(EC4217)**
4. Digital Image Processing **(EC4218)**

SEMESTER III

Code	Subject	L	T	P	Cr
EC4319	Thesis-1	0	0	0	16
EC4320	Seminar	0	0	0	4
				Total	**20**

SEMESTER IV

Code	Subject	L	T	P	Cr
EC4421	Thesis-2	0	0	0	20
				Total	**20**

Total Credits: 84

Note: Bold items are common Elective in both the streams (Embedded Systems & Communication Systems)