

Revised Curriculum  
**M.Tech in Signal Processing & Communication Engineering (SPCE)**  
**Indian Institute of Technology Bhubaneswar**

**Semester I**

Subject Name	Code	L-T-P	Credit	Contact Hours
Advanced Communication Engineering	EC6L001	3-0-0	3	3
Advanced Digital Signal Processing	EC6L004	3-0-0	3	3
Applied Probability and Linear Algebra	EC6L040	3-0-0	3	3
Elective - 1		3-0-0	3	3
Elective - 2 / Open Elective		3-0-0/3-1-0	3/4	3/4
Advanced Communication Engineering Laboratory	EC6P001	0-0-3	2	3
Applied Signal Processing Laboratory	EC6P003	0-0-3	2	3
<b>Total Credits</b>	<b>19/20</b>			

**Semester II**

Subject Name	Code	L-T-P	Credit	Contact Hours
Wireless and Mobile Communication	EC6L020	3-0-0	3	3
5G and Beyond Wireless Communication	EC6L042	3-0-0	3	3
Elective - 3		3-0-0	3	3
Elective - 4		3-0-0	3	3
Elective - 5 / Open Elective		3-0-0/3-1-0	3/4	3/4
Design and Simulation Laboratory	EC6P002	0-0-3	2	3
Thesis Part-1	EC6D005		2	
<b>Total Credits</b>	<b>19/20</b>			

**Semester III**

Subject Name	Code	L-T-P	Credit	Contact Hours
Thesis Part-2	EC6D006		14	
<b>Total Credits</b>	<b>14</b>			

**Semester IV**

Subject Name	Code	L-T-P	Credit	Contact Hours
Thesis Part-3	EC6D007		14	
<b>Total Credits</b>	<b>14</b>			

**Total Program Credits: 66/68**

### List of Electives

Course Name	Code	LTP	Credits
Optical Communication	EC6L012	3-0-0	3
Statistical Signal Processing	EC6L005	3-0-0	3
Antenna Theory	EC6L013	3-0-0	3
EMI and EMC Techniques	EC6L009	3-0-0	3
Remote Sensing Systems	EC6L011	3-0-0	3
Passive Microwave Circuits, Devices and Measurements	EC6L041	3-0-0	3
Information Theory and Coding	EC6L003	3-0-0	3
Sensor Networks	EC6L032	3-0-0	3
Speech Signal Processing	EC6L028	3-0-0	3
Array Signal Processing	EC6L024	3-0-0	3
Pattern Recognition	EC6L027	3-0-0	3
Design and Analysis of Algorithms	EC6L006	3-0-0	3
Communication Networks	EC6L010	3-0-0	3
Satellite Communication	EC6L018	3-0-0	3
Computational Electromagnetics	EC6L016	3-0-0	3
Modern Radar System	EC6L022	3-0-0	3
Fiber Optic Sensors	EC6L019	3-0-0	3
Computer Networks	EC6L026	3-0-0	3
Photonic Network	EC6L014	3-0-0	3
Multimedia Network	EC6L025	3-0-0	3
Networks and Systems Security	CS6L002	3-0-0	3
Adaptive Signal Processing	EC6L023	3-0-0	3
Biomedical Signal Processing	EC6L015	3-0-0	3
Image and Video Processing	EC6L002	3-0-0	3
Computer Vision	EC6L031	3-0-0	3
Advanced Coding Theory	EC6L043	3-0-0	3
Quantum Communications	EC6L044	3-0-0	3
Network Optimization	EC6L045	3-0-0	3
Broadband Access Networks	EC6L046	3-0-0	3

\*In addition to the courses in the above list, students may be permitted to register for courses offered by other departments/schools, depending on suitability.