Telecommunications

Course Code	20EC2702A	Year	IV	Semester	I
Course Category	Open Elective-IV	Offering Branch	ECE	Course Type	Theory
Credits	3	L-T-P	3-0-0	Prerequisites	--
Continuous Internal Evaluation:	30	Semester End Evaluation:	70	Total Marks:	100

Course Outcomes	
Upon successful completion of the course, the student will be able to	
CO1	Infer the basic knowledge of telecommunication system, regulations (L2).
CO2	Make use of revolutionary changes in Tele Communication technologies (L3).
CO3	Analyse different components of tele communication system. (L4).
CO4	Appraise the use of various components of telecommunication systems (L4).

Mapping of course outcomes with Program outcomes (CO/ PO/PSO Matrix)

Note: 1- Weak correlation 2-Medium correlation 3-Strong correlation

* - Average value indicates course correlation strength with mapped PO

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2													
CO2	3									2				
CO3		2								2			2	2
CO4		2								2			2	2
Avg.	3	2								2			2	2

Syllabus

Unit No.	Contents	Mapped CO
1	**Telecommunication Systems:** Evolution of Tele Communication Systems, Simple telephone communication, Telephones, Telephone System, Facsimile, Internet Telephony, Tele Communication Standards.	CO1 –CO4
2	**Cell Phone Technologies**: Cellular Telephone Systems, A Cellular Industry Overview, 2G and 3G Digital Cell Phone Systems, Long Term Evolution and 4G Cellular Systems	CO1 –CO4
3	**Wireless Technologies:** Wireless LAN, PANs and Bluetooth, ZigBee and Mesh Wireless Networks,WiMAX and Wireless Metrop olitan-Area Networks- Infrared wireless- Ultra wideband wireless- Additional wireless applications	CO1 –CO4
4	**Optical Communication:** Optical Principles, Optical Communication Systems, Fiber-Optic Cables, Optical Transmitters and Receivers.	CO1 –CO4

5	**Satellite Communication:** Satellite Orbits, Satellite Communication Systems, Satellite Subsystems, Ground Stations, Satellite Applications, Global Navigation Satellite Systems.	CO1 –CO4

Learning Resources
Text Books
1. L. E. Frenzel Jr., Principles of Electronic Communication Systems, 4th Ed., Mc Graw Hill, 2016. 2. Thiagarajan Viswanathan, Telecommunication Switching Systems and Networks, PHI
Reference Books
1. P.Gnanasivam, Telecommunication Switching and Networks, New Age International 2. W. C. Y. Lee, Wireless & Cellular Telecommunications, Mc Graw-Hill, 3rd Ed., 2006. 3. W. Tomasi, Advanced Electronic Communication Systems, 4th Ed, Pearson Education, 2013. 4. Dennis Roddy, Electronic Communications, 4th Ed, Pearson Education, 2003.
e-Resources
https://www.digimat.in/nptel/courses/video/117102059/L26.html https://nptel.ac.in/courses/117102059
