

## TELECOMMUNICATIONS

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

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

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

<b>Syllabus</b>		
<b>Unit No.</b>	<b>Contents</b>	<b>Mapped CO</b>
I	<b>Telecommunication Systems:</b> Evolution of Tele Communication Systems, Simple telephone communication, Telephones, Telephone System, Facsimile, Internet Telephony, Tele Communication Standards.	CO1 –CO4
II	<b>Cell Phone Technologies:</b> Cellular Telephone Systems, A Cellular Industry Overview, 2G and 3G Digital Cell Phone Systems, Long Term Evolution and 4G Cellular Systems	CO1 –CO4
III	<b>Wireless Technologies:</b> Wireless LAN, PANs and Bluetooth, ZigBee and Mesh Wireless Networks, WiMAX and Wireless Metropolitan-Area Networks- Infrared wireless- Ultra wideband wireless- Additional wireless applications	CO1 –CO4

IV	<b>Optical Communication:</b> Optical Principles, Optical Communication Systems, Fiber-Optic Cables, Optical Transmitters and Receivers.	CO1 –CO4
V	<b>Satellite Communication:</b> Satellite Orbits, Satellite Communication Systems, Satellite Subsystems, Ground Stations, Satellite Applications, Global Navigation Satellite Systems.	CO1 –CO4

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<b>Learning Resources</b>
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<b>Text Books</b>
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| <ol style="list-style-type: none"> <li>1. Louis E. Frenzel Jr., Principles of Electronic Communication Systems, 4/e, McGraw Hill Publications, McGraw-Hill Education, 2016.</li> <li>2. Telecommunication Switching Systems and Networks, by Thiagarajan Viswanathan, PHI</li> </ol> |
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<b>Reference Books</b>
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| <ol style="list-style-type: none"> <li>1. Telecommunication Switching and Networks. By P.Gnanasivam, New Age International</li> <li>2. William C. Y. Lee, “Wireless &amp; Cellular Telecommunications”, McGraw-Hill Companies Inc, Third Edition, 2006.1.</li> <li>2. Wayne Tomasi, Advanced Electronic Communication Systems, 4/e, Pearson Education, 2013.</li> <li>3. Dennis Roddy, Electronic Communications, 4/e, Pearson Education, 2003.</li> </ol> |
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