

M.Tech Electronics and Communications Engg.	Name of Faculty: Dr. C. K. AANANDAN
Course: ELE 3209 ANTENNA THEORY	Semester: II
Lecture Hall: Room No.	Timings: as per CBCS

Week and date	Lecture topics	Assignments	Remarks
Week 1 (3 rd Jan 17)	Defenitions – general Overview of Antennas		
Week 2 (9 th Jan 17)	Antenna arrays – Broadside array – end fire array	<i>Assignment-1</i>	
Week 3 (16 th Jan 17)	Antenna arrays – Broadside array – end fire array -directivity		
Week 4 (23 rd Jan 17)	3 dimensional characteristic – Design procedure – Non uniform array – Binomial array		
Week 5 (30 th Jan 17)	– Chebyscheff array – Planar array – Array factor – beam width – directivity.		
Week 6 (6 th Feb 17)	First Internals		
Week 7 (13 th Feb 17)	Travelling wave antennas – Helical Antennas – Yagi – Uda antenna – spiral antenna – Log periodic antenna – Dipole array – Design of Dipole array	<i>Assignment-1 submission</i>	
Week 8 (20 th Feb 17)	– Horn antennas – Sectoral horns – pyramidal horns – Corrugated horn antenna.	<i>Assignment-2</i>	
Week 9 (27 th Feb 17)	Reflector Antennas: Plane reflector – Corner reflector – Parabolic reflector – Patterns of large circular aperture – Parabolic cylinder – Cassigrain antennas, Babinet principle and complementary antennas.		
Week 10 (6 th Mar 17)	Antenna Synthesis: Continuous sources, Schelkunoff Polynomial method, Fourier transform method – Woodward method – Taylor Line source method –		
Week 11 (13 th Mar 17)	Triangular, Cosine and Cosine squared amplitude distribution – Line source phase distribution – Continuous aperture sources.		
Week 12 (20 th Mar 17)	Microstrip Antennas and Smart Antennas: Basic characteristics – Feeding techniques – Rectangular and circular patch antennas		
Week 13 (27 th Mar 17)	Second Internals		
Week 14 (3 rd Apl 17)	Smart Antenna analogy – Cellular radio system evolution – Signal propagation Antenna beamforming – Mobile Adhoc Networks (MANETs), System design.	<i>Assignment-2 submission</i>	
Week 15 (10 th Apl 17)	<i>Publication of Sessionals</i>		
Week 16 (17 th Apl 17)	Commencement of II Sem Examinations		

M.Tech Electronics and Communications Engg.	Name of Faculty: Dr. C. K. AANANDAN
Course: ELE 3209L ANTENNA Lab	Semester: II
Lecture Hall:	Timings: as per CBCS

Antenna Lab Experiments:

1. Familiarization: Antenna Trainer Kit
2. Radiation Pattern Measurements:
 H-Plane,
 E-Plane
 Pyramidal Horns
3. Helical Antenna Fabrication and Measurement.
4. Microstrip Antennas:
 Rectangular Microstrip Antenna Design, fabrication and measurement.
5. Antenna measurements using Network Analyser: Time gating applications