### **\*ECE 5324/6324---2013**

### **Material Covered for Midterm I \***

**\*1. Pages 1-34 of Class Notes ( Center-fed dipoles, Vertical end-fed**

**Monopoles above ground,Ohmic losses,**

**Antenna Efficiency, Loop antennas, Antennas in communication**

**systems, Antennas in Radar systems;**

**Antenna Arrays-- 1-D, 2-D and 3-D antenna arrays,Broadside arrays,**

**Electronically scannable (stearable )**

**antennas, Endfire arrays.**

**2. Pages 81-89 of the Text ( small loop antennas)**

**3. Pages 151-159 of the Text ( dipole antennas of various lengths)**

**4. Pages 107-111 ( antennas in communication systems)**

**5. Pages 122 -123 ( antennas in monostatic radar systems)**

**6. Pages 271-284 ( antenna arrays)\***

## **Material covered for Midterm II**

**1.Pages 303- 307 of the Text; Mutual Coupling between antennas in an array**

**2.Pages 47-53 of Class Notes( Examples including mutual impedance effects)**

**3. Pages 57-62 of Class Notes ( Impedance matching of antennas using 2- or 3- lumped reactances)**

**4.Pages 285, 286 of the Text; The Hanson- Woodyard Endfire Array**

**5.Chapter 9 pp. 344- 356 of the Text; Aperture antennas, uniform rectangular apertures.**

**6. Chapter 11 pp. 465-474 of the Text; Rectangular Microstrip Patch Antennas.**

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### Material covered after Midterm II

1. **Chapter 7 pp. 219-237of the Text; Traveling Wave Antennas, Traveling Wave Vee antenna, Rhombic Antennas, Helical Antennas**

**( normal mode of radiation, axial mode of radiation), Biconical Antennas, Slot Antennas.**

1. **Posted Class Material on Slot Antennas including complementary**

**dipoles, arrays of dipoles, off-center feeds for changing input**

**impedance of slot antennas, Batwing Antennas, Turnstile Antennas**

**for TV .**

1. **Chapter 9 pp. 357-390 of the Text; Tapered Rectangular Apertures,**

**Open-ended rectangular waveguide, Rectangular Horn Antennas, H-plane sectoral horn antenna, E-plane sectoral Horn Antenna, The Pyramidal Horn Antenna, Circular Apertures, Tapered Circular Apertures described in Table 9-2 on pp. 389-390 of the Text**

1. **Pages 77, 78 of Class Notes**