

**Program: BS Electronics (7<sup>th</sup> Semester)**

**Subject: Microwave Communication (Course Code: ELEC 683)**

**Instructor: Dr. Sana Ul Haq**

**Lectures Schedule**

**Note: The following Book will be followed for all Lectures.**

**ELECTRONIC COMMUNICATION SYSTEMS (5<sup>th</sup> Edition)**

**by Kennedy, Davis and Prasanna**

**Lecture 1**

Chapter 12 WAVEGUIDES, RESONATORS AND COMPONENTS

12.1.4 Rectangular Waveguides

The  $TE_{m,0}$  Modes (Example 12.9)

**Lecture 2**

12.1.4 Rectangular Waveguides

The  $TE_{m,n}$  Modes (Example 12.10)

**Lecture 3**

12.1.4 Rectangular Waveguides

The  $TM_{m,n}$  Modes (Examples 12.12 and 12.13)

**Lecture 4**

12.1.4 Rectangular Waveguides

Field Patterns

## **Lecture 5**

12.2 Circular and Other Waveguides

12.2.1 Circular Waveguides

Analysis of Behavior (Example 12.14)

## **Lecture 6**

12.2.1 Circular Waveguides

Field Patterns (Example 12.15)

## **Lecture 7**

12.2.1 Circular Waveguides

Disadvantages, Advantages and Special Applications

## **Lecture 8**

Chapter 13 MICROWAVE TUBES AND CIRCUITS

13.2 Multicavity Klystron

13.2.1 Operation

## **Lecture 9**

13.3 Reflex Klystron

13.3.1 Fundamentals

## **Lecture 10**

13.4 Magnetron

Effect of Magnetic Field

Effect of Magnetic and Electric Fields

## **Lecture 11**

13.4 Magnetron

13.4.1 Operation

## **Lecture 12**

13.5 Traveling-Wave Tube (TWT)

13.5.1 TWT Fundamentals