

SEMESTER Fifth	DEPARTMENT Telecommunications Engineering	COURSE TITLE Analog Communications Lab.
COURSE CODE ET506	HOURS 3 UNITS 1	COURSE SPECIFICATIONS Practical Content
<p>1. Introduction to Communication Systems and Measuring Noise Parameters:</p> <ul style="list-style-type: none"> ➤ Using a simple transmitter and receiver. ➤ Measuring noise figure parameters using a noise figure meter. 		
<p>2. Measurement of AM and FM Parameters:</p> <ul style="list-style-type: none"> ➤ Generating an AM signal; modulation index measurement; carrier signal amplitude measurement; base band signal amplitude measurements. ➤ Using AM Demodulator to reconstruct information signal. ➤ The use of DSBSC generator – SSB generator. 		
<p>3. FM and PM:</p> <ul style="list-style-type: none"> ➤ FM Signal generation and using spectrum analyzer to observe the frequency spectrum. ➤ Demonstration of different types of FM demodulator to reconstruct the information signal from a FM signal; using old methods (filtering) and modern methods (PLL) of FM demodulation. 		
<p>4. Frequency Division Multiplexing (FDM):</p> <ul style="list-style-type: none"> ➤ Basic FDM transmitter of two analog signals. ➤ Recovering of two multiplexed signals. 		
<p>5. Super heterodyne receiver, FM receiver and digital radio systems:</p> <ul style="list-style-type: none"> ➤ Detecting the AM signal in super heterodyne receiver circuits (RF, IF, and AF stages). ➤ Detecting the FM signal in FM receiver circuits (RF, IF, and AF stages). ➤ Demonstration of the stages of the circuit of digital radio system. 		
<p>References:</p> <ol style="list-style-type: none"> 1. George Kennedy and Bernard Davis, <i>Electronic Communication Systems</i>, McGraw hill. 2. Paul H. Young, <i>Electronic Communications Techniques</i>, Prentice Hall. 		