

2013 Scanning Sheet. Assignment Description: _____ Instructor: _____ Date: _____ Scanned File Name: _____

ABET Outcomes											Rubric or student %	Example problem	Outcome #	EE 363 Communication Systems Laboratory (1) - Outcomes Reviewed 2013
A	B	C	D	E	F	G	H	I	J	K				
2	2			2		1	1		1	1			1	Analyze and interpret a periodic waveform in terms of its Fourier series expansion.
1	2			1		1	2						2	Use of Spectrum analyzer to measure the frequency and relative amplitudes of different frequency components in a given waveform
2	2	2		2		1	2		1	2			3	Analyze and design an Amplitude Modulation System, and then observe the modulated waveform in Oscilloscope and Spectrum Analyzer to assess the amplitudes and frequencies of the sidebands, and the modulation index.
2	2	2		2		1	2		1	1			4	Understand the principle and the features of Balanced modulator
2	2	2		2		1	2						5	Analyze and design a mixer circuit for Communication systems and observe the performance to verify the design objectives.
2	2	2		2		1	2		1	2			6	Characterize an IF amplifier with emphasis on the bandwidth to interpret the features of the Band-pass filter for AM receivers.
2	2	2		2		1	1		1	2			7	Analyze and design an AM demodulator
2	2	2		2		1	2						8	Analyze and interpret the frequency modulated wave using oscilloscope and Spectrum analyzer to evaluate the feature of Frequency Modulation.
2	2	2		2		1	2						9	Interpret the IF amplifier for FM in specific relation to the bandwidth to interpret the features of the band pass filter for FM
2	2	2		2									10	Interpret the performance of FM detector (discriminator)
2	2	2		2		1	2						11	Assessment of total harmonic distortion in power amplifiers.
2	2	2		2		1	2						12	Design and analysis mixers for up/down conversion.
2	2	2		2		1	2						13	Evaluate the performance of an RF amplifier.

1=supporting contribution
2=significant contribution

Rubric 5: Excellent Mastery of Outcome By Vast Majority of Students 4: Good Mastery of Outcome By Vast Majority of Students 3: Adequate Mastery of Outcome By Majority of Students 2: Marginal Mastery of Outcome By Most Students 1: Lack of Mastery of Concept By Most Students	a. an ability to apply knowledge of mathematics, science, and engineering	
	b. an ability to design and conduct experiments, as well as to analyze and interpret data	
	c. an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability	
	d. an ability to function on multi-disciplinary teams	
	e. an ability to identify, formulate, and solve engineering problems	
	f. an understanding of professional and ethical responsibility	
	g. an ability to communicate effectively	
	h. the broad education necessary to understand the impact of engineering solution in a global, economic, environmental, and societal context	
	i. a recognition of the need for, and an ability to engage in life-long learning	
	j. a knowledge of contemporary issues	
	k. an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice	
	Improvement Suggestions or Comments:	