



MUTAH UNIVERSITY
Faculty of Engineering
Department of Electrical Engineering



Course Syllabus

Course Code	Course Name	Credits	Contact Hours
0401428	Analog Communication LAB	1	2 T

INSTRUCTOR/COORDINATOR

Name	Dr. Rula Alrawashdeh
Email	rular18@mutah.edu.jo rularsr18@gmail.com
Office Hours	14:00-17:00 (Mon)

TEXTBOOK

Title	Lab Sheets
Author/Year/Edition	
Other Supplemental Materials	
Title	
Author/Year/Edition	

SPECIFIC COURSE INFORMATION

A. Brief Description of the Content of the Course (Catalog Description)

This laboratory is important for engineers wishing to emphasize the communications area. This course provides practical hands-on exposure to analog transmission techniques. It also introduces the concept of different transmission methods used in broadcasting i.e. (AM and FM) and how we can generate them using separate elements.

B. Pre-requisites (P) or Co-requisites (C)

Communications (2) (0401422) (P)

C. Course Type (Required or Elective)

Required

SPECIFIC GOALS

A. Course Learning Outcomes (CLOs)

By the end of this course, the student should be able to:

CLO1: Understand basic theories of analog communication in practice with the ability of visualization and practical implementation of double-side, single-side and suppressed carrier modulation and demodulation [6].

CLO2: Understand the function of each component in the analog communication system [6].

CLO3: Develop the ability to compare and contrast the strengths and weaknesses of various modulation techniques [6].

CLO4: Demonstrate an understanding of Frequency and Angle Modulation. [6].

CLO5: Work effectively in groups by sharing responsibilities and collaborating on findings [5].

B. Student Learning Outcomes (SOs) Addressed by the Course

1	2	3	4	5	6	7
				✓	✓	

BRIEF LIST OF TOPICS TO BE COVERED

List of Topics	No. of Weeks	Contact Hours
Experiment 1: Introduction	1	2
Experiment 2: The signal source	1	2
Experiment 3: Tuned Circuits	2	4
Experiment 4: The Crystal	1	2
Experiment 5: The amplifier	1	2
Experiment 6: Filters.	1	2
Experiment 7: The balance modulator	2	4
Experiment 8: Single amplifier modulator	1	2
Experiment 9: Detection and Demodulation	2	4
Experiment 10: Frequency Modulation	1	2
Experiment 11: FM detection	1	2
Total	14	28

EVALUATION

Assessment Tool	Due Date	Weight (%)
Reports	After each experiment	40

Course Work (Homeworks, Quizzes, Projects, ...etc.)	According to the university calendar	20
Final Exam	According to the university calendar	40

ABET's Students Learning Outcomes (Criterion # 3)		
Relationship to program outcomes		
ABET 1-7	Engineering Student Outcomes	
1	an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	
2	an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors.	
3	an ability to communicate effectively with a range of audiences.	
4	an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts.	
5	√	an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives.
6	√	an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions.
7		an ability to acquire and apply new knowledge as needed, using appropriate learning strategies.