MUTAH UNIVERSITY
Faculty of Engineering
Department of Electrical Engineering

Course Syllabus
Study Plan 2017: Communication Track

Course Code	Course Name	Credits	Contact Hours
0401529	Telephony Engineering	3	3 T

INSTRUCTOR/COORDINATOR	
Name	Dr. Saqer S. Alja'Afreh
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Office Hours	13:00-14:00 (Sun)
Classroom Time	11:00-12:00 (Sun, Wed)

TEXTBOOK	
Title	Telecommunication Switching and Networks,
Author/Year/Edition	2nd Edition by P. Gnanasivam
Other Supplemental Materials	
Title	Fundamentals of Telecommunications
Author/Year/Edition	Roger L. Freeman

SPECIFIC COURSE INFORMATION

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

Introduction to Telecommunications systems; Telephone Handset; Subscriber Loop Design, Switching Systems (TDM), Transmission Media.. Introduction to Microwave links design

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

Digital Communications (0401521) **(P)**

C. Course Type (Required or Elective)

Elective

SPECIFIC GOALS

A. Course Learning Objectives (CLOs)
By the end of this course, the student should be able to: **CLO1: Understand** the basic components and operation of telephone handset [1]. **CLO2: Recognize** different parts of telecommunications networks [1]. **CLO3**: **Differentiate** between different telephones switching systems [1]. **CLO4: Understand** the basic principles of multiplexing techniques, mainly TDM schemes [1]. **CLO5: Review and compare** between different transmission media [1]. **CLO6: Analyze RF and Mw** links over different environments [4].

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**
Chapter 1: Introduction to Telecommunications systems;	2	6
Chapter 2: Telephone Handset;	2	6
Chapter 3: Subscriber Loop Design.	3	9
Chapter 4: Switching Systems (TDM)	3	9
Chapter 5: Transmission Media.	2	6
Chapter 6: Introduction RF and Microwave Links Design	2	6
Total	*14*	*42*

EVALUATION		
Assessment Tool	**Due Date**	**Weight (%)**
Mid Exam	According to the university calendar	30
Course Work (Homeworks, Quizzes, , …etc.)	One week after being assigned	20
Final Exam	According to the university calendar	50

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.