



The Hashemite University
Faculty of Engineering
Course Syllabus

Course Title:	Communication electronics	Course Number:	110409520
Department:	Electrical Engineering	Designation:	electrical students
Prerequisite(s):	110409325		
Instructor:	D. Ashraf A. Ali	Instructor's Office:	Eng. 3057
Instructor's e-mail:	ashraf@hu.edu.jo	WEB:	
Office Hours:			
Time:	Sun Tue Thu 9-10 AM	Lecture Hall	
Course description:	Introduction to analogue communication principles, such as AM modulation and FM modulation. Explanation of circuit design constraint for both AM/FM modulations. High frequency and low frequency circuit design elements and applications.		
Textbook(s):	" Communication Electronics: Principles and applications" 3rd ed , Frenzel. McGraw-Hill, 1999		
Other required material:	Lectures notes		
Course objectives:	<p><i>The student should be able to:</i></p> <ol style="list-style-type: none"> 1. Study the amplitude modulation principles for amplitude modulation (single sided modulation) 2. Differentiate between single sided and double sided modulation. 3. Study the amplitude modulation circuits, amplitude modulators, balance, and demodulator circuits. 4. Understand the single side band circuits. 5. study the frequency modulation principles 6. Understand the phase modulation and modulation index. 7. Compare between the frequency and frequency modulation in terms of efficiency and robustness. 8. Understand the modulation of digital signals. 9. Understand and design frequency modulation circuits. Phase modulators, and demodulators. 		
Topics covered:	<ol style="list-style-type: none"> 1. amplitude modulation principles 2. modulation index and percentage of modulation 3. amplitude modulation power distribution 4. amplitude modulator circuits 5. amplitude demodulator circuits 6. balance modulator circuits\ 7. SSB circuits 8. Frequency modulation principles 9. Phase modulation 10. Frequency modulation vs amplitude modulation 11. Frequency modulation circuits 12. Phase modulators and frequency demodulator circuits. 		
Class/laboratory schedule:	3 class sessions every week; 45 minutes each.		

Grading Plan:	Project+presentation	30 Points)	To be announced later
	Mid Exam	30 Points)	To be announced later
	Final Exam	(40 Points)	Will be announced by the registrar
General Notes:	Attendance is mandatory. No more than 15% no excuse absent is permitted.		