

University : Menoufiya University

College : Faculty of Electronic Engineering

Department : Electronics and electrical communication engineering

Course Specification

1- Course basic information :		
Course Code: EC 323	Course Title: Communication theory	Academic year:2012/2013 Level (3) – Semester : 1
Department requirement	Teaching hours: Lecture <input type="text" value="3"/> Tutorial <input type="text" value="2"/> Lab <input type="text" value="0"/>	

2- Aim of the course	<ul style="list-style-type: none">• Understand the concepts and theories of mathematics and sciences of Communication theory• Describe and analyze the different modulation and demodulation techniques, transmission of signal through the channel and noise performance study for analogue communication system.
3- Intended Learning Outcomes:	
A- Knowledge and Understanding:	a1) Concepts and theories of mathematics and sciences, appropriate to the Communication theory. a8) Current engineering technologies as related to Communication theory. a14) Basics of design and analyzing electronic engineering systems, while considering the constraints of applying inappropriate technology and the needs of commercial risk evaluation; a17) Communication systems
B- Intellectual Skills	b1) Select appropriate mathematical and computer-based methods for modeling and analyzing problems. b5) Assess and evaluate the characteristics and performance of components, systems and processes. b14) Plan, conduct and write a report on a project or assignment. b15) Analyze the performance of Communication theory.
C- Professional Skills	c1) Apply knowledge of mathematics, science, information technology, design, business context and engineering practice integrally to solve engineering problems. c12) Use appropriate mathematical methods or IT tools.

	c13) Practice computer programming for the design and diagnostics of and analog communication systems. c17) Use appropriate tools to measure system performance.
D- General Skills	d1) Collaborate effectively within multidisciplinary team. d3) Communicate effectively. d5) Lead and motivate individuals. d9) Refer to relevant literatures.
4- Course Contents	Introductory topics - The Amplitude modulations - demodulations Techniques- The Analog modulation - Demodulation Techniques - Signal transmission through linear Comm. Channels - The Performance Evaluation of analogue Comm. Systems in the Presence of Noise and interferences.
5- Teaching and Learning Methods	<ul style="list-style-type: none"> - Lectures - Tutorials - Labs and/or case studies - Research assignments
6- Teaching and Learning Methods for disable students	NA
7- Student Assessment	
a- Assessment Methods	<ul style="list-style-type: none"> - Weekly sheet exercises at class room - Quizzes - Labs and/or case study for more demonstration. - Mid term, and final exams
b- Assessment Schedule	<ul style="list-style-type: none"> - Exercise sheet/ Lab assignment : Weekly - Quizz-1: Week no 2, 4 - Mid-Term exam: Week no 8 - Quizz-2: Week no 10, 12 - End term examination: Week no 16 - Class tutorial and quizzes: 15 Week no 16
c- Weighting of Assessment	<ul style="list-style-type: none"> - Mid-term examination: 35 % - Final – term examination: 70 % - Case study and/or practical exam: 5 % <li style="text-align: right;">Total 100 % <hr/> <ul style="list-style-type: none"> - Final – term examination: 70 % - Other types of assessment: 5 % <li style="text-align: right;">Total 100 %
8- List of text books and references:	
a- Course notes	There are lectures notes prepared in the form of a book authorized

	by the department
b- Text books	<p>1- Wayne Tomasi, "Electronic Communications Systems," 5th Edition, ISBN: 81-7758-264-X, March 2004, Pearson Prentice Hall.</p> <p>2- Simon Haykin, "An Introduction to Analog & Digital Communications," 1989, John Wiley & Sons, Inc.</p> <p>3- J. Dunlop and D. G. Smith, "Telecommunication Engineering," 3rd edition, Chapman & Hall, 1994.</p> <p>4- Grahame Smillie, "Analogue and Digital Communication Techniques," 1999, Arnold Press.</p>
c- Recommended books	[1] 4- Roger L. Free Man, "Telecommunication System Engineering," John Wiley & Sons, Inc, 1989
d- Periodicals, Web sitesetc	<ul style="list-style-type: none"> • Web Sites related to digital communication.

Course contents - ILOs Matrix

Content Topics	Week	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Introductory topics	1-2	a1	b1	c1	d1
The Amplitude modulations- demodulation	3-5	a1	b1,b5	c1,c12	d1,d3
The Analog modulation	6-7	a8,a14	b5,b14	c12,c13	d1,d3,d5
Signal transmission through linear Comm. Channels	9-11	a8,a14	b14,b15	c12,c13	d3,d5
The Performance Evaluation of analogue Comm. Systems in the Presence of Noise and interferences.	12-14	a14,a17	b14,b15	c13,c17	d5,d9

Course coordinator:

Head of Department:

Date: / /