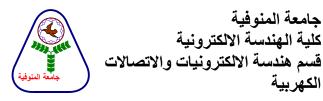
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Annual Course Report

Elective Course 3

(Radar and Sonar)

Basic Information				
1 Title and Code	Radar and Sonar EC 425			
2 Programme(s) on which this course is given	EC			
3 Academic year / Level of programme	4 th year / 1 st Semester			
4 Units/Weekly hours				
Lecture 3 Tutorial/Practical 1	Total 4			
5- Names of lecturers contributing to the delive	ery of the course			
i- Prof. Kamal H. Awadalla Prof. Adel A. Saleeb				
Course coordinator: Prof. Kamal H. Awadalla Prof. Adel A. Saleeb				
External evaluators:				
B- Statistical Information				
No. of students attending the course: No.	359 <mark>%</mark> 100			
No. of students completing the course: No.	353 % 98.32			
Results:				
Passed: No. 346 % 98. Failed:	No. 7 % 2			
Grading of successful students:				

10.19 70 36 Very Good: No. Excellent: No. 19.8 No. % Pass: % 41.92 Good: 92 26.06 No. 148

C-Professional Information

1. Course Teaching

Topic	No of hours	Lecture	
 1- Radar Systems General properties of radar systems Block diagram of a radar Signal detection Radar resolution 	6	2	
 2- Radar signals and signal processing Coherent and noncoherent signal sequences Optimum and matched filters 	6	2	
 3- Radar power budget analysis Introduction Required signal-to-noise ratio calculation Radar surveillance 	6	2	
 4- Target tracking Introduction Tracking system structure Tracking devices 	6	2	
 5- Radar antennas Fundamental parameters Main types of radar antennas Electronically steerable antennas 	6	2	
6- Synthetic aperture radar	6	2	

 Introduction Model of SAR as a phased array Signal processing in an SAR 		
 7- Interference protection • Introduction • The main types of interference • Ground clutter and chaff level 	6	2
Total sum	42	14

Topics taught as a percentage of the content specified:				
<u>>90 %</u> √	<70%			
2. Teaching and Learning Methods:				
Lectures:	$\sqrt{}$			
Practical Training/ Laboratory:	$\sqrt{}$			
Seminar/Workshop:				
Class Activity:	1			
Case Study:	1			
Other Assignments/Homework: Case Study Other assignments/homework: A real world project assigned.	J			
3. Student Assessment:				
Method of Assessment	Percentage of tota			
Written examination	70			

Midterm exams 15
Oral Examination 0

Practical/laboratory work 0

Other Assignments/class work 15

	Total	100 %
	Members of Examination Committee Prof. Prof. Prof.	:
	Role of external evaluator:	
4.	Facilities and Teaching Materials:	
	Totally adequate	$\sqrt{}$
	Adequate to some extent	
	Inadequate	
5.	Administrative Constraints	
	 Students need extra hours Insufficient class rooms and halls Insufficient assistant staff membe Insufficient Lab. Technicians. 	
6.	Student Evaluation of the course: R	esponse of Course Team
mat - L	Insufficient background in advanced athematics Lack of Software Programs Algorithms	- - -
7.	Comments from external evaluator(s):	
8	Course Enhancement	

Several resources and references should be included.

Modification of the course contents to include up to date topics in radar systems

9. Action Plan for Academic Year 2011 – 2012

Progress on actions identified in the previous year's action plan:

Improvement Field	Weak points	Action required	Person Responsible	Completion Date
Assessment Methods	Good	-	- Faculty - Department	2014
Quality of	Good	-	- Faculty	2013

Teaching and Learning			- Department	
Learning resources	Not enough	Several resources and references should be included.		2012
Course content	1-Although the course is a radar and sonar systems, it is totally devoted to electromagnetic radars 2- Topics like ultrasonic radar and sonar systems must be studied 3- Infrared and Laser radar systems must also be studied	Modification of the course contents to include up to date topics in radar systems		2011

Course Coordinator: Prof. Kamal H. Awadalla Prof. Adel A. Saleeb

Authorized by Department Council in:

Authorized by Faculty Council in:

Head of Department:

Prof.

Date: / /