

45. Course Specification of Engineering Project

Managements

	A. Course Identification and General Information:								
1.	Course Title:	Engine	ering Proj	ect Mana	gements				
2.	Course Code & Number:	FR304							
	Credit hours:		C.	Н		Total			
3.			Tu.	Pr	Tr.	Total			
		2	-	-	-	2			
4.	Study level/ semester at which this course is offered:	Fourth Year/ Second Semester							
5.	Pre –requisite (if any):	Engineering Economy (BR232)							
6.	Co –requisite (if any):	NA							
7.	Program (s) in which the course is offered:	All Electrical Engineering Program			1				
8.	Language of teaching the course:	Arabic and English.							
9.	Location of teaching the course:	Class							
10.	Prepared By:	Asst. Prof. Dr. Ahmed Al Arashi							
11.	Date of Approval								

II. Course Description:

This course introduces students to the main principals of the project management. They will be exposed to the definitions of the project, project cycle, project planning, monitoring, risk assessments, budgeting, and end project evolution and reporting. This course will emphasize on Electrical engineering projects and the need for sentimental confederation to minimize the project foot print on the environment.

	III. Course Intended learning outcomes (CILOs) of the course	Referenced PILOs
a1	Define the definition of project	A3
a2	Define the Electrical engineering professional Ethics.	A4
b1	analyze the project critical path	B2

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad



b2	Consider environmental dimensions associated with projects.	B4
c1	Apply the acquired electrical engineering knowledge to evaluate the system technical performance.	C1
c2	Use engineering techniques to enhance the project technical performance.	C4
d1	Work as a team in developing a mini project.	D1
d2	Present a project using MS power point.	D4

· · ·	(A) Alignment Course Intended Learning Outcomes of Knowledge and Understanding to Teaching Strategies and Assessment Strategies:						
Cours	Course Intended Learning Outcomes Teaching strategies Assessment Strategies						
a1.	Define the definition of project	 Class Lectures. 	 Quiz Mid-term Final exam				
a2.	Define the Electrical engineering professional Ethics.	 Interactive Class Discussion 	 Quiz Mid-term Final exam				

(B) Alignment Course Intended Learning Outcomes of Intellectual Skills to Teaching Strategies and Assessment Strategies:

	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies	
b1.	analyze the project critical path	 Class Lectures. Interactive Class Discussion 	QuizMid-termFinal exam	
b2.	Consider environmental dimensions associated with projects.	 Class Lectures. Interactive Class Discussion 	QuizMid-termFinal exam	

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Adel Ahmed Al-	Mohammad Algorafi		Assurance	
Shakiri			Assoc. Prof. Dr.	

Huda Al-Emad



© Alignment Course Intended Learning Outcomes of Professional and Practical Skills to Teaching Strategies and Assessment Strategies:					
Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies			
c1. Apply the acquired electrical engineering knowledge to evaluate the system technical performance.	 Class Lectures. Interactive Class Discussion 	QuizMid-termFinal exam			
c2. Use engineering techniques to enhance the project technical performance.	 Class Lectures. Interactive Class Discussion 	QuizMid-termFinal exam			

(D) Alignment Course Intended Learning Outcomes of Transferable Skills to Teaching Strategies and Assessment Strategies:

100	reaching briategies and Assessment briategies.						
	Course Intended Learning Outcomes	Teaching strategies	Assessment Strategies				
d1.	Work as a team in developing a mini	 Student 	 Presentation 				
	project.	projects	resentation				
d2.	Present a project using MS power	 Student 	 Presentation 				
poir	nt.	projects					

IV	IV. Course Content:					
	A – Theoretical Aspect:					
Order	Units/Topics List	Learning Outcomes	Sub Topics List	Number of Weeks	Contact hours	
1.	Introduction	al	 Definition The need for Project Management Response to a Changing Environment Project Goals 	1	2	
2.	Main Project Management Concepts	b1 , a2	 Functions of Management. Project Viewpoint versus Traditional Management. Evolution of Project Management. 	2	4	

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Shakiri			Assoc. Prof. Dr.	
			Huda Al-Emad	



			 Areas of Applications of Project Management Common Approach of Project Management Different Forms of Project Management Project Environments Project Management in various sectors Project and Program 		
3.	Projects Planning	b1 and,b2	 Planning Steps Project Master Plan Scope and Work Definition Project Organization Structure and Responsibilities. Project Management System. Scheduling. Planning and Scheduling Charts 	2	4
4.	Network Scheduling, PERT, CPM and Resource Allocation.	a2 and b1	 Logic Diagrams and Networks. Calendar Scheduling and Time-Based Networks Management Schedule Reserve 	1	2
5.	Network Scheduling, PERT, CPM and Resource Allocation.	a2 and b1	 Program Evaluation and Review Technique (PERT). Critical Path Method (CPM) Scheduling with Resource Constraints. 	1	2
6.	Cost Estimating and Budgeting	b2	 Cost Estimating Cost Escalation Cost Estimating and the Systems Development Cycle Cost Estimating Process. Elements of Budgets and Estimates. Budgeting Using Cost Accounts 	2	4

Head of Quality Assurance Dean of the Faculty Academic Rector of Sana'a University Prof. Dr. Mohammed Prof. Dr. Al-Qassim Mohammed Department Unit Development AL-Bukhaiti Asst. Prof. Dr. Assoc. Prof. Dr. Center & Quality Abbas Adel Ahmed Al-Mohammad Algorafi Assurance Shakiri Assoc. Prof. Dr. Huda Al-Emad



			 Cost Schedules and Forecasts 		
7.	Managing Risks in Projects	b1 and c1	 Risk Concepts. Risk Identification Risk Assessment Risk Response Planning. Project Management Risk Management 	2	4
8.	Project Control	c1 and c2	 The Control Process Information Monitoring Internal and External Project Control Cost Accounting Systems for Project Control Project Control Process Performance Analysis Forecasting "To Complete" and "At Completion" 	1	2
9.	Project Evaluation, Reporting, and Termination	c1, d1 , d2	 Project Evaluation Project Review Meetings Reporting Terminating the Project. Termination Responsibilities Closing the Contract Project Extensions 	1	2
Numbe	r of Weeks /and	Number of Weeks /and Units Per Semester			28

V. Teaching strategies of the course:

- Class Lectures.
- Project
- Presentation.
- Interactive Class Discussion

	VI. Assignments:						
No	Assignments	Aligned CILOs(symbols)	Week Due	Mark			
1.	Areas of Applications of Project ManagementCommon Approach of Project	b1 , a2	3 rd	1.5			

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a1,a2,b1,b2

2.	 Program Evaluation and Review Technique (PERT). 	a2,b1	7 th	1.5		
3.	Termination ResponsibilitiesClosing the ContractProject Extensions	c1,d1,d2	12 th	2		
	Total					

VI	VII. Schedule of Assessment Tasks for Students During the							
	Semester:							
No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	Aligned Course Learning Outcomes			
1.	Assignments	2 nd ,7 th ,12 th	5	5%	a2, b1,c1,d1,d2			
2.	Quiz 1	3 rd	5	5%	a1,a2,b1,b2			
3.	Quiz 2	5 th	5	5%	a1,a2,b1,b2			
4.	Midterm exam	7 th	10	10%	a1,a2,b1,b2			
5.	Project presentation	15 th	25	25%	c1,c2,d1,d2			

 16^{th}

50

100

VIII. Learning Resources:
 Written in the following order: (Author - Year of publication – Title – Edition – Place of publication – Publisher).
1- Required Textbook(s) (maximum two).
 John M. Nicholas, 2004, "Project Management for Business and Engineering, Principals and Practice", 2nd Edition, Elsevier Inc. Or latest edition. R. Dan Reid and Nada R. Sanders, 2005, "Operations Management An Integrated 4th edition
2- Essential References.
 Oosthuizen and Venter, 2011, "Project Management in Perspective", Oxford University Press Southern Africa (Pty) Ltd.
3- Electronic Materials and Web Sites etc.
None.

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri

Final Exam

Total

6.

Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad

50%

100%



Al-Qassim Mohammed

 IX. Course Policies: Class Attendance: A student should attend not less than 75 % of total hours of the subject; otherwise he will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring an approved statement from university Clinic Tardy: 2. For late in attending the class, the student will be initially notified. If he repeated lateness in attending class he will be considered as absent. 3. A student should attend the exam on time. He is Permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam- Assignments & Projects:
 A student should attend not less than 75 % of total hours of the subject; otherwise he will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring an approved statement from university Clinic Tardy: For late in attending the class, the student will be initially notified. If he repeated lateness in attending class he will be considered as absent. 8. Exam Attendance/Punctuality: A student should attend the exam on time. He is Permitted to attend an exam half one hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam-
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3. hour from exam beginning, after that he/she will not be permitted to take the exam and he/she will be considered as absent in exam-
he/she will be considered as absent in exam-
Assignments & Projects:
4. The assignment is given to the students after each chapter; the student has to submit all
the assignments for checking on time-
Cheating:
5. For cheating in exam, a student will be considered as failure. In case the cheating is
repeated three times during his/her study the student will be disengaged from the Faculty-
Plagiarism:
Plagiarism is the attending of a student the exam of a course instead of another student.
6. If the examination committee proved a plagiarism of a student, he will be disengaged
from the Faculty. The final disengagement of the student from the Faculty should be
confirmed from the Student Council Affair of the university.
Other policies:
- Mobile phones are not allowed to use during a class lecture. It must be closed, otherwise
7. the student will be asked to leave the lecture room Mobile phones are not allowed in class during the examination
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Reviewed	Vice Dean for Academic Affairs and Post Graduate Studies: Asst. Prof. Dr. Tarek
By	<u>A. Barakat</u>
	President of Quality Assurance Unit: Assoc. Prof. Dr. Mohammed Algorafi
	Name of Reviewer from the Department: Assoc. Prof. Dr. Radwan Al bouthigy
	Deputy Rector for Academic Affairs Asst. Prof. Dr. Ibrahim AlMutaa
	Assoc. Prof. Dr. Ahmed Mujahed

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Shakiri			Assoc. Prof. Dr.	
			Huda Al-Emad	



Asst. Prof. Dr. Munasar Alsubri

45. Template for Course Plan of Engineering Project

Managements

I. Information about Faculty Member Responsible for the								
Course:								
Name of Faculty	Assoc. Prof. Dr. Office Hours							
Member	Ahmed Al Arashi				IIUui	3		
Location& Telephone No.		SAT SUN MON TUE WED THU				THU		
E-mail	arashiaa@yahoo.com							

II. Course Identification and General Information:								
1.	Course Title:	Engine	ering Projec	et Manage	ements			
2.	Course Number & Code:	FR304						
			C .]	Н		Total		
3.	Credit hours:	Th.	Tu.	Pr.	Tr.	Total		
		2	-	-	-	2		
4.	Study level/year at which this course is offered:	Fourth Year/ Second Semester						
5.	Pre –requisite (if any):	Engineering Economy (BR232)						
6.	Co –requisite (if any):	NA						
7.	Program (s) in which the course is offered	All Electrical Engineering Program						
8.	Language of teaching the course:	Arabic and English.						
9.	System of Study:	Regular						
10.	Mode of delivery:	Semester						
11.	Location of teaching the course:	Class						

Head of Quality Assurance Department Unit Asst. Prof. Dr. Assoc. Prof. Dr. Adel Ahmed Al-Shakiri

Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad



III. Course Description:

This course introduces the students to the main principals of the project management. They will be exposed to the definitions of the project, project cycle, project planning, monitoring, risk assessments, budgeting, and end project evolution and reporting. This course will emphasize on Electrical engineering projects and the need for sentimental confederation to minimize the project foot print on the environment.

IV.Intended learning outcomes (ILOs) of the course:

- Brief summary of the knowledge or skill the course is intended to develop:
 - **1.** Define the definition of project
 - 2. Define the Electrical engineering professional Ethics.
 - **3.** analyze the project critical path
 - 4. Consider environmental dimensions associated with projects.
 - **5.** Apply the acquired electrical engineering knowledge to evaluate the system technical performance.
 - 6. Use engineering techniques to enhance the project technical performance .
 - 7. Work as a team in developing a mini project.
 - 8. Present a project using MS power point.

V.	V. Course Content:							
	A – Theoreti	ical Aspect:						
Order	Units/Topics List	Sub Topics List	Number of Weeks	Contact hours				
1.	Introduction	 Definition The need for Project Management Response to a Changing Environment Project Goals 	1 st	2				
2.	Main Project Management Concepts	 Functions of Management. Project Viewpoint versus Traditional Management. Evolution of Project Management. Areas of Applications of Project Management 	2 nd ,3 rd	4				

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		 Common Approach of Project Management Different Forms of Project Management Project Environments Project Management in various sectors Project and Program 		
3.	Projects Planning	 Planning Steps Project Master Plan Scope and Work Definition Project Organization Structure and Responsibilities. Project Management System. Scheduling. Planning and Scheduling Charts 	4 th ,5 th	4
4.	Network Scheduling, PERT, CPM and Resource Allocation.	 Logic Diagrams and Networks. Calendar Scheduling and Time-Based Networks Management Schedule Reserve 	6 th	2
5.	Midterm Exam		7 th	2
6.	Network Scheduling, PERT, CPM and Resource Allocation.	 Program Evaluation and Review Technique (PERT). Critical Path Method (CPM) Scheduling with Resource Constraints. 	8 th	2
7.	Cost Estimating and Budgeting	 Cost Estimating Cost Escalation Cost Estimating and the Systems Development Cycle Cost Estimating Process. Elements of Budgets and Estimates. Budgeting Using Cost Accounts Cost Schedules and Forecasts 	9 th ,10 th	4

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			Huda Al-Emad	



8.	Managing Risks in Projects	 Risk Concepts. Risk Identification Risk Assessment Risk Response Planning. Project Management Risk Management 	11 th ,12 th	4
9.	Project Control	 The Control Process Information Monitoring Internal and External Project Control Cost Accounting Systems for Project Control Project Control Process Performance Analysis Forecasting "To Complete" and "At Completion" 	13 th	2
10.	Project Evaluation, Reporting, and Termination	 Project Evaluation Project Review Meetings Reporting Terminating the Project. Termination Responsibilities Closing the Contract Project Extensions 	14 th	2
11.	Final Project	 Discussion of project 	15 th	2
12.	Final Exam		16 th	2
Numbe	r of Weeks /and	16	32	

VI. Teaching strategies of the course:

- Class Lectures.
- Project
- Presentation.
- Interactive Class Discussion

VII.Assignments:					
No	Assignments	Aligned CILOs(symbols)	Week Due	Mark	

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1.	 Areas of Applications of Project Management Common Approach of Project 	b1 , a2	3 rd	1.5
2.	 Program Evaluation and Review Technique (PERT). 	a2,b1	7 th	1.5
3.	Termination ResponsibilitiesClosing the ContractProject Extensions	c1,d1,d2	12 th	2
Total				

VIII. Schedule of Assessment Tasks for Students During the Semester:					
No.	Assessment Method	Week Due	Mark	Proportion of Final Assessment	
1.	Assignments	2^{nd} ,7 th ,12 th	5	5%	
2.	Quiz 1	3 rd	5	5%	
3.	Quiz 2	5 th	5	5%	
4.	Midterm exam	7 th	10	10%	
5.	Project presentation	15 th	25	25%	
6.	Final Exam	16 th	50	50%	
	Total 100 100%				

IX. Learning Resources:

• Written in the following order: (Author - Year of publication – Title – Edition – Place of publication – Publisher).

1- Required Textbook(s) (maximum two).

1. John M. Nicholas, 2004, "Project Management for Business and Engineering, Principand Practice", 2nd Edition, Elsevier Inc. Or latest edition.

2. R. Dan Reid and Nada R. Sanders, 2005, "Operations Management An Integrated", edition

2- Essential References.

1. Oosthuizen and Venter, 2011, "Project Management in Perspective", Oxford Univers Press Southern Africa (Pty) Ltd.

3- Electronic Materials and Web Sites etc.

Head of Qua Department Asst. Prof. Dr. As Adel Ahmed Al- Moha Shakiri

Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad



None.

	X. Course Policies:
1.	Class Attendance: A student should attend not less than 75 % of total hours of the subject; otherwise he will not be able to take the exam and will be considered as exam failure. If the student is absent due to illness, he/she should bring an approved statement from university Clinic
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6.	Plagiarism: Plagiarism is the attending of a student the exam of a course instead of another student. If the examination committee proved a plagiarism of a student, he will be disengaged from the Faculty. The final disengagement of the student from the Faculty should be confirmed from the Student Council Affair of the university.
7.	 Other policies: Mobile phones are not allowed to use during a class lecture. It must be closed, otherwise the student will be asked to leave the lecture room Mobile phones are not allowed in class during the examination. Lecture notes and assignments my given directly to students using soft or hard copy

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Shakiri			Assoc. Prof. Dr.	

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<u>46. Course Specification of Entrepreneurship</u> <u>&Communication Skills</u>

Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad



Head of Department Asst. Prof. Dr. Adel Ahmed Al-Shakiri Quality Assurance Unit Assoc. Prof. Dr. Mohammad Algorafi Dean of the Faculty Prof. Dr. Mohammed AL-Bukhaiti Academic Development Center & Quality Assurance Assoc. Prof. Dr. Huda Al-Emad