



Course Specification

— (Bachelor)

Course Title: Engineering Project Management

Course Code: CEN 1412

Program: Bachelor in Computer Engineering

Department: Computer Engineering

College: Computers and Information Technology

Institution: University of Tabuk

Version: 1.0

Last Revision Date: 27 July 2022



Table of Contents

A. General information about the course:	3
B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods	4
C. Course Content	4
D. Students Assessment Activities	5
E. Learning Resources and Facilities	5
F. Assessment of Course Quality	5
G. Specification Approval	6



A. General information about the course:

1. Course Identification

1. Credit hours: (3)

2. Course type

A.	<input type="checkbox"/> University	<input type="checkbox"/> College	<input checked="" type="checkbox"/> Department	<input type="checkbox"/> Track	<input type="checkbox"/> Others
B.	<input type="checkbox"/> Required		<input checked="" type="checkbox"/> Elective		

3. Level/year at which this course is offered: 9/5

4. Course general Description:

This course describes the techniques and strategies for creating a successful engineering project. This course introduces engineering projects and their management, and then proceeds stage-by-stage through the engineering life-cycle project, from requirements, implementation, to phase-out. The course offers information for understanding the needs of the end user of a product and other stakeholders associated with a project, and is full of techniques based on real, hands-on management of engineering projects.

5. Pre-requirements for this course (if any):

130 CR

6. Co-requisites for this course (if any):

N/A

7. Course Main Objective(s):

- Understand the main concepts of project management.
- Learn how projects are delivered within schedule commitments.
- Understand how projects are delivered within budget.
- Understand how to produce quality solutions with reduced errors, improved effectiveness, appropriate risk management.
- Provide continuous process improvement via collaboration.
- Implement project communications and oversight.

2. Teaching mode (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	Traditional classroom	45	100%
2	E-learning		
3	Hybrid <ul style="list-style-type: none"> • Traditional classroom • E-learning 		
4	Distance learning		



3. Contact Hours (based on the academic semester)

No	Activity	Contact Hours
1.	Lectures	45
2.	Laboratory/Studio	-
3.	Field	-
4.	Tutorial	-
5.	Others (specify)	-
Total		45

B. Course Learning Outcomes (CLOs), Teaching Strategies and Assessment Methods

Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
1.0	Knowledge and understanding			
1.1	Understand the main concepts of project management	K1	Lectures	Exams Assignments
1.2	Understand how to produce quality solutions with reduced errors , improved effectiveness , appropriate risk management and internal controls	K3		
1.3	Learn how Projects are Delivered within schedule, cost, and quality Commitments	K3		
2.0	Skills			
2.1	Explain IT project management terminologies	S1	Lectures Research Activities	Exams Project Assignments
2.2	Explain the phases that should be used to implement IT project management	S2		
2.3	Evaluate the phases that should be used to implement IT project management	S2		
3.0	Values, autonomy, and responsibility			



Code	Course Learning Outcomes	Code of PLOs aligned with program	Teaching Strategies	Assessment Methods
3.1	Illustrate team work and communication skills	V2	Project	Project

C. Course Content

No	List of Topics	Contact Hours
1.	The Role and the Challenge	3
2.	Performing Engineering on Projects	3
3.	Stakeholders (topic one): Understanding Your Users, Engineering choices, Degrees of design freedom	3
4.	Stakeholders (topic two): Effective experience for the users, Customer's coordinate system, Role-based processing, design the system based on the needs of the user	3
5.	How do engineering projects get created	3
6.	Organizing and Planning (part one): creating and using a work-breakdown structure, hierarchical structuring and decomposing the work, comprising a project into a nested set of smaller pieces	3
7.	Organizing and Planning (part two): Defining the tasks, organizing these tasks, defining resources	3
8.	Schedule and Cost (part one): defining project's statement of work, defining the specifications and contract, creating credible predictions for Schedule	3
9.	Schedule and Cost (part two): creating the Activity Network, identify the interdependencies between the tasks, use the three-point estimation methodology, Create SMART tasks	3
10.	Schedule and Cost (part three): Defining cost of software defects , define cost types and techniques, define cost Control and measurement, calculate earned value analysis technique, creating credible predictions for cost	3
11.	Drawing Valid Conclusions from Numbers (part one): Defining quantifiable data, procedures of technical performance measures	3
12.	Drawing Valid Conclusions from Numbers (part two): procedures of operational performance measures, procedures of safety measures, procedures of management measures	3
13.	Risk and Opportunity Management (part one): combining good engineering and good statistics practices, cope with the uncertainties, opportunity management, defining risks in engineering projects	3
14.	Risk and Opportunity Management (part two): Assessment of risks in engineering projects, defining risks responses	3
15.	Monitoring the Progress of Your Project	3
Total		45





D. Students Assessment Activities

No	Assessment Activities *	Assessment timing (in week no)	Percentage of Total Assessment Score
1.	Mid Term 1	5-6	15%
2.	Mid Term 2	10-11	15%
3.	Project	13	10%
4.	Assignments	7, and 12	20%
5.	Final Exam	16	40%

*Assessment Activities (i.e., Written test, oral test, oral presentation, group project, essay, etc.).

E. Learning Resources and Facilities

1. References and Learning Resources

Essential References	Engineering Project Management. By Neil G. Siegel Publisher : Wiley; 1st edition (February 18, 2020) ISBN-10 : 1119525764 ISBN-13 : 978-1119525769
Supportive References	Project Management: A Systems Approach to Planning, Scheduling, and Controlling. By Harold Kerzner Publisher : Wiley; 11th edition (February 18, 2013) ISBN-10 : 1118022270 ISBN-13 : 978-1118022276
Electronic Materials	NA
Other Learning Materials	NA

2. Required Facilities and equipment

Items	Resources
facilities (Classrooms, laboratories, exhibition rooms, simulation rooms, etc.)	Classroom
Technology equipment (projector, smart board, software)	White board, data show projector, computer and internet connection.
Other equipment (depending on the nature of the specialty)	N/A

F. Assessment of Course Quality

Assessment Areas/Issues	Assessor	Assessment Methods
Effectiveness of Teaching	Faculty, Program Leaders, and Advisory Board	Both Direct and Indirect



Assessment Areas/Issues	Assessor	Assessment Methods
	Students	Indirect
Effectiveness of Students Assessment	Faculty, Program Leaders, Advisory Board, and Independent Opinion	Both Direct and Indirect
Quality of Learning Resources	Faculty, Students, and Advisory Board	Indirect
The Extent to which CLOs have been Achieved	Faculty, Program Leaders, Advisory Board, and Independent Opinion	Direct (as in section B) and Indirect/Surveys
	Students	Indirect
Other	-	-

Assessors (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify))

Assessment Methods (Direct, Indirect)

G. Specification Approval

COUNCIL /COMMITTEE	
REFERENCE NO.	
DATE	

