

The University of Jordan
School of Engineering
1st Semester 2024/2025

Course Title:	Special Topics in Engineering Maintenance & Quality Management (0936 762)
Learning/Teaching Methods:	<ul style="list-style-type: none">• Interactive PowerPoint Presentation.• Lectures/Problem-solving sessions.• Discussion & Projects.• Videos, Cases, Homework & quizzes.
Assessment Methods:	Homework, Participation, Midterm Exam, Final Exam & Project
Providing Department:	Industrial Engineering
Instructors:	Prof. Ghaleb Y. Abbasi
Phone:	5355000 Ext. 22700
Email:	abbasi@ju.edu.jo
Class time:	Monday 4:30 - 6:00 PM Wednesday 4:30 – 6:00 PM
Classroom:	
Office Hours:	Monday 1:00 – 3:00 PM & By Appointment

Course Description (3 Credit Hours):

This course will introduce the different types of contracts and contract management tools, techniques, and selection methods available to today's engineers with concentration on quality and maintenance areas. The procurement process will be explained with case studies and video learning. Contract negotiation, awarding, and closing along with claims management will be addressed.

Course Prerequisite:

Management Knowledge and experience is a plus.

Course Objectives:

The main objective of this course is to strengthen the engineers' skills in the "Engineering Maintenance & Quality Management MSc Program" in contracts and contract management to enable a sound and strong decision-making process.

Expected Outcomes:

Students will be expected to develop the following skills/understanding upon the successful completion of the course:

1. Understand the dynamic environment of contract management.
2. Manage contracts from initiation to termination over the project life cycle.
3. Learn how to use different contract management tools in the work environment.
4. Develop contract management skills.

Suggested Readings:

- International Project Management Association (IPMA). (2015). Individual Competence Baseline for Project, Program and Portfolio Management, Version 4.0. Zurich, Switzerland.
- Kassel, David. (2017), Managing Public Sector Projects: A Strategic Framework for Success in an Era of Downsized Government (ASPA Series in Public Administration and Public Policy) Mar 17, 2010.
- Kerzner, Harold. (2013). Project Management, A Systems Approach to Planning, Scheduling, and Control. John Wiley & Sons Inc., USA.
- Procurement Guidance (2018). The World Bank, Washington DC, USA.
- Project Management Institute. (2021). A Guide to the Project Management Body of Knowledge (PMBOK® Guide English & Arabic), 7th Edition. Newton Square, Pennsylvania, USA.
- Procurement Guidance Contract Management Practice, 1st Edition. (2018). The World Bank, Washington D.C., USA.

Grading System:

Description	%	Day	Date & Time
Midterm Exam	30%	Monday	02/12/2024
Project/Case Study	20%	TBA	Proposal by mid-November Presentation on 06/01/2025
Final Exam	40%	Sunday	19/01/2025 @ 4:30 PM
HW/Participation/Quiz	10%	On going	

Contents:

The topic of “Contracts & Contract Management will be covered in the course:

Topics

- Early Project Definition
- Project Scope
- Linking the WBS & BoQ
- Case Study
- Contractor’s Pre-Qualification
- Contracts Elements
- Case Study & Video
- The Procurement
- PMBOK Approach
- Case Study & Video
- Types of Contracts
- Contracting Methods Available
- Case Study
- Contract Selection
- Case Study& Video
- Tendering Procedures
- Unbalanced Bids
- Case Study
- Contract Negotiation
- LOI, Awarding & Closing
- Case Study
- Claims Management & Risks
- Case Study & Video
- Presentations & Discussions

Project/Case Study

Each student is expected to submit a Project/Case Study applying the methods, tools & techniques discussed during the course, along with their current and previous knowledge and experience (if any). Each Project should contain:

1. The report should be arranged in the following general organization as a minimum: Table of contents, Abstract, Introduction, Literature Review, Paper Body, Discussion, and Conclusions & Recommendations.
2. At least five recent references in the area, with complete reference & Bibliography.
3. Typed, 1.5 space with all figures, tables, charts,.... done in an organized professional manner (no scans).
4. A PPP for each paper with about 10 minutes for presentation, which should be done in a professional manner with the proper visual aids.

Notes:

1. Do not hesitate to ask questions about any material you do not fully understand
2. Students are required to have a notebook and take notes during classes.
3. Students are expected to attend every class session, and they are responsible for all material, announcements, schedule changes, etc., discussed in class.
4. Discuss the assignments among yourselves. This is helpful to the learning process.
5. There will be several homework assignments and unannounced quizzes during the semester. Students are expected to be ready to take a quiz any time they have a class. There will be no make-up quizzes or homework.
6. Any students with disabilities who need accommodation in this course are encouraged to speak with the instructor as soon as possible to make appropriate arrangements for these accommodations.
7. No late assignments accepted.

