

APPENDIX A – COURSE SYLLABI

1. **Course number and name:** 0915381 - Management for Chemical Engineering
2. **Course Prerequisite:** 3rd year Level
3. **Credits, contact hours, and categorization of credits in Table 5-1** (math and basic science, engineering topic, and/or other): (3 Cr. – Required Course)
4. **Syllabus URL:** <http://elearning.ju.edu.jo>

5. **Instructor's or course coordinator's name:** Dr. Ali Khalaf Al-Matar. Office: ChE307, Telephone: 06/5355000 ext 22890, Email: aalmatar@ju.edu.jo .
6. **Textbook, title, author, and year:** Schermerhorn, J.R., 2013. Management, 12th Edition. New York, NY: John Wiley & Sons.
 - a. Fang, Y. and Kant, K., 2011. Fundamentals of management: Concepts and principles. McGraw Hill.
 - b. Jack Welsh's thoughts and videos
<https://www.youtube.com/watch?v=ojkOs8Gatsg>
<https://www.youtube.com/watch?v=i9vSiflxDBI>
<https://www.youtube.com/watch?v=gKXv9yPioQ4>

7. **Live stream platform:** Microsoft Teams
Live Stream URL: <https://web.microsoftstream.com/video/e671b758-d51c-4d1e-8f8a-305a705cb387>
YouTube: https://www.youtube.com/channel/UC2aLJ_dDpSM-pQjuOh1R9cw
8. **Specific course information**
 - a. **Catalog description** (2010 ChE Curriculum): Theories of management, Forecasting, organization of chemical engineering projects, breakeven analysis, project evaluation and cashflow diagrams. Critical path method, decision trees and alternatives, inventory control.
 - b. **Prerequisite:** ChE 0905212 – Chemical Engineering Principles II
 - c. **Indicate whether a required, elective, or selected elective** (as per Table 5-1) course in the program: elective course.
9. **Specific goals for the course**
 - a. Specific outcomes of instruction (e.g. The student will be able to explain the significance of current research about a particular topic.)
 - i. Be able to know, comprehend, apply, analyze, synthesize and evaluate the basic principles of the fundamentals of managing technical organizations.
 - ii. Be prepared for further study in the area of engineering technology management.
 - iii. Be able to identify and apply appropriate management techniques for managing contemporary organizations.

- iv. Have an understanding of the skills, abilities, and tools needed to obtain a job on a management track in an organization of their choice.

10. Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course.

- a. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics. O1
- b. An ability to communicate effectively with a range of audiences. O3
- c. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts. O4
- d. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives. O5
- e. An ability to acquire and apply new knowledge as needed using project based learning strategies with focus on new newly emerging technologies and engineering skills. O7

11. Brief list of topics to be covered:

- a. Introduction and general discussion
- b. Historical foundations of management
- c. Environment and diversity
- d. International dimensions of management
- e. Ethical behavior and social responsibility
- f. Sustainability
- g. Information and decision making
- h. Planning, organizing, and controlling
- i. Student Projects: accounting, job interviews, meeting management, risk management, negotiations, SWOT analysis ...etc.