Course Description Form

1. Course Name:
Industrial engineering and quality control
2. Course Code:
MPAC405
3. Semester / Year:
Yearly (2024-2025)
4. Description Preparation Date:
The beginning of the academic calendar for the year (2024-2025)
5. Available Attendance Forms:
Weekly / theoretical + practical
6. Number of Credit Hours (Total) / Number of Units (Total)
(60 theoretical hours + 30 practical hours) 90 hours / 5 units
7. Course administrator's name (mention all, if more than one name)
Name: Dr. Hussein salim Email: hussein.kt@uowa.edu.iq

8. Course Objectives	
Course Objectives	1. Identify the stages of industrial engineering development. 2. Studying the plant selection and plant location. 3. Studying the production planning using operation research. 4- studying the statistical methods used in quality control. 5- controlling production process by designing and using quality control charts.

9. Teaching and Learning Strategies	
Strategy	1. Lectures (power point) 2. Use of weight board.

10. Course Structure

Week	Hours	Required Learning Outcomes	Unit or subject name	Learning method	Evaluation method
1st week	2 Theoretical	The student understands the subject	Introduction to industrial engineering.	Theoretical	quiz
2-3	2 Theoretical	The student understands the subject	Using operation research in	Theoretical	quiz

			production planning (linear programming methods).		
4-5	2 Theoretical	The student understands the subject	Using operation research in production planning (simplex programming method).	Theoretical	quiz
6	2 Theoretical	The student understands the subject	Selection of plant location	Theoretical	quiz
7-8	2 Theoretical	The student understands the subject	Plant layout	Theoretical	quiz
9-10	2 Theoretical	The student understands the subject	Motion and time study	Theoretical	quiz
11-12	2 Theoretical	The student understands the subject	Feasibility study	Theoretical	quiz
13-14	2 Theoretical	The student understands the subject	Maintenance and replacement	Theoretical	quiz
15-16	2 Theoretical	The student understands the subject	Resources management	Theoretical	quiz
17-18	2 Theoretical	The student understands the subject	Definition and introduction to quality control	Theoretical	quiz
19-20	2 Theoretical	The student understands the subject	0bjectives and functions of quality control	Theoretical	quiz
21-22	2 Theoretical	The student understands the subject	Economics of quality control	Theoretical	quiz
23-24	2 Theoretical	The student understands the subject	Statistic principles	Theoretical	quiz
25-26	2 Theoretical	The student understands the subject	Quality control charts	Theoretical	quiz
27-28	2 Theoretical	The student understands the subject	Probability theory and using in QC	Theoretical	quiz
29	2 Theoretical	The student understands the subject	Probability distributions	Theoretical	quiz
30	2 Theoretical	The student understands the subject	Sampling programs and inspection by samples	Theoretical	Quiz
Course Evaluation					

Distributing the score out of 100 according to the tasks assigned to the student such as daily preparation, daily oral, monthly, or written exams, reports .... etc					
Learning and Teaching Resources	Introduction to industrial engineering				
Required textbooks (curricular books, if any)	Production planning and control				
Main references (sources)	0peration research				
Recommended books and references (scientific journals, reports…)	https://highperformancehvac.com/industrail engineering, operation research and production planning.				
Electronic References, Websites	https://highperformancehvac.com/control-circuits-for-hvac-systems/				
11.					

12.	