# Course Description Form

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| 1. Course Name: |
| Industrial Engineering |
| 2. Course Code: |
| CSE4301 |
| 3. Semester / Year: |
| 2nd Semester |
| 4. Description Preparation Date: |
| 16/2/2024 |
| 5. Available Attendance Forms: |
| Personal |
| 6. Number of Credit Hours (Total) / Number of Units (Total) |
| 30/2 |
| 7. Course administrator's name (mention all, if more than one name) |
| Name: Ass. Prof. Dr. Huthaifa Al-Khazraji<br>Email: 60141@uotechnology.edu.iq |
| 8. Course Objectives |

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| **Course Objectives** | • Understanding how taxonomies of industrial engineering can be used<br>• Identify and implement effective solutions to real industrial problems by applying contemporary industrial engineering tools and cutting-edge technology in production, planning, management, economic, quality, control, safety, service.<br>• Implement and improve integrated systems that manage manpower, materials, machines, information, energy, and environment<br>• Search for alternative operations, evaluate the alternatives, and to be able to make a decision |

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| 9. Teaching and Learning Strategies |

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| **Strategy** | 1. Presentation of Lectures<br>2. Providing problems and its solutions<br>3. Discussing the solutions<br>4. The above points are accomplished through: presentations, home-works, and documented reports |

| 10. Course Structure | | | | | |
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| **Week** | **Hours** | **Required Learning Outcomes** | **Unit or subject name** | **Learning method** | **Evaluation method** |
| 1 | 2 | | Introduction | **In class Presentation and reports** | **Discussing evaluating reports Written exam** |
| 2 | 2 | | Marketing | **In class Presentation and homework** | **Discussing and evaluating homework Written exam** |
| 3 | 2 | | Cost Volume Profit | **In class Presentation** | **Discussing and evaluating homework Written exam** |
| 4 | 2 | | Plant Location and Layout | **In class Presentation** | **Discussing and evaluating homework Written exam** |
| 5 | 2 | | Exam | | |
| 6 | 2 | | Production and Productivity | **In class Presentation and reports** | **Discussing and evaluating reports Written exam** |
| 7 | 2 | | Work Study | **In class Presentation and homework** | **Discussing and evaluating homework Written exam** |
| 8 | 2 | | Network Analysis | **In class Presentation** | **Discussing and evaluating homework Written exam** |
| 9 | 2 | | Inventory Control | **In class Presentation and homework** | **Discussing and evaluating homework Written exam** |
| 10 | 2 | | Exam | | |
| 11 | 2 | | Assembly Line Balancing | **In class Presentation and reports** | **Discussing and evaluating reports Written exam** |
| 12 | 2 | | Scheduling | **In class Presentation and homework** | **Discussing and evaluating homework Written exam** |
| 13 | 2 | | Quality Control | **In class Presentation and homework** | **Discussing and evaluating homework Written exam** |
| 14 | 2 | | Maintenance, Replacement and Reliability | **In class Presentation and homework** | **Discussing and evaluating homework Written exam** |
| 15 | 2 | | Workplace Health and Safety | **In class Presentation** | **Discussing and evaluating homework Written exam** |

## 11. Course Evaluation

20% Documented exam
5% Quizzes
5% Reports and Homework
70% Final Exam

## 12. Learning and Teaching Resources

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| Required textbooks (curricular books, if any) | |
| Main references (sources) | 1. Industrial Engineering and Management, Khanna (1999)<br>2. Operations Research an Introduction, Taha (2003)<br>3. Handbook of Industrial Engineering: Technology and Operations Management, Salvendy (2001)<br>4. Statistical Quality Control, Montgomery (2012)<br>5. Balancing and Sequencing of Assembly Lines, Scholl (1999)<br>6. Principles of Marketing, Philip, Veronica, John and Gary (2005) |
| Recommended books and references (scientific journals, reports…) | Scientific Journals<br>1. Journal of Computers & Industrial Engineering<br>2. European Journal of Industrial Engineering |
| Electronic References, Websites | Websites<br>Industrial Engineering Knowledge Center – Blogger: http://nraoiekc.blogspot.com |