Ministry of Higher Education and Code:ME.G. 431

 Scientific Research Stage: Fourth

 University of Babylon Subject: Industrial Engineering

Department of Mechanical Engineering

Weekly hours: Theoretical (2 hours) Practical (-) Discussion (1 Hour)

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| Weeks | Subject | Contents | Week |
| 1 |  | Introduction to Industrial Engineering  | 1 |
| 2 |  | Plant layout, Pre-Production Analysis, Post-Production Analysis, Steps cost Calculation | 2 |
| 3 |  |  | 3 |
| 4 |  |  | 4 |
| 5 |  | Detailed steps for product design, Translate Specification Product, Raw Material Tests | 5 |
| 6 |  |  | 6 |
| 7 |  |  | 7 |
| 8 |  |  | 8 |
| 9 |  | Quality Control, Six Sigma, Process Capability,  | 9 |
| 10 |  |  | 10 |
| 11 |  |  | 11 |
| 12 |  |  | 12 |
| 13 |  | Linear Programming, Transportation Models, Maintenance  | 13 |
| 14 |  |  | 14 |
| 15 |  |  | 15 |
| 16 |  |  | 16 |
| 17 |  |  | 17 |
| 18 |  | Knowledge Engineering Systems, Neural Networks, Fuzzy Systems, Sustainability , Genetic Algorithms | 18 |
| 19 |  |  | 19 |
| 20 |  |  | 20 |
| 21 |  |  | 21 |
| 22 |  |  | 22 |
| 23 |  |  | 23 |
| 24 |  | Total Quality, ISO 9001, 14000 | 24 |
| 25 |  |  | 25 |
| 26 |  |  | 26 |
| 27 |  | Forecasting, Reliability Theory | 27 |
| 28 |  |  | 28 |
| 29 |  | Choose the machines and tools, Operations Sequence | 29 |
| 30 |  |  | 30 |