

# H-Form ISE 321

| Course Information:          |   |
|------------------------------|---|
| <b>Code and Title:</b>       | ISE 321 Production Planning and Control (2)                                 |
| <b>Prerequisites:</b>        | ISE 220   |
| <b>Co requisite (if any)</b> |   |
| <b>Credit Hours: 3</b>       | Lecture Hrs. (45), Tutorial Hrs. (15), Lab (0), <b>Total Credits ( 60 )</b> |
| <b>College/ Department:</b>  | College of Engineering/Industrial and Systems Engineering                   |

| Course Description:   |
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| This course introduces students to the managerial concepts and quantitative techniques required in the areas of aggregate planning, MRP, scheduling for the short term, and decision modelling. To enable students to make efficient operations management decisions in practice. |

| Course Objectives:   |
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| This course aims to allow the students to understand industrial engineering and operations management in order to make use of managerial concepts and quantitative techniques required in the area of planning, analyze operations, scheduling and making decision. As well developing the students' ability to design solutions for operations in factories/institutions based on the learned knowledge through lectures, presentations and case studies. |

| Course Learning Outcomes |  |     |
|--------------------------|--|-----|
|                          |  | PLO |
| Knowledge Understanding  |  |     |
| 1.1                      | Recognize the impact of production planning and control in industrial engineering case studies.                      | K3  |
| Skills                   |  |     |
| 2.1                      | Develop long term aggregate plans and MRP and short scheduling for manpower, equipment, material, and processes      | S1  |
| 2.2                      | Solve different production planning and decision making using different software tools with real applications        | S2  |
| 2.3                      | Apply the concept of the assembly line balancing for production planning solutions                                   | S3  |
| 2.4                      | Perform decision making tools and their application in operations management to judge production planning solutions. | S4  |
| Values                   |  |     |
| 3.1                      | Judge the impact of production planning solutions.   | V2  |

| Textbook:                      |  |                          |                       |
|--------------------------------|--|--------------------------|-----------------------|
| <b>Title:</b>                  | Operations Management: Sustainability and Supply Chain Management  |                          |                       |
| <b>Author(s):</b>              | Jay Heizer, Barry Render, and Chuck Munson,  |                          |                       |
| <b>Publisher:</b>              | Pearson,   | <b>Year and Edition:</b> | 14 <sup>th</sup> 2023 |
| <b>Other Useful Resources:</b> | Sustainable Operations Management, 1st Edition, V. Belvedere and A. grando, Egea. John Wiley & Sons, 2017. |                          |                       |