BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE, Pilani
Pilani Campus
AUGS/ AGSR Division

SECOND SEMESTER 2020-2021
COURSE HANDOUT (PART II)

Date: 18/01/2021

In addition to Part-I (General Handout for all courses appended to the time table) this portion gives further specific details regarding the course.

Course No. : MSE G512
Course title : Manufacturing Planning & Control
Instructor-in-charge : Divyansh Patel

Course description

Generalized model of production systems, types of production flows, Life cycle concepts, Facilities location and layout planning, Aggregate and batch production planning, Inventory systems, Materials requirements planning, Elements of monitoring and production control.

Objective

The objective of this course is to impart important decision making processes and analytical tools in design, planning and control of manufacturing / service processes. At the end of the course the students shall be able to establish routes and schedules for work that will ensure the optimum utilization of men, materials and machines in a manufacturing / services.

Scope

- Familiarise fundamental concepts in production / operations management
- Understand the decision making process in design, planning and control of manufacturing / service systems
- Develop skills for decision making in conversion process / manufacturing systems

Text books

T   Russell R. S. & Taylor B. W., "Operations Management", International Student Version, 7/e, John Wiley and Sons (Asia) Pte. Ltd., 2011

Reference books

R1. Heizer, Jay_Render, Barry_Munson, Chuck - Operations management_ sustainability and supply chain management (2020, Pearson)
R2. Reid and Sanders - Operations Management -
R3. Chase, R.B., Aquilano, N.J., and Jacobs, F.R., "Operation Management for Competitive Advantage", 9th Edition, Tata McGraw-Hill, Delhi, 2002.
R4. Krajewski, L.J., and Ritzman, L.P., "Operations Management: Strategy and Analysis", 6th Edition, Pearson Education Asia, India, 2003.

Course plan

Module No.	Lecture Session	Reference	Learning outcomes
1	Introduction to Operations, Operational Decision-Making Tools: Decision Analysis	T 1	Students will familiar with the need of Production Planning and Control in Industry. Operational Decision-Making Tools: Decision Analysis
2	Product planning	T 4	Students will able to find out the design requirements of a product and able to convert them into engineering specifications.
3	Process planning	T 6	Students will able to find out the design requirements of a process and its make its analysis.
4	Capacity and layout planning	T 7	Students will able to the design the layout for different manufacturing environments.
5	Forecasting	T 12	Student will be familiar with different forecasting methods and also able to assess the effectiveness of a forecasting method in a specific environment.
6	Inventory management	T 13	Student will be familiar with the inventory classification methods and control methods.
7	Aggregate planning	T 14	Student will able to develop aggregate planning and solve it for a specific environment.
8	Resource planning	T 15	Student will be familiar with various analytical tools used in resource planning and project management.
9	Project management	T 9	Student will be familiar with various analytical tools used in resource planning and project management.

Module No.	Lecture Session	Reference	Learning outcomes
10	Scheduling	T 17	Students will able to analyse scheduling issues and learn different analytical tools related to scheduling.

Evaluation scheme

Evaluation Component	Duration	Weightage	Date & Time	Remarks
Mid-Sem.	90 Min.	25% (50 Marks)	-	Closed/Open Book
Comprehensive	120 Min	35 % (70 Marks)	30/06/2021	Closed/Open Book
Case Presentation/ Literature Review/Assignment		10% (20 Marks)	-	Report
Project		30% (60 Marks)	-	Online presentation

Chamber consultation hour: To be announced in the first class.

Notices: All notices related to this course will be put on the Nalanda.

Makeup policy: Make up will be permitted only in genuine cases with prior permission

Instructor-in-charge
MSE G512