MBG5205 OPERATIONS MANAGEMENT

Course Code	MBG5205	Semester	II
Course Title	**OPERATIONS MANAGEMENT**		
Credits	3	Type	Core

This is a problem-solving, skill development and employability-based course which will enhance the coordination and operations management techniques of the students.

Course Description

To introduce the students to the production and operations management function and the new advancements like technical and computer skills in operations management practices.

Course Outcomes (COs)

Course Outcome

By the end of the course, students are expected to be able to gain the following.

1. Knowledge gained
- Understand the meaning and significance of operations management
- An insight into the New technologies in operations management
- the factors involved in an efficient production system
- models of total quality management and material handling principles and practices.

2. Skills gained
- the basics of computer-based manufacturing systems and project management skills.
- analytical and planning skills

3. Competency gained
- Data processing , budget management, risk management , problem solving skills

Module I

Production as a value addition process – its ingredients – 5 P's of operations management – Design function. Plant location – plant layout – Economy of size – Make/ Buy mix, productivity – work methods, work measurement techniques, capacity measurements.

Module II

Vertical Integration – Quality Management, Quality control – Statistical Quality Control (including process control) TQM – ISO 9000, 14000 and SA 8000 and other international standards – Quality circles – JIT – Vendor selection and rating – quality problem solving tools- Six Sigma – Service Quality.

Module III

Production Planning and Control – Forecasting – aggregate planning – development of MPS – capacity planning – shop floor control – Master and detailed schedules, work orders, route sheets, Job cards etc – Value analysis/engineering.

Module IV

Materials Management – Stores management – maintenance management (including reliability concepts) Inventory Control – P & ! system – safety stocks – ABC – VED – two Bin –

EOQ – MRP – I, MRP II – Inventory records – spare parts management – Concepts of SCM & Logistics.

Module V

Computer Based Integrated Manufacturing Systems – CIM, CAM, Robotics, automated material, FMS, ERP, World class manufacturing – Project Management concepts – PERT/CPM (concepts) – Gantt Chart-Precedence diagram – Lessons from Japanese and Chinese manufacturing – challenges due to globalization.

Testing & Evaluation (if any)

- Assignments
- Case analysis/ Problems
- Seminar/Project
- Discussions/ Group activity
- Internal Tests

References

1. Panneerselvam (2012).Production and Operations Management.Prentice Hall India Learning Private Limited, 3 edition.
2. Jay Heizer, Barry Render, Chuck Munson&Amit Sachan (2017). Operations Management. Pearson Education, Twelfth edition.
3. Mahadevan B. (2015). Operations Management: Theory and Practice. Pearson Education India; Third edition
4. Panneerselvam (2012).Production and Operations Management.Prentice Hall India Learning Private Limited, 3 edition.
5. KrajewskiLee J., Malhotra Manoj K., Ritzman Larry P. & Srivastava Samir K. (2018). Operations Management: Processes and supply chain. Pearson Education, Twelfth edition.
6. Russel&Taylor (2015). Operations and Supply Chain Management. Wiley; Eighth edition.