

SIST Graduate Program - Course Details and Schedule

IndM 5212 Production & Operations Management (3 Credits)

Schedule: Fall - Online and Live

Description:

Production/operations concepts with emphasis upon systems, systems design and analysis, strategies, productivity, planning, forecasting, deterministic and stochastic inventory control, MRP scheduling, and project planning. An additional fee is associated with this course.

Course Specific Objectives

The student, upon completion of IndM 5212 will be able to:

- Understand the impact of manufacturing configuration and processes on planning, scheduling, and controlling.
- Know the Process Life Cycle and applications.
- Know the Product Life Cycle and applications.
- Understand the problem of estimating capacity, requirements and be familiar with methods used in deriving estimates.
- Understand Operations Systems Management.
- Understand forecasting methods and know their advantages, and limitations, and know how to apply inventory control methods.
- Understand and apply the concepts of inventory management and control.
- Understand the basics of Material Requirements Planning (MRP) and Supply Chain Management (SCM).
- Understand and know how to apply scheduling methods including Intermittent Process Schedule and Aggregate Scheduling.
- Have an overall understanding of planning, controlling, organizing, and scheduling for production operations.
- Be able to conceptually build an operation.

Topical Content Outline

Part 1: The Strategic Importance of Operations - Introduction of the meaning of POM and roles of operations relating to the other business functions.

Part 2: Ensuring Quality - Foundations and strategic implications of Total Quality Management (TQM), quality techniques, Statistical Process Control (SPC), and Human Resources issues in Operations Management.

Part 3: Designing the Operating System - Key strategic decisions in operations, such as product and service design, processes and technology, capacity and facilities, and project management.

Part 4: Managing The Supply Chain - Issues to cover include Supply Chain Management, studies in Inventory Management with EOQ model, Material Requirement Planning (MRP), Enterprise Resource Planning (ERP) systems and Lean Systems.

Course Textbook

The following textbook are **required** in this course:

- Operations and Supply Chain Management (2023), 11th Ed.,
Authors: Roberta S. Russell and Bernard W. Taylor.
Publisher: Wiley
- Publication Manual of the American Psychological Association (APA) Publication Manual, 7th ed. or the latest.