MBPC4020 GREEN SUPPLY CHAIN MANAGEMENT (3-0-0)

Course Objectives:

1. To provide foundational knowledge associated with the green supply chain.
2. To teach the implications of today's most pressing environmental issues.
3. To describe how the various green supply chain practices can actually save money, increase efficiency, and reduce delivery time.

MODULE-I

Introduction:

Traditional Supply Chain and Green Supply Chain, Environmental Concern and Supply Chain, Closed-loop Supply Chain, Circular supply chain models, cradle-to-cradle design Corporate Environmental Management, Green Supply Chain (GSCM): Definition, Basic Concepts, GSCM Practices

MODULE-II

Design for the Environment (DFE) or Eco-Design:

Eco-Design and Supplier Relationships, Definitions of Eco-Design, Tools of Product Eco-Design, Involving suppliers in product eco-design: Drivers, Challenges, and Success Factors

Green Procurement and Purchasing:

Definitions of Green Purchasing, Drivers of Green Purchasing, Green Purchasing Strategies, Green Purchasing Performance Measurement, Green Supplier Development and Collaboration

MODULE-III

Green Manufacturing or Production:

Evolution, Definitions, 4R's: Recycling, Remanufacturing, Reuse, and Reduction, Closed-loop Manufacturing, ISO 14000 Systems, Life Cycle Analysis (LCA), Lean Manufacturing for Green Manufacturing or Production, Biodegradable packaging, packaging optimization

Green Logistics and Transportation:

Definitions of Green Logistics, Critical Drivers of Green Logistics, Green Transportation and Logistics Practices, Environmental Impacts of Transportation and Logistics, Closing the Loop: Reverse Logistics

COURSE OUTCOMES

CO1 Apply green supply chain practices to optimize resource use, reduce waste, and improve efficiency
CO2 Analyse eco-design strategies, supplier collaboration, and green procurement frameworks
CO3 Evaluate critical drivers of green logistics, environmental impact, and carbon accounting tools in supply chains
CO4 Design closed-loop logistics systems and green manufacturing models aligned with environmental goals

Books:

1. Joseph Sarkis, Yijie Dou, Green Supply Chain Management: A Concise Introduction, Routledge
2. Charisios Achillas, Dionysis D. Bochtis, Dimitrios Aidonis, Dimitris Folinas, Green Supply Chain Management, Routledge
3. Hsiao-Fan Wang, Surendra M. Gupta, Green Supply Chain Management: Product Life Cycle Approach, McGraw Hill Publishing
4. Stuart Emmett, Vivek Sood, Green Supply Chains: An Action Manifesto, Wiley Publications