

MARITIME LOGISTICS

Introduction to Logistics in the Maritime Sector: Role of logistics in shipping ecosystems and port operations; Freight forwarding: types, documentation, Incoterms, international trade flows; Maritime logistics value chains: from cargo owner to consignee; Inventory and Warehousing Management: Inventory models (EOQ, safety stock), order cycles, demand forecasting; Warehousing roles in port and hinterland operations: cross-docking, consolidation, yard layout; Transport and Distribution Management: Maritime versus intermodal transport planning; Cost components, rate structures, liner and tramp shipping logistics, container logistics; Port calling schedules, consolidation hubs, feeder networks; Port Logistics & Supply Chain Integration: Port operations, cargo handling equipment, terminal types; Inland logistics: drayage, hinterland connectivity, rail/road interface; 3PL/4PL service providers and logistics outsourcing; Performance Metrics, Risk & Sustainability: KPIs: Vessel turnaround, dwell time, ontime delivery, cost per TEU; Risk management: cargo loss, delays, regulatory compliance; Sustainability in logistics: emissions, green corridors, BIMCO and IMO standards; Emerging Trends & Case Studies

Digital logistics: blockchain, port community systems, IoT trackers; Case studies: IMUaligned port logistics models, success and failure examples; Project: design logistics flow for a hypothetical port or shipping route.