



National Institute of Technology Meghalaya
An Institute of National Importance

CURRICULUM

Programme	Bachelor of Technology in Mechanical Engineering	Year of Regulation	2018
Department	Mechanical Engineering	Semester	VII

Course Code	Course Name	Credit Structure				Marks Distribution			
		L	T	P	C	INT	MID	END	Total
ME 417	SUPPLY CHAIN AND LOGISTICS MANAGEMENT	3	0	0	3	50	50	100	200

Course Objectives	To introduce the basic of supply chain and its drivers and use the knowledge of Demand and Supply in a Supply Chain in organization in E- business.	Course Outcomes	CO1	Able to Interpret the basic s of Supply chain and its strategies . (Understanding)
	To develop an ability and skill to use Network Design and its effect on organizational performance.		CO2	Able to Explain the drivers of supply chain, and structuring Drivers (Understanding)
	To analyse the theories of logistics and decisions, Benchmarking and performance analysis to solve the organizational problems.		CO3	Able to Apply the knowledge of Planning Demand and Supply in a Supply Chain in organization in E-business analysis.(Application)
			CO4	Able to Apply the knowledge of Network Design in the Supply Chain in network design decision in organizations(Application)
			CO5	Able to Analyse logistics and decisions, Benchmarking and performance analysis in organizations (Analysis)

No.	COs	Mapping with Program Outcomes (POs)												Mapping with PSOs		
		PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
1	CO1	0	0	0	0	0	0	0	0	2	2	2	2	0	2	0
2	CO2	0	0	0	0	0	0	0	0	2	2	3	2	0	2	0
3	CO3	0	0	0	0	0	0	0	0	3	3	3	3	0	3	0
4	CO4	0	0	0	0	0	0	0	2	3	3	3	2	0	3	0
5	CO5	0	0	0	0	0	0	0	2	3	3	3	3	0	3	0

SYLLABUS

No.	Content	Hours	COs
I	Introduction to Supply Chain Management, Understanding the Supply Chain. Supply Chain Performance: Competitive and Supply Chain Strategies, achieving Strategic Fit and Scope of Strategic Fit.	06	CO1
II	Supply Chain Drivers and Metrics: Drivers of Supply Chain Performance, Framework for structuring Drivers, Facilities, Inventory, Transportation, Information, Sourcing and Pricing.	06	CO2
III	Planning Demand and Supply in a Supply Chain: Demand Forecasting in a Supply Chain, Aggregate Planning in a Supply Chain. Designing Distribution Networks and Application to E-Business, Role of distribution, factors influencing distribution network design, design options for a distribution network, E-Business and the distribution network.	08	CO3
IV	Network Design in the Supply Chain- Role of network design in the supply chain, factors influencing network design decisions, framework for network design decisions Role of Information Technology in supply chain, coordination in a supply chain, Bullwhip Effect, Effect on performance due to lack of coordination, obstacles to coordination in a supply chain.	08	CO4
V	Factors influencing logistics and decisions. Modelling logistic problems, logistics in practice, Benchmarking and performance analysis techniques, the bin –packing problem, travelling salesman problem.	08	CO5
Total Hours		36	

Essential Readings

1. Supply Chain Management: Strategy, Planning & Operation- Sunil Chopra & Peter Meindle- Pearson, 5th ed. 2013.
2. Julien Bramel and David Simchi-Levi, “The logic of Logistics Theory algorithms and Applications for Logistics management”, Springer series in Operations Research, 1997

Supplementary Readings

1. Donald J. Bowersox & David J. Closs “Logistical Management: The integrated Supply Chain Process”, TMH Publication, 2017