Material Management in Supply Chain

SM-485

BASIC INFORMATION

Program	**BBA / BBIS**
Credit Hours	**3**
Prerequisites	*OM-345*

CAPSULE STATEMENT

Effective material management is the key driver in enhancing the value of a supply chain. This course offers the participants an opportunity to develop their knowledge base with respect to material management in supply chains. The course presents a holistic view of flow of material in the entire supply chain. The course enables participants to learn state of the art tools and techniques for planning, designing, and managing material management systems in supply chain. Application of these tools and techniques will enhance the competitiveness of supply chains by increasing responsiveness, and reducing the costs. The course also discusses the sustainability issues of supply chain with special focus on social and environmental sustainability, along with the economic sustainability.

LEARNING OBJECTIVES

Upon successful completion of this course, the participants will be able to:

1. Appreciate the important role that material management plays in supply chains
2. Plan and design material flow systems in supply chain using state of the art mathematical models
3. Develop a sound understanding of the issues of social and environmental sustainability of material management in supply chains

LEARNING METHODOLOGY

Inter-active Class Discussions	In-class Skill Development Exercises	Simulations
Computer Software Tools	Case Studies & Presentations	Industrial Trip

TEXT BOOK

Supply Chain Management (4th Edition) by *Sunil Chopra*

ADDITIONAL REFERENCES

1. Business Logistics (5th Edition)by Ballou
2. Data Analysis & Decision Making (3rd Edition) by *Albright, Winston, Zappe*

COMPUTER APPLICATIONS

Software packages like Excel with various add-ons will be extensively used in this course.

Additional workshops/tutorial sessions may be arranged to familiarize participants with these tools.

GRADE ASSESSMENT

Instrument	Weightage
Weekly Assignments	10%
Case Analysis	10%
Quiz	10%
Class Participation	10%
Supply Chain Simulation	10%
Mid-Term / Paper Presentation	10%
Final Exam	40%

WEEKLY ASSIGNMENTS

1. A short assignment will be given every week

2. All assignments should be Typed and submitted at the START of the next session

3. Serious errors in grammar, spellings, and formatting will result in loss of points. So please PROOF READ your work before submission.

4. You are not allowed to share or show your assignment output to any member outside your team under any circumstances. You are also responsible for security of soft copies of your assignments.

5. The weekly assignments will be graded on a three point scale

   0 point *Not submitted / Unsatisfactory*
   1 point *needs major improvement*
   2 points *Satisfactory*

CASE ANALYSIS

1. You will be required to work on 2-3 case studies, and submit your analysis in a report form for each case study

2. All the case analysis will be conducted in teams

3. The report should adhere to the standard norms of professional report writing

4. The grade of the case report will depend on the thoroughness and soundness of the analysis, as well as the presentation of analysis in the report

5. All team members are required to participate in preparing the case analysis and other assignments. In case a member fails to participate, it is the responsibility of the remaining team members to exclude his/her name from the submitted assignment, and notify the resource person. Failure to do so will be considered as an act of violation of the class policy and may result in serious loss of grade for the entire team or selected members.

QUIZZES

1. Make-up quizzes will not be allowed

2. All quizzes will be Open Books / Open Notes

CLASS PARTICIPATION

1. You are required to attend the classes regularly and with punctuality

2. You should come fully prepared in each class, and participate actively in class activities

RESEARCH PAPER PRESENTATION

You are required to make a presentation on a published journal research paper on a topic assigned by the resource person

END-TERM EXAM

1. End-Term Exam will be comprehensive
2. The test will be Open Book and Open Notes

CLASS POLICY

SEATING PLAN

All participants are required to sit according to the fixed seating plan, (finalized in Session-3) and have their name plates in front of them for each session

EMAIL ADDRESSES

Participants should establish their email accounts on the UMT email system, and use this address for all communications during this course

MOODLE (Course Management System)

Participants should regularly visit the course website on MOODLE Course Management system, and fully benefit from its capabilities

USE OF MOBILE PHONES AND OTHER ELECTRONIC DEVICES

1. Use of mobile phones and similar devices is prohibited during the class. Your phone should not be heard or visible during the class

2. All mobile phones should be turned-off (or at least in the "silent" mode) and secured in pockets or bags during the class time, and may not be used for ANY purpose, including calculations, time-keeping, etc. In case you are anticipating an emergency call, you need to discuss this matter with the resource person BEFORE the start of the class

ENTERING AND LEAVING THE CLASSROOM

You are requested to seek permission from the resource person while entering or leaving the classroom during the session

USE OF UNFAIR MEANS

1. COPYING or SHARING in graded instruments (e.g. assignments, quizzes, tests etc), or using any other unfair means, is not permissible. Any individual or team failing to comply will be reported to the Unfair Means Committee (UMC) for appropriate action.

2. We expect from you a thoroughly professional approach in this regard

COURSE CONTENTS

WEEK	TOPIC
1	Course overview
2	Optimizing supply chain using Mathematical Models
3	Network Design for Material Management in Supply Chain
4	Transportation models for logistics
5	Mixed Integer Programming Models for Supply Network Design
6	Integrated Supply Chain Optimization models
7	Optimization with Multiple Objectives in Supply Chain
8	*Supply Chain SIMULATION*
9	Role of Coordination in Material Management in Supply Chain
10	Sustainable Supply Chains
11	Social and Environmental Sustainability of Supply Chain
12	Effective Warehouse Management
13	Transportation of Material in Supply Chain
14	*Industrial Trip*
15	Research Paper Presentations