SUPPLY CHAIN ANALYTICS

MBA-MS PROGRAM

MBA-MS BATCH: 2016-18 /TRIMESTER: 5

DEPARTMENT OF MANAGEMENT, BANGALORE CAMPUS

AMRITA VISHWA VIDYAPEETHAM

INSTRUCTOR AND CONTACT INFORMATION

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COURSE OBJECTIVE

To provide a strong foundation in supply chain analytics in order to handle complex data bases, build advanced analytical models and deliver effective visualization product and comprehensive reports.

LEARNING OUTCOMES

The course covers a reasonable curriculum in supply chain analytics
At the end of the course the student should be able to

1. Analyse and model supply chains
2. Enhance supply chain visibility
3. Develop data driven rules to manage volatility
4. Plan inventory flow of goods and services.
5. Forecast demand and to predict and monitor supply and replenishment policies

COURSE DESCRIPTION

The course is an application oriented one and most of the exercises have to be done with industrial data. During the course basic concepts regarding supply chain management will be revised and applied using industrial data. Various capabilities of R environment and computational routines in R for supply chain analysis will be introduced in a comprehensive manner.

REQUIRED COURSE MATERIALS AND READINGS

Prescribed Text Book for the course

Stadler Hartmut and Kilger Christoph (2005),"Supply Chain Management and Advanced Planning: Concepts, Models, Software and Case Studies", Third Edition, Springer, ISBN-3-540-22065-8

OPTIONAL COURSE MATERIALS & READINGS (CASES, ARTICLES, REPORTS ETC)

Márquez Adolfo Crespo (2010) "Dynamic Modelling for Supply Chain Management: Dealing with Front-end, Back-end and Integration Issues", Springer

Simchi-Levi, David, Chen, Xin, Bramel, Julien (2014), "The Logic of Logistics Theory, Algorithms, and Applications for Logistics Management", Third Edition, Springer, ISBN- 978-1-4614-9149-1

Tang Christopher S, Teo Chung-Piaw and Wei Kwok-Kee (Eds) (2008), "Supply Chain Analysis: A Handbook on the Interaction of Information, System and Optimization", Springer, ISBN-13: 978-0-387-75239-6

EVALUATION CRITERIA

Assignments & final Project, Mid term and End term examinations

Components and Weights (faculty can Decide on components

Components	**Weightage (%)**
Assignments and final projects	30%
Midterm Exam	30%
End term	40%
Total	**100%**

DETAILS OF SESSION: TENTATIVE COURSE SCHEDULE

WEEK	SESSION NO.	TOPICS TO BE COVERED	ASSIGNED READING, CASE DISCUSSION, ASSIGNMENTS

Week 1to 5	1 to 5	1. Basics of Supply Chain Management Supply Chain Management – An Overview Supply Chain Analysis Types of Supply Chains Advanced Planning	
6to 12	3 to 28	2.Concepts of Advanced Planning Systems Structure of Advanced Planning Systems Strategic Network Planning Demand Planning Master Planning Demand Fulfilment and ATP Production Planning and Scheduling Purchasing and Material Requirements Planning Distribution and Transport Planning Coordination and Integration Collaborative Planning	1.Architecture of Selected APS 2.Demand Planning of Styrene Plastics 3.Scheduling of Synthetic Granulate
13to 15	29 to 30	3. Implementing Advanced Planning Systems The Definition of a Supply Chain Project The Implementation Process	4.SCM in a Pharmaceutical Company 5.Food and Beverages 6.Computer Assembly 7.Semiconductor Manufacturing

ANY OTHER SPECIFIC RULES

Students have to bring their laptops installed with R and R Studio. Download R from http://cran.r-project.org/ and R Studio from http://www.rstudio.com/products/rstudio/download/

Sharing computers are not allowed. They should make their own arrangement for charging the laptops.