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


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


EVALUATION CRITERIA

Assignments & final Project, Mid term and End term examinations

Components and Weights (faculty can Decide on components)

<table>
<thead>
<tr>
<th>Components</th>
<th>Weightage (%)</th>
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<tbody>
<tr>
<td>Assignments and final projects</td>
<td>30%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>30%</td>
</tr>
<tr>
<td>End term</td>
<td>40%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
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DETAILS OF SESSION: TENTATIVE COURSE SCHEDULE

<table>
<thead>
<tr>
<th>WEEK</th>
<th>SESSION NO.</th>
<th>TOPICS TO BE COVERED</th>
<th>ASSIGNED READING, CASE DISCUSSION, ASSIGNMENTS</th>
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### Course Outline

**Year: 2017 | Trimester: 5**

| Week 1 to 5 | 1 to 5 | 1. Basics of Supply Chain Management  
Supply Chain Management – An Overview  
Supply Chain Analysis  
Types of Supply Chains  
Advanced Planning |
|-------------|--------|------------------------------------------------|
| 6 to 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 |
| 13 to 15    | 29 to 30| 3. Implementing Advanced Planning Systems  
The Definition of a Supply Chain Project  
The Implementation Process |

| 1. Architecture of Selected APS  
2. Demand Planning of Styrene Plastics  
3. Scheduling of Synthetic Granulate  
4. SCM in a Pharmaceutical Company  
5. Food and Beverages  
6. Computer Assembly  
7. Semiconductor Manufacturing |

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### Any Other Specific Rules


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