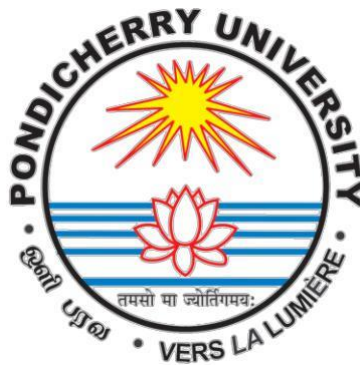




**DEPARTMENT OF INTERNATIONAL BUSINESS  
SCHOOL OF MANAGEMENT**

***MBA: Logistics & Supply Chain Management***

## ***COURSE CURRICULUM***



**PONDICHERY UNIVERSITY  
PONDICHERY 605 014**

# MBA

## LOGISTICS & SUPPLY CHAIN MANAGEMENT

### Information Brochure



Department Of International  
Business  
School Of Management  
Pondicherry University  
Pondicherry - 605014

COURSE CURRICULUM, SYLLABI  
& GUIDELINES

**Minutes of the meeting with the Dean & Faculty held on 19-01-2018 at the office of HOD i/c of Department of International Business at 11:00am**

**Members Present:**

1. Dr. Anjaneya Swamy, Dean SOM
2. Dr. Sridharan P
3. Dr. Bushan D. Sudhakar
4. Dr. Y. Srinivasulu
5. Dr. M. Banumathi
6. Dr. Rajeev Viswanathan
7. Dr.S. Thyagarajan
8. Dr. P.G. Arul
9. Dr. Senkathir R

Dr. Anjaneya Swamy, Dean-SOM welcomed the gathering and greeted all the faculty members.

This meeting was in tune with the Vice Chancellor's meeting on 17-01-2018 with the Deans & HODs with respect to the Introduction of New Courses.

- Dean appraised and appreciated the Department of IB and said that this Department had got huge potential in introducing and managing a new course titled "MBA - Logistics & Supply Chain Management." In this regard a Structure, Curriculum & Syllabus for the new programme may be worked out and a proposal may be submitted as soon as possible.
- Dr. M. Banumathi agreed to coordinate in making the proposal of the New Course MBA- Logistics & Supply Chain Management.
- Once the proposal is agreed upon then we need work on seeking for necessary approvals from the concerned University Authorities. Dean also suggested in reconstituting the Board of Studies members adding specialized or relevant discipline persons drawn from premier Institutes of repute including Industry personnel.
- Resolved that the Department need to apply for the SAP grant when it is called for and Dr. P.Sridharan & Dr.P.G Arul agreed to work on the Proposal.

Meeting concluded with a cup of Tea...

Dr. Anjaneya Swamy

Dr. Sridharan P

Dr. Bushan D. Sudhakar

Dr. Y. Srinivasulu

Dr. M. Banumathi

Dr. Rajeev Viswanathan

Dr.S. Thyagarajan

Dr. P.G. Arul

Dr. Senkathir R



புதுவைப் பல்கலைக்கழகம் /பாண்டிச்சேரி विश्वविद्यालय /PONDICHERRY UNIVERSITY  
கல்விப் பிரிவு /शैक्षणिक अनुभाग /ACADEMIC SECTION

பி. ராஜசேகரன் / पी. राजशेखरन / P. RAJASEKARAN,  
உதவிப் பதிவாளர்/सहायक कुलसचिव/ASSISTANT REGISTRAR,  
கல்வி-சேர்க்கை/शैक्षणिक-प्रवेश/ACADEMIC-ADMISSION,  
எண்/ச/No.PU/AS-AD/ACA-11/2018-19/ / 138

ஆர். வி. நகர்/आर.वी. नगर/R.V. NAGAR,  
காலாபட்டினம்/कालापेट/KALAPET,  
புதுச்சேரி/पुदुच्चेरी/PUDUCHERRY - 605 014.  
தேதி/दिनांक/DATE: 26.12.2018

To  
The Head  
Department of International Business,  
Pondicherry University.

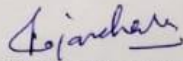
**Sub:** Minutes of Meeting of Deans of all Schools /HOD's held on 17.12.2018 to increase of existing intake in certain courses and starting of new programmes on self-financing basis for the Academic year 2019-20 – Reg.  
\*\*\*\*\*

Earlier during 2018-19 the Departments had submitted proposals to start new courses. This was considered by High level committee which had made its recommendations to start certain new programmes on self financing basis. In this regard a meeting of Deans of all Schools /Heads of all Departments was held on 17.12.2018 under the Chairmanship of Vice-Chancellor. Based on the decision taken in the meeting on 17.12.2018 your Department is permitted to start **MBA (Logistics and Supply Chain Management)** with intake of **72 (seventy two only)** on self financing basis from the academic year 2019-20 subject to the following conditions:

1. If required, Guest faculty may be engaged to run the course.
2. The Syllabus for the approved new course is to be framed by the respective Programme Committee / Board of Studies immediately and same may be submitted to Director (SEI&RR) **by 4<sup>th</sup> January 2019.**
3. Mode of admission for the above programme also need to be specified.
4. Since, the proposed new course is to be run on Self Financing basis a separate fee structure covering all the expenditure for the programme is to be framed by the Department and has to be approved by the Competent Authority.

This may be treated as **"MOST URGENT"**.

Yours faithfully,

  
ASSISTANT REGISTRAR  
(Academic-Admissions)

Copy to:-

1. The Dean, School of Management, Pondicherry University.
2. The Assistant Registrar, O/o. the Registrar - for kind information of Registrar.





**PONDICHERRY UNIVERSITY**  
**Department of International Business**  
**SCHOOL OF MANAGEMENT**



**Dr. BUSHAN D. SUDHAKAR**  
 Associate Professor & Head i/c

R.V. Nagar, Kalapet, Pondicherry – 605014  
 Ph: (0413) 2654643; Cell: 7639656047

25-01-2018

To,

**The Registrar**  
 Pondicherry University  
 Pondicherry

Through: Dean – School of Management

Sir,

**Sub: Floating of new course for the Academic Year 2018-19**  
Ref: PU/AS-AD/ACA-11/Admission 2018-19/210 circular dated  
23/1/2018

\*\*\*\*\*

We are happy to inform you that the Department of International Business, School of Management is planning to float a new course for the Academic Year 2018-19. The proposed title of the course is **"MBA- Logistics & Supply Chain Management"** as a P.G. Course with an intake of 50 students. The Faculty of the Department along with the Dean – School of Management deliberated & discussed thoroughly and been able to prepare the Programme overview, Scheme, Curriculum and Syllabus for your perusal and further approval.

Thanking you

Yours Truly

*[Signature]* 25/1/18

**Bushan D. Sudhakar**

Enclosed:

- 1) Programme Overview, Scheme, Curriculum and Syllabus



**Dr. BUSHAN D. SUDHAKAR, Ph.D.**  
 Associate Professor & Head  
 Dept. of International Business  
 School of Management  
 Pondicherry Central University  
 Puducherry - 605 014.

*[Signature]* 4.5.18

*[Signature]*

*[Signature]*

*[Signature]*

*[Signature]*

# **DEPARTMENT OF INTERNATIONAL BUSINESS SCHOOL OF MANAGEMENT PONDICHERRYUNIVERSITY**

## **The University**

The Pondicherry University (A Central University) was established by an Act of Parliament, which was enforced by a Notification of the Government of India in October 1985. The campus is spread over 800 acres of land which is rolling down to the Bay of Bengal sea beach. The inner landscape is featured by sprawling lawns, well nurtured gardens, picturesque road shapes, and lush green belt with eco-forest mostly flavored by Cashew-nuts. The tranquil setting makes Pondicherry University Campus a unique one with exquisite natural beauty with sea shore that captures viewers' imagination and provides an ideal atmosphere for persuading study and research. On the University Campus, 15 Schools and 37 Departments with ample number of students across the globe who undertake post-graduation program under Choice Based Credit System (CBCS). The University is a member of the Association of Commonwealth Universities and signed MoU with several foreign Universities/ Institutions.

## **School of Management**

The School of Management is the first School to be established in the University in the year 1986 and is one of the popular Schools of Excellence in the campus primarily focusing on the business-related courses since the very inception of this University. The School is offering five MBA programs – MBA (International Business), MBA (Logistics and Supply Chain Management), MBA (General), MBA (Business Analytics), MBA (Tourism Studies), MBA (Banking Technology), MBA (Digital Business), MBA (General, Karaikal Campus) (Insurance Management, Karaikal Campus).

## **Department of International Business (DIB)**

In response to the changes that are taking place on the face of the world business scenario and the needs of the industry at national and international level, on the recommendations of duly constituted advisory committee, Pondicherry University established the Department of International Business during the academic year 2006 – 2007 to offer a specialized MBA program in International Business under the roof of the School of Management. The MBA program is to prepare leader-managers with competencies in international business operations.

**Vision:** Vision of the Department is to shape management education with international orientation by generating new leading-edge knowledge and preparing upright, dependable, socially sensitive leader-managers highly committed to the progress of mankind.

**Mission:** To support business organizations in India and other developing countries by enriching the best practices in international business. It shall seek to do this by preparing risk-taking leader-managers who will pioneer emerging global business operations and set new benchmarks.

### **Objectives**

- I. To Provide a congenial learning and training environment to potential aspirants to gain deep insight in Logistics and Supply Chain Management.
- II. To Enhance knowledge through innovative teaching and research, conceptual and applied, relevant to Logistics and Supply Chain
- III. To Gain Command on the key factors in new business models based on e-commerce and an insight into how they affect traditional systems of Logistics Management
- IV. To Analyze and organize Global Network Logistics for trade and transport systems, sourcing and procurement and Supply chain management.
- V. To Address LSCM Problems in a Holistic approach by considering general management concepts, human resources, environmental concerns and quality, technological and economic aspects

## **About Logistics and Supply Chain Management Program**

Rapid developments in the Logistics and Supply Chain business on one hand and the consequential impact of the same on India's domestic market on the other, call for a professional approach and sensitivity to Logistics and Supply Chain business environment.

The MBA: Logistics and Supply Chain Management is a specialized program for developing a competent cadre of business executives to meet the country's growing requirements of training personnel in the field of Logistics and Supply chain management.

The main academic focus is on equipping the participants with an in-depth knowledge of Logistics and Supply Chain business and to instill in them an urge to take up competitive global challenges in the Logistics and Supply Chain business environment. The program also focuses on equipping its students with all the knowledge and expertise in dealing with the Logistics and Supply Chain business world ranging from International Logistics and Management; Procurement, Storage and Warehouse Management; Distribution Management for Global Supply Chain; Port and Airport Management for Logistics; Containerization and multimodal transport; Maritime Logistics Law & Documentation and software related to Logistics and supply chain management.

The program aims to provide students with the knowledge, mind-set and skills necessary in building a successful career in global logistics and supply chain management. The program will enable students to:

- Take-up positions in managerial capacities in manufacturing, retailing, e-commerce companies and export & import houses.
- Work as merchandizing and logistics managers in import and export operations.
- Work as system designers, packaging, warehousing and other operations for domestic and international logistics.
- Develop entrepreneurship capabilities and empower them to work on their own as logistics and supply chain providers.

This is a specialized program in Logistics & Supply Chain Management (L&SCM). It is a multi-disciplinary program having focus on design, planning and management of L&SCM functions, networks, processes and systems. It will have two pathways:

1. Domestic and International logistics and supply chain for import-export operations.



2. Supply chain management and optimization for transport systems like airways, shipping, railways and inland containers/cargos.

The overall educational aim of MBA - Logistics & Supply Chain Management is to equip students with knowledge, understanding, skills and experiential learning in Logistics, Packaging Logistics, Modelling & Simulation of Supply Chains, Cross-Functional Process Integration and Handling of Cargos and Clearance at Airports, Ports, Dry Ports, Customs, *Export Processing Zones*(EPZs), etc. In addition, students will be exposed to various facilities of L&SCM for hands-on training.

### **Program Features**

The MBA: Logistic and Supply Chain Management Program – a multidisciplinary and integrative curriculum reinforcing the strategic, international and ethical dimensions of business – has the following salient features:

- With experienced teachers on the Faculty, the program equips the students with the practical nuances of conducting international business in a competitive environment;
- The Course is meticulously designed to meet the growing international business challenges, and to develop a competent cadre of business executives.
- The University has a well-equipped library along with the school library, with online databases and Computer Centers with a 24 -hour Internet access.
- Using lectures, case studies, problem-based learning and group projects, the program prepares students to manage, motivate and innovate.
- Periodical Guest Lectures by Executives from different MNCs; Industry Visits; Port Visits, Summer and a Final Project in MNCs are the USPs of the program.

## **Program Thrust Areas:**

### **Logistics and Supply Chain Management**

- Basics of Logistics and Supply Chain Management
- Distribution Management for Global Supply Chain
- Procurement, Storage and Warehouse Management
- Port and Airport Management for Logistics
- International Logistics and Management
- Containerization and Multimodal Transport
- Supply Chain Risk Modeling and Management
- Applied GIS and Spatial Data Analytics
- Public Private Partnership and Port Development
- Supply Chain Software's
- Inventory Management & Material Requirements Planning

### **Career opportunities for Logistics Professionals**

Logistics involves so many critical business activities that nearly every Fortune 500 and Global company can be considered a potential employer for logistics managers. The same can be said for smaller public and private companies around the world. From the largest automobile manufacturers to the smallest zipper producers, any company that purchases and /or sells products has a need for logistics professionals to manage the flow of product and information locally, nationally, and internationally.

Service firms like hospitals and restaurant chains must also manage logistics activities. LOGISTICS function functions as the integrator of the supply chain. Hence, an agile supply chain is managed by the skillful logisticians to get the product to the market – At the right time, At the Right place and At the right quantities.

#### **What is the most common career path in logistics?**

No single career path dominates logistics management. In fact, there are hundreds of potential career paths. Your career path will be largely influenced by your skills, interests, and personal decisions. It will also be impacted by the size, type, geographic scope, and organizational structure of the firm that you choose to work for.

A broad base of business skills, knowledge of the logistics process, and relevant internship/work experience will give you ample opportunity to begin your career with a manufacturer, retailer, carrier, third party logistics firm, or other organization. You will likely begin as a management trainee, analyst, or first line

supervisor. As you demonstrate your managerial capabilities, you can progress to logistics positions of greater responsibility. You may also decide to gain experience in other parts of the organization. One key to your success in this field is flexibility. You will work with people throughout your company—logistics, manufacturing, and marketing. Depending on the size of your company, your initial responsibilities may deal with one or more logistics functions. Some positions will require you to specialize in a specific area of logistics. There are numerous opportunities and career paths in this field it is up to you to seek them out and develop the appropriate skills to be successful.

### **Job profiles in the logistics industry**

- Analyst
- Consultant
- Customer Service Manager
- International Logistics Manager
- Inventory Control Manager
- Logistics Engineer
- Logistics Manager
- Logistics Services salesperson
- Logistics Software Manager
- Materials Manager
- Production Manager
- Purchasing Manager
- Supply Chain Manager
- Systems Support Manager(MIS)
- Transportation Manager
- Vendor Managed Inventory Coordinator
- Warehouse Operations Manager

### **Employability / Placement**

With literally hundreds of career paths to follow, working in the supply chain provides opportunities in every field, in both the private and public sector. From fashion, film production and video gaming, to health care, emergency services and aviation, there is an exciting and demanding supply chain role in virtually each and every area.

Whether it's sourcing materials, manufacturing goods, or the warehousing and distribution of products, more than three quarters of a million Canadians already work in supply chain roles for private companies, governments, charities and other organizations

The supply chain sector labor force by sub-functions are:

- Senior management.
- Logistics information systems.
- Warehousing.
- Transportation.
- Inventory/material Control.
- Purchasing.
- Marketing and Sales.
- Customer Service

## Faculty Profile

Academically highly vibrant and professionally committed core faculty is participating in the program. They have excellent credentials in their own field of specialization through publications and consultant activities.

<p><b>Dr. Bushan D. Sudhakar</b>, MIM, Ph.D. Associate Professor &amp; Head i/c Experience: 22 Years</p>	<p>Global Marketing, Advertising &amp; Branding Business Communication &amp; Negotiation Skills</p>
<p><b>Dr.P.Sridharan</b>, M. Com, M.Phil., Ph.D. Professor <i>Experience :25 Years</i></p>	<p>International Banking Financial Management Management Accounting</p>
<p><b>Dr. Lalitha Ramakrishnan</b>, BA, MBA, Ph.D Professor Experience: 24 Years</p>	<p>Marketing and Human Relations</p>
<p><b>Dr.Y. Srinivasulu</b>, MBA, M.Phil, Ph.D Associate Professor Experience: 23 Years</p>	<p>Marketing Management Services Marketing, Brand Management, Industrial Marketing</p>
<p><b>Dr.M.Banumathi</b>,MA, MBA, M.Phil., Ph.D. Associate Professor Experience: 21Years</p>	<p>Strategic Management, Green Marketing International Trade International Economics</p>
<p><b>Dr. P.G. Arul</b>, M. Com, M.Phil, MBA(IB),Ph.D Assistant Professor Experience: 17 Years</p>	<p>International Trade Logistics &amp; Documentation Procedure, International Human Resource Management, Foreign Exchange Management.</p>
<p><b>Dr.Rajeesh Viswanath</b> MA, MBA, Ph.D Assistant Professor Experience: 19 Years</p>	<p>Organizational Behavior Performance Management Systems Cross Cultural Management</p>
<p><b>Dr. S. Thiyagarajan</b></p>	<p>Quantitative Techniques Operations Research</p>



M.A., MBA, M.Com., M.Phil,Ph.D

Assistant Professor

Experience: 12 Years

Research Methodology

Accounting, Advertising

## **COURSE CURRICULUM**

### **GUIDELINES Course Details**

Two-year, four semesters full time Programme (Intake of 72) with dual specialization in any of the four functional areas namely Marketing, Finance, Human Resource and Operations & Systems.

#### **Eligibility criteria:**

Any graduate degree with 50% marks is eligible. For reservation candidates belonging to SC/ST, 5% relaxation is applicable.

#### **Selection process:**

Candidates will be short listed based on their performance in the pan India Entrance examination conducted by Pondicherry Central University. Kindly watch out for the university notification for MBA admissions in the 3rd week of January 2019. The NRI and foreign nationals are exempted from undergoing the regular selection process. However, foreign nationals are requested to route their applications through ICCR/MHRD, Government of India. The NRI candidates shall apply directly to the Head of the Department with proof of NRI status. The NRI status of the father/mother alone will be considered.

***Choice Based Credit System (CBCS):*** The MBA (*Logistics and Supply Chain Management*) Degree program is offered through a unique 'Choice Based Credit System'. Under Choice Based Credit System, subjects are classified into Hard Core and Soft-Core Papers. Hard Core subjects are compulsory. The students have a choice to select from among the list of Soft-Core papers offered within the department and by other departments.

***Weightage of Marks:*** The weightage of marks between continuous Internal Assessment and End Semester Examination shall be 40 and 60 respectively.

***Passing Minimum:*** A student is declared to have passed a given subject only when he/ she secures a minimum of 40 marks in the end-semester examination and an aggregate of 50% marks (both Internal and End-Semester Examination put together). There is no minimum passing marks for the internal assessment component.

***Internal Assessment Components:*** The weightage of 40 marks for Internal Assessment Components shall consist of the following components.

- |                                   |            |
|-----------------------------------|------------|
| 1. Two Class Tests (15+15)        | : 30 marks |
| 2. Two Written Assignments (5+ 5) | : 10 marks |

-----  
**Total** : **40 marks**  
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***Evaluation of End Semester Written Examination:*** The answer scripts of the End Semester Examination shall be evaluated for a weightage of 60 marks and this will be evaluated by one External Examiner and one Internal Examiner (course in-charge) separately. The average of the marks awarded by both Internal and External examiners shall be taken for providing the Grades. The list of External Examiners is to be approved by the Dean, School of Management from a panel of External Examiners to be given by the Course in-charge for each subject and the consolidated panel of examiners shall be forwarded to the Dean by the Head of the of the Department.

***Comprehensive Viva-voce Examination:*** The End Semester Comprehensive Viva-Voce Examination shall carry a weightage of 50 marks and this will be evaluated by two Internal Examiners. The list of Internal Examiners is to be approved by the Dean, School of Management from a panel of Internal Examiners to be submitted by the Head of the Department.

***Summer Project:*** Every student of MBA: ***Logistics and Supply Chain Management*** shall carry out a project in any leading business organization (preferably in an MNC) for a period of 8 weeks during summer vacation (May& June) under the guidance of a Faculty Member in the Department. Once guides are allotted to the students, the students should contact the respective guides periodically and get necessary guidance and feedback on the project work. At the end of the project period, every student shall make a presentation of his/ her

project work and shall submit a structured project report as approved by the Faculty Guide within 15 days from the date of the completion of the project period.

The Summer Project Report and Viva-Voce examination will be evaluated by two Internal Examiners. The list of Internal Examiners is to be approved by the Dean, School of Management from a panel of Internal Examiners to be submitted by the Head of the Department. Summer Project Report will be valued for a weightage of 100 marks and Viva –Voce examination for the Summer Project shall carry a weightage of 50 marks (Total 150 Marks). The Summer Project marks obtained by the students will be recorded in the mark statement issued to them in the Third Semester (along with the third semester marks).

***Internship:*** Every student of MBA: ***Logistics and Supply Chain Management*** shall undergo Internship training during the Third Semester of the program. This Internship shall be for 2 days (Fridays & Saturdays) in all the weeks of the entire Third Semester. During this Internship, every student should attach himself/ herself with any organization carrying on any type of international operations or transactions. The objective of the Internship training is to give the students a hands-on experience of real-life business operations. At the end of the Third Semester, each student should submit an Internship Training Report explaining clearly what each student has learnt during the Internship period. The Internship Report and the Viva-Voce Examination will be evaluated by the internal Faculty Guide. The Weightage for the Internship Report shall be 75 marks and weightage for Viva-Voce Examination shall be 25 marks (Total 100 marks).

***Final Project:*** Every student of MBA: ***Logistics and Supply Chain Management*** should carry out a project in any leading business organization (preferably in an MNC) for a period of 8 weeks during the first part of the Fourth Semester till the third week of February. Once the guides are allotted to the students, the students

should contact the respective guides periodically and get necessary guidance and feedback on the project work. At the end of the project period, every student shall submit a structured project report as approved by the Faculty Guide within the period specified by the Department.

The Final Project Report and Viva-Voce examination will be evaluated by two Internal Examiners. The list of Internal Examiners is to be approved by the Dean, School of Management from a panel of Internal Examiners to be submitted by the Head of the Department. Final Project Report will be valued for a weightage of 150 marks and Viva –Voce examination for the Final Project shall carry a weightage of 50 marks (Total 200 Marks).



***Question Paper Pattern:***

The question paper pattern for each of the subjects for the End-Semester Written Examination (**For 60 Marks**) shall be as given

**Part A**

Consist of 10 short answer questions each carrying two (02) marks (two questions should be asked from each Unit). **(10 X 2 = 20 marks)**

**Part B**

Five questions are to be answered (Either/Or pattern) each carrying six (06) marks (two questions will be asked from each Unit). **(5 X 6 = 30 marks)**

**Part C**

A compulsory question consisting a Case study/ Problem in the relevant Subject. **(1 X 10 = 10 marks)**

**Industrial / Port Visits:** Industrial Visit (Industrial Study Tour) shall be the compulsory component of the MBA: International Business Program. Such tour will be organized with the approval from the appropriate authorities of the University. It is also resolved that one- three teachers along with few Ph.D full time scholars of the Department by rotation will be accompanying the students.

***Attendance:*** Each student shall obtain 70 per cent attendance to be eligible for appearing for the Semester-End Examination.

***Grading:*** Grading of the marks obtained by the students shall be made as per the norms of Choice Based Credit System (CBCS) in the same manner as followed in other Departments of Pondicherry University.

## **PROGRAM DETAILS**

**(MBA – Logistics and Supply Chain Management)**

<b>Total Number of Credits</b>	<b>-</b>	<b>105</b>
<b>Total Number of Theory Papers</b>	<b>-</b>	<b>30</b>
<b>Total Number of Project Work</b>	<b>-</b>	<b>2</b>
<b>Total Number of Internship</b>	<b>-</b>	<b>1</b>
<b>Total No. of Comprehensive Viva-Voce</b>	<b>-</b>	<b>4</b>

**Mode of Evaluation for Continuous Internal Assessment (Weightage of Marks-40):**

**Two Class Tests, Two Written Assignments, and any of these following components: Attendance/ Mini Projects / Seminars / Quizzes (announced and / or unannounced case analysis and case discussion / Term Paper Class Participation / Assessment of Class Notes etc. End-Semester Examination (Weightage of Marks – 60):**

**At the end of the Semester a three-hour written examination will be conducted covering the entire syllabus**

## ***DETAILED COURSE STRUCTURE***

<b>FIRST SEMESTER</b>				
<b>Code</b>	<b>Course</b>	<b>Credits</b>	<b>Marks</b>	<b>Hard/Soft Core</b>
MLSM 101	Principles of Management	4	100	H
MLSM 102	Managerial Economics	4	100	H
MLSM 103	Accounting for Managers	4	100	H
MLSM 104	Statistics for Decision Making	4	100	H
MLSM 105	Global Business Environment	4	100	H
MLSM 106	IT Tools and Techniques for Logistics & SCM	3	100	H
MLSM 107	Comprehensive Viva-Voce	2	100	H
<b><i>Total</i></b>		<b>25</b>	<b>700</b>	

<b>SECOND SEMESTER</b>				
<b>Code</b>	<b>Course</b>	<b>Credits</b>	<b>Marks</b>	<b>Hard/Soft Core</b>
MLSM 108	Marketing Management	4	100	H
MLSM 109	Human Resources Management	4	100	H
MLSM 110	Financial Management	4	100	H
MLSM 111	Research Methods for Business	4	100	H
MLSM 112	Productions and Operations Management	4	100	H
MLSM 113	Logistics and Supply chain Management	4	100	H
MLSM 114	Comprehensive Viva-Voce	2	100	H
MLSM 115	Summer Project – 6-8 Weeks (May- June) (Project Report – 75 Marks+ Viva Voce-25 Marks)	6	100	<b>H</b>
<b><i>Total</i></b>		<b>32</b>	<b>800</b>	

<b>THIRD SEMESTER</b>				
<b>Code</b>	<b>Course</b>	<b>Credits</b>	<b>Marks</b>	<b>Hard/Soft Core</b>
MLSM 201	Strategic Management in Logistics	3	100	H
MLSM 202	Procurement, Storage and Warehouse Mgt.	3	100	H
MLSM 203	Sea Port and Airport Management for Logistics	3	100	H
MLSM 204	Maritime Logistics and Documentation	3	100	H
MLSM	Elective – I	3	100	S
MLSM	Elective – II	3	100	S
MLSM	Elective – III	3	100	S
MLSM 205	Internship	2	100	H
MLSM 206	Comprehensive Viva-Voce	2	100	H
<b>Total</b>		<b>25</b>	<b>900</b>	

<b>FOURTH SEMESTER</b>				
<b>Code</b>	<b>Course</b>	<b>Credits</b>	<b>Marks</b>	<b>Hard/Soft Core</b>
MLSM 207	Containerization and multimodal transport	3	100	H
MLSM 208	Supply chain risk modeling and management	3	100	H
MLSM	Elective – IV	3	100	S
MLSM	Elective – V	3	100	S
MLSM	Elective – VI	3	100	S
MLSM 209	Comprehensive Viva-Voce	2	100	H
MLSM 210	<b>PROJECT WORK (8 Weeks) (Project Report – 75 Marks + Viva-Voce – 25 Marks)</b>	<b>6</b>	100	H
<b>Total</b>		<b>23</b>	<b>700</b>	

*\*The Code Number for Elective Subjects will be followed as per the Elective Course in the specialization stream chosen by the students.*

# Electives

MLSM 301: APPLIED GIS AND SPATIAL DATA ANALYTICS

MLSM 302: PUBLIC PRIVATE PARTNERSHIP AND PORT DEVELOPMENT

MLSM 303: MODELING TECHNIQUES AND IT FOR OPERATIONS MANAGEMENT

MLSM 304: CUSTOMER RELATIONSHIP MANAGEMENT

MLSM 305: INVENTORY MANAGEMENT & MATERIAL REQUIREMENTS PLANNING

MLSM 306: DISTRIBUTION MANAGEMENT FOR GLOBAL SUPPLY CHAIN

MLSM 307: ENTERPRISE RESOURCE PLANNING

MLSM 308: SUPPLY CHAIN SOFTWARES

MLSM 309: QUALITY MANAGEMENT

MLSM 310: ADVANCED OPERATIONS RESEARCH

MLSM 311: INTERNATIONAL LOGISTICS AND MANAGEMENT



# **FIRST SEMESTER**



**Logistics and Supply Chain Management**

## MLSM 101 PRINCIPLES OF MANAGEMENT

### Objectives:

To give comprehensive view on management process in the corporate world  
 To understand the Global Management Practices and its nuances in the emerging business environment.  
 To apply the suitable Global Management Practices in Domestic and MNCs operations

Unit	Description	Hours
1	Overview of Management: Recent Developments in Management Practices – Management as Profession – Functions of Management and its Practice in New Business Environment – Comparative Management Practices – Technology based Management Practices – Change Management – Managerial Opportunities and Challenges.	<b>09</b>
2	International Management: Evolution of International Business Operation - Relevance of International Management – Factors affecting International Management – Models of Comparative Management - Management practices in USA, China, European Union, Japan and Emerging Economies. Global Business Environment: Management in Globalized Environment –	<b>09</b>
3	Global Trade and Foreign Direct Investment - Role of Government and Institutions in Regulating Management Practices- Merger and Acquisition and its implication on Management Practices - Ethics and values in International Management Practices. Global Management Strategy: Understanding global strategy- Diagnosing	<b>09</b>
4	industry global potential- Managing global competitive dynamics- Leveraging resources and capabilities - Entering foreign markets- Making strategic alliances and networks work - Diversifying, acquiring, and restructuring- Strategizing with Corporate Social Responsibility. Management Functions in International Companies: Organizational	<b>09</b>
5	Structure – International Production and Sourcing – International Human Resource Management - International Management of Selected Value Chain Activities- The Value Chain - Accounting in the International Business- Internationalization of Services – International Controlling - Challenges in International Management Practices.	

### Text Books:

1. Helen Deresky (2016): International Management – Managing Across Borders and Cultures, 9<sup>th</sup> Edition, Pearson
2. Fred Luthans & Jonathan Doh (2012), International Management – Culture, Strategy & Behavior, 9<sup>th</sup> Edition, Pearson
3. Dirk (2009): Strategic International Management – Text and Cases, Springer

### Reference Books:

1. Charles W.L. Hill (2012) International Management, 8<sup>th</sup> Edition by McGraw Hill/Irwin

## MLSM 102 MANAGERIAL ECONOMICS

### Objectives:

To help in managerial decision making in order to achieve desired economic goals. To think systematically while solving business issues and also to forecast the future. To enhance the ability to apply fundamental economic concepts to complex business realities.

Unit	Description	Hours
1	Introduction: Nature and Scope of Managerial Economics - Significance of Economics in Management – Objectives of a firm – Managerial economist’s role and responsibilities – Fundamental economic concepts.	09
2	Demand Analysis: Individual and Market demand functions – Law of demand – Determinants of demand – Elasticity of demand – Price elasticity, income elasticity and cross elasticity – using elasticity in managerial decisions – Demand forecasting techniques – Law of supply.	09
3	Production analysis: Factors of production - Production function – Law of variable proportion - Economies of scale – Law of Returns to scale. Cost analysis: Types of costs - Cost of production – Cost output relationship in the Short run and long run – their nature, shape and inter relationship – Break-even analysis.	09
4	Market Structure: Price determination under perfect competition – Monopoly Market – Duopoly - Monopolistic competition - Oligopoly – Game theory - Pricing methods.	09
5	Macro-Economic Environment: National income concepts, measurement – In India - International Comparison - uses of National Income – difficulties in calculation – Nature and phases of Business cycle – Theories of Business cycle. Inflation – Demand pull and cost-push inflation – effects of inflation and control measures- Government Policies – Fiscal and Monetary Policy – External Sector Policies	09

### Text Books:

1. Karl E. Case and Ray C. Fair (2015), “Principles of Economics”, 3<sup>rd</sup> edition, Pearson Education.
2. Christopher R Thomas, S. Charles Maurice (2014) “Managerial Economics”, 10<sup>th</sup> edition, TaTa Mc Graw Hill.

### Reference Books:

1. Craig H. Peterson and Cris W. Lewis (2005) “Managerial Economics”, Pearson Education,
2. Michael R. Baye (2006) “Managerial Economics and Business Strategy”, Mc.Graw Hill
3. Dominick Salvatore (2009) “Managerial Economics – Principles and worldwide application” 6<sup>th</sup> edition, Oxford Higher Education.
4. Gregory N Mankiw (2012) “Principles of Economics” Cengage Learning.
5. Robert J Michaels (2011) “Economics for Managers- Transaction and Strategy” Cengage Learning.
6. William A Mc. Eachern A Indira (2012) “Macro Economics” A south Asian Perspective, Cengage learning

## MLSM 103 ACCOUNTING FOR MANAGERS

### Objectives:

- To acquaint the students with the fundamental principles of financial, Cost & Management Accounting.
- To enable the students to take decisions using management accounting tools.
- To expose the students to financial management for making efficient investment decisions.

Unit	Description	Hours
1	Book-Keeping and Accounting – Objectives of Financial Accounting – Branches of Accounting : Financial, Cost and Management Accounting - Accounting Conventions - Journal – Ledger- Trial Balance – Preparation of Trading, Profit and Loss Account and Balance Sheet – Capital and Revenue Expenditure- Deferred Revenue Expenditure – Capital and Revenue Receipts – Depreciation – Causes and need for depreciation – Different Methods of Calculating Depreciation - Depreciation Accounting.	09
2	Financial Statements Types of Financial Analysis – Techniques of Financial Analysis – Comparative Statements, Common Size Statements -Ratio Analysis – Profitability Ratios – Coverage Ratios – Turnover Ratios – Financial Ratios - uses and limitations of Ratio Analysis – Funds Flow Analysis – uses and limitations - Cash Flow Analysis – uses and limitations – Difference between funds flow and cash flow analysis.	09
3	Marginal Costing – Cost Volume Profit Analysis – Breakeven Analysis – Key Factor – Profit Planning - Decisions involving Alternative Choices: Determination of sales mix, exploring new markets and Make or Buy decisions. Costing – Elements of Cost – Cost Accounting – Objectives – preparation of Cost Sheet (Problems) – Classification of cost – Cost Unit and Cost Centre – Methods of Costing – Techniques of Costing.	09
4	Nature and Scope of Finance – Finance Functions – Changing Role of Finance Manager – Objectives of Finance – Profit Maximization Vs Wealth Maximization – Major Financial Decision Making Areas – Sources of Funds – Short-Term & Long-Term Funds.	09
5	Time Value of Money – Cost of Capital – Calculation of Cost of Capital – Capital Structure – Theories of Capital Structure – Capital Budgeting – Dividend Policies - Working Capital Management.	09

### Text Books

1. Grewal T S (2016) MANAGEMENT ACCOUNTING, Sultan Chand & Sons Private Limited
2. Maheswari S.N (2014) COST & MANAGEMENT ACCOUNTING, Sultan Chand.
3. Bhattacharyya (2012), ESSENTIALS OF FINANCIAL ACCOUNTING, Prentice
  
1. Anthony R.N, (2010) MANAGEMENT ACCOUNTING- TEXT AND CASES, Irwin.
2. Horngren T. Charles, (2000) COST ACCOUNTING, Prentice Hall.
3. Kaplan D (2012) INTRODUCTION TO FINANCIAL STATEMENT ANALYSIS, Kaplan Group.

## MLSM 104 STATISTICS FOR DECISION MAKING

### Objectives:

- To expose the students to various Statisticals and Operations research tools for data analysis.
- To enable the students to interpretation the results.
- To facilitate them to take objective decisions based on the models.

Unit	Description	Hours
1	Measures of Central Tendency: Arithmetic Mean, Weighted Arithmetic Mean, Mean, Median Mode – Measurement of Variance: Range, Quartile deviation, Average deviation, Standard deviation, Coefficient of variance – Probability: Concept and theorems, Binomial, Poisson and Normal distribution - Determinate of Confidence interval	09
2	Hypotheses testing: Errors in testing – one tail & two tail testing – one sample t test and two sample t tests – paired t test – F test – ANOVA: one way and two way.	09
3	Non-Parametric statistics: Sign test, Runs test – Chi Square test – Mann Whitney –Wilcoxin test – Krushal Wallis – Friedman tests – Spearman’s Rank Correlation.	09
4	Pearson Correlation and Regression analysis - Basics of Multivariate Analysis: Factor analysis – Cluster analysis – Discriminant Analysis – Multiple Regression – Multiple Analysis of variance.	09
5	Linear programming: Problem formation, Graphical Method, Simplex – Transportation: Basic feasibility solution, Optimization Methods - Assignment – Game Theory: Saddle point, Dominance and Mixed strategy.	09

### Text Books

1. Sharma J. K, (2012) OPERATIONS RESEARCH: THEORY AND APPLICATION, Macin
  2. Gupta S. P, (2006) STATISTICAL METHODS”, Sultan Chand & Co., New Delhi.
  3. Mustafi C. K, (2008) STATISTICAL METHODS IN MANAGERIAL DECISIONS”,
- 
1. Levin, I Richard, (2006) STATISTICS FOR MANAGERS, Prentice-Hall, India.
  2. Siegal Sidney and Castellan N. John, (1988) NON-PARAMETRIC STATISTICS FOR THE BEHAVIOURAL SCIENCES, McGraw Hill College, India.
  3. Hair Joseph and Anderson Rolph (2010) MULTIVARIATE DATA ANALYSIS, Prentice Hall, India.
  4. Anderson R David et. al., (2009) South-Western College Pub QUANTITATIVE METHODS FOR BUSINESS South Western College, India.

## MLSM 105 GLOBAL BUSINESS ENVIRONMENT

**Objective:**

To understand about various factors that are having impact on the functioning of business

To study the impact of International factors that influences the business

**To know** about the important bilateral and **multi-lateral** economic cooperation agreements

Unit	Description	Hours
1	Basics of International Business, Modes of entry in to International Business; Frame work for analyzing international business environment; Institutional support to International Business-- UNO, IMF, World Bank; UNCTAD; WTO.	09
2	Factors affecting Socio-Cultural environment, Impact of Socio-Cultural environment on Business, Factors affecting Technological environment, Impact of Technological environment on Business, International Technology Transfers – importance and types, Foreign Technology Acquisition.	09
3	Economic Environment-- International financial system, Foreign Exchange Markets: Determining exchange rates; Fixed and flexible exchange rate system; Participants in the Foreign exchange markets; Cash and Spot exchange market; Exchange rate quotes; LERMS; Factors affecting exchange rates – spot rates, forward exchange rates, forward exchange contracts; Foreign Exchange Risk: Transaction exposure, translation exposure and economic exposure, Management of exposures.	09
4	Political and legal environment - Legislature, Executive, Judiciary - Multinational Corporations: Conceptual Frame work of MNCs - MNCs and Host and Home Country relations - Foreign investment flows and barriers. Ecological issues.	09
5	Regional Economic Co-operation and Integration between Countries; Different levels of integration between Countries; European Union, NAFTA, ASEAN, EFTA, SAARC, SAPTA, The ANDEAN community, MERCOSUR.	09

**Text Books:**

1. F.Adhikary, Manab, Global Business Management, Macmillan, New Delhi
2. Black and Sundaram: International Business Environment, PHI New Delhi.
3. F. Buckley, Ardin: The Essence of International Money, PHI New Delhi

**Reference Books:**

1. Bhattacharya, B: Going International Response Strategies for Indian Sector, Wheeler
2. Gosh, Biswanath, Economic Environment of Business, South Asia Book, New Delhi
3. Letiche, John M: International Economics Policies and Theoretical Foundations, Academic Press, New York
4. Tayeb, Monis H: The Global Business Environment – An Introduction, Sage Publication, New Delhi

## MLSM 106 IT Tools and Techniques for Logistics & SCM

### Objectives:

To understand the critical role and applications of Information Systems  
 Tools To enable the students with technological advancements  
 To achieve operational excellence with the business tools and techniques

Unit	Description	Hours
1	Concept of Management Information System: Concepts of Information System and Management information systems- Information System design and development-Implementation testing and conversion- Evolution and element of MIS – Definition – Characteristics and basic requirements of MIS – Structure of MIS- Approaches to MIS development- Computerized MIS- Pre- requisites of an effective MIS- Limitations	<b>09</b>
2	MIS and Decision support System (DSS): MIS Vs data processing – MIS and decision support system – MIS and information resource management – MIS and Operations Research- Executive information and decision support systems – Artificial intelligence and expert system – MIS in Indian organizations – Recent developments in information technology	<b>09</b>
3	Computers and Communication: Information technology and Global integration –On-line information services – Electronic bulletin board systems – The internet, electronic mail, interactive video – Communication Channels – Communication networks – Local area networks – Wide area networks – Video conferencing- Relevance to MIS	<b>09</b>
4	Functional Information systems: MIS for Research Production - MIS for Marketing - MIS for Personnel - MIS for Finance - MIS for Inventory- MIS for Logistics- MIS for Product Development- MIS for Market Development.– Enterprise resource planning systems (ERP Systems) – Inter- organizational information systems – Value added networks – Networking.	<b>09</b>
5	Client/ Server Computing: Communication servers – Digital networks – Electronic change and its applications. Electronic Commerce and Internet: E-Commerce bases – E- Commerce and Internet – M-Commerce- Electronic Data Inter-change (EDI)- Applications of internet and website management.	<b>09</b>

1. Anthony, Dear den& Bedford, Management Control Systems
2. N.P. Srinivasan & Gupta, Management Control Systems
3. O'Brien, James A, Management Information System, Golgotha Publications Ltd.
4. Sadagopan, S., Management Information System, Prentice Hall of India.

# **SECOND SEMESTER**



**Logistics and Supply Chain Management**



## MLSM 108 MARKETING MANAGEMENT

**Objectives:**

To understand the basic concepts of Marketing  
 To gain the knowledge of marketing management in the international perspective To develop marketing strategies for the dynamic international markets.

Unit	Description	Hours
1	The Concept of marketing - Evolution of marketing: From transaction-based to relationship marketing- Marketing research and Decision support systems. Market Segmentation, Targeting and Positioning.	10
2	Product Mix - Product management decisions, Branding and Packaging, Product Life Cycle strategies - New Product Development - Pricing considerations and approaches, Base Methods of setting Price, pricing strategies and Policies.	10
3	Distribution channels and physical distribution. Marketing communication and Promotion mix Strategies. Nature of international marketing: meaning, Framework for International Marketing- Barriers for International Marketing	10
4	International Marketing Decisions: product Planning, Designing and Development for international markets- Pricing Decisions: Pricing 10 Strategies And Price setting For International Markets.	
5	Distribution: Channel Management And Physical distribution Management in International Marketing. Promotion: International Advertising Programs, Sales Management And Sales Promotion For Foreign Markets.	10

**Text Books:**

1. Philip Kotler, Marketing Management- The South Asian Perspective, Pearson Education
2. Warren J. Kegan: Global Marketing Management' Pearson Education

1. Svend Hollensen : Global Marketing: A Decision-Oriented Approach- , Pearson Education.
2. Ramasamy, Namakumari: Marketing Management, McMillan Publishers
3. Saxena: Marketing Management (Tata McGraw-Hill)

## MLSM 109 HUMAN RESOURCE MANAGEMENT

### Objectives:

- To Understand the HRM Principle and Practices in the Domestic Context.
- To Study the Global HRM Practices with Multicultural Nature compounded by Geographical Dispersion.
- To Adopt the best Practices of Global HRM and its application to the Domestic and MNCs operating in India.

Unit	Description	Hours
1	Human Resource Management: Evolution – Objectives – Significance – HR Planning –Recruitment & Selection – Training & Development – Performance Evaluation – Career Planning and Succession- - Domestic HRM v/s IHRM - Growth of Internationalization of World Business- Strategic Orientation of IHRM- International Assignments.	09
2	IHRM Functions: Planning - International recruitment and selection - Training and Development of expatriates - International compensation: components, objectives and methods of Compensation - Taxation decisions - Changing trends in International employment-M & A –Integration of acquired employees in newer cultures, Global Mobility and HR-International postings.	09
3	IHRM Challenges and Opportunities: Domestic and MNCs Perspectives – Managing Expatriation –Entry Level (Campus) Recruitment Women Expatriates – Risk Factors Associated with Expatriation – Special Provisions pertaining to Expatriate Labour Recruitment - Empanelment of Overseas Recruitment Agencies e-Migrate - Role of Indian Embassy - Staff Recruitment- Regions - MiddleEast, Africa and Asia Pacific- Repatriation -Process of repatriation, job related adjustments, organisational development.	09
4	IHRM Employer-Employee Relation in MNCs – Contemporary Issues and New Directions of Industrial Relation – Changing Dynamics of Employees Union in MNCs Management – Conflict management - Relevance and retunes of Labour Laws – Grievances Handling in MNCs -Managing Diversity - Learning Organisation – Adopting and Managing changes.	09
5	IHRM Strategies and Developments - Total quality in HRM - Scope of TQM - Comparison of Traditional and TQ HRM approaches - Barriers to TQHRM - HR project planning - Importance of computerized information system - IHRM Experiences of USA, UK, Japan and China.	09

### Text Books:

1. Peter J. Dowling & Denice E. Welch (2009) IHR M, Cengage
2. Aswathappa k; SadhnaDash(2009) IHRM; Tata McGrawHill,

### Reference Books:

1. Bhatia S.K. 2005. IHR M: A Global Perspective: Practices and Strategies for Competitive Success, Deep and Deep Book Publishers, New Delhi,
2. Dessler, G. (2005) Human Resource Management (10th Ed.), Prentice Hall Publishing
3. Tony Edwards, Chrisrees: International Human Resource Management, Pearson,
4. Indrani Mutsuddi: Managing Human Resources in the Global Context, New Age Publishers,

## MLSM 110 FINANCIAL MANAGEMENT

**Objectives:**

The course provides an analytical framework of Financial Management  
It enables how cross-border financing, valuation, risk management analysis  
It analyses exchange rates, tax and legal issues and country risk.

Unit	Description	Hours
1	Financial Management in a global perspective - IFM basic concept & challenges – International monetary system - Overview of international financial markets (Bond markets, Equity markets, Forex Market)-International Flow of Funds- International Portfolio Investments	09
2	Foreign Exchange Exposure and risk management- Exchange rate forecasting- volatility-Exposure types- Transaction Exposure, Translation exposure, Economic Exposure-Currency Derivatives-forward, futures & options-usage in firms as hedging tool.	09
3	Financial management of the MNC: Multinational Capital Budgeting – subsidiary Vs parent-MNC capital budgeting inputs and calculations- Multinational cost of capital - capital structure-factors influencing decisions- Long-term and Short-term financing decisions- Cash Management.	09
4	International Project Appraisal – Traditional and Modern Techniques (Present value approach) Country Risk Analysis –importance-risk factors and assessment –risk ratings – incorporating risk in capital budgeting. Understanding global economic indicators.	09
5	Introduction to valuation – Principles and practices – Tools and techniques – CAPM- Estimating discount rates-Estimating cash flows – Equity DCF models.	09

**Text Books**

1. Jeff Madura, International Financial Management, 7th Edition, Thomson India.
2. Jeff Madura, International Corporate Finance, 8<sup>th</sup> Edition, SWcengage Indian Edition.

**Reference Books:**

1. Cheol S.Eun and.Resnick, International Financial Management, SIE 4<sup>th</sup> Edition, TMH
2. Allen Shapiro, Multi-National Financial Management, Prentice-Hall of India
3. Apte, P.G. International Financial Management, Fourth edition, Tata McGraw-Hill
4. AswathDamodaran, Corporate Finance -Theory and Practice, Wiley & Sons Inc,2<sup>nd</sup>Edn.
5. AswathDamodaran, Investment Valuation, Wiley ,2<sup>nd</sup> Edition.

## MLSM 111 RESEARCH METHODOLOGY FOR BUSINESS

### Objectives:

- To Familiarize students with the techniques and tools of Business Research.
- To develop research report writing skills among students.
- To introduce them to software packages widely used in research analysis.

Unit	Description	Hours
1	Over view of Research methodology: Meaning and purpose – Types of research: Exploratory, Analytical, Descriptive, Experimental and Case study.	09
2	Research Focus: Problem definition, Selection and formulation – Review of Literature – Delimitation of the scope of the study – Setting Objectives – Definition of the concepts – Formulation of hypothesis – Preparation of Research design – Field work and Data collection.	09
3	Meaning of Hypothesis – Types of Hypothesis – Sources of hypothesis – Testing of Hypothesis – Errors in Testing – Measurements – Scaling techniques and Scale Construction – Sample size – Sampling error – Sampling Methods and Applications.	09
4	Data Collection: Primary and Secondary Data: Observation, Interview, Telephonic Interview, Questionnaire – Internal and External source of Secondary data – Construction of Interview schedule and Questionnaire – Pre testing and Pilot Study – Reliability and Validity tests – Processing and data analysis: Checking, Coding, transcription and tabulation of data – Report writing: Types of report, Contents of report, Styles and Conventions in report writing - Steps in drafting a report: Cover page, Introduction, Text, Bibliography and Appendix.	09
5	Data Analysis using Computers: Software Packages – Parametric and Non Parametric hypothesis testing – Correlation and Regression analysis – Time Series – Basic Multivariate analysis.	09

### Text Books

1. Krishnaswamy O R and Ranganatham M. (2014) METHODOLOGY OF RESEARCH IN SOCIAL SCIENCES, Himalaya Publication, India.
  2. Kothari C R (2014), "RESEARCH METHODOLOGY: METHODS AND TECHNIQUES", New Age India.
  3. Sekaran Uma and Bougie Roger (2010) RESEARCH METHODS FOR BUSINESS: A
- 
1. Kerlinger Fred and Lee B Howard (1999), FOUNDATIONS OF BEHAVIORAL RESEARCH, S.Chand
  2. Hatt K Paul and Goode J William, (2016), METHODS IN SOCIAL RESEARCH, Asia Law House.
  3. Cooper R Donald and Schindler (1998) Pamela BUSINESS RESEARCH METHODS Irwin Professional Publishing

## MLSM 112 PRODUCTION AND OPERATIONS MANAGEMENT

### Objectives

- To introduce the production Process and Planning Process
- To Familiarize the concepts of Operations
- To expose the students to various models and techniques

Unit	Description	Hours
1	System concept of production –Production system – Productivity – World class manufacturing- process planning and design- selection of process-value analysis/value engineering-make or buy decision- capacity planning and forecasting- Demand pattern- Forecasting model-selection of forecasting techniques-SMA-WMA-Simple exponential smoothing, Linear regression – Delphi method	09
2	Facility location; factors influencing plant location-break even analysis-facility layout-basic formats-classification- process layout, Product layout and Group technology layout- advantages and limitation- systematic layout planning (SLP) – Concept of CRAFT, ALDEP, CORELAP- Assembly Line – Line balancing concept-Concept of mass production. Material management and inventory control – Components of material management-Purchase model with instantaneous replenishment and without shortage – Manufacturing model without shortage – Material handling system- unit load concept- material handling principle-classification of material handling equipments.	09
3	Aggregate sales and operation planning – Introduction – overview-Production planning environment. Material Requirement planning (MRP) - Product Structure/ Bill of material (BOM) – MRP System and overview-Production planning control- Planning phase-action phase- the control phase. Single machine scheduling (SMS); types of scheduling-concept of SMS-SPT rule to minimize mean flow time-minimizing weighted mean flow time –EDD rule to minimize maximum lateness-flow shop scheduling-Introduction to Johnson Problem – Extension of Johnson’s rule.	09
4	Project management: CPM – PERT – GANTT chart/Time chart – work study-method study- time study – motion study. Quality control: Introduction- need to control quality- quality system- QC techniques-control charts for variables and attribute- Acceptance sampling – Operating characteristic curve – Single sampling plan.	09
5	Maintenance - planning and control - Maintenance Objectives –Types – Basic reasons for replacement- reliability – reliability improvement-reliability calculations- Modern production management tools- JIT manufacturing - Introduction to Six sigma concepts- TQM- Lean manufacturing. -Kaizen.	09

1. Chary S, (2017) “Production and Operations Management”, McGraw Hill Education
2. Chunawalla S A and Pate D R, (2016), “Production and Operation Management”, Himalaya Publishing House.
3. Panneerselvam (2012) “Production and Operations Management”, Prentice Hall India

### Reference Books:

1. William J. Stevenson, (2017), “Operations Management”, McGraw-Hill Education

**MLSM 113 LOGISTICS AND SUPPLY  
CHAIN MANAGEMENT**

**Objectives:**

- 1.To study the importance of Logistics operations and its competitive edge.
2. To impart the knowledge on the procurement and vendor management for regular supply of goods.
- 3.To understand the various necessity of multi storage points and suitable delivery system for making operations more efficient.
- 4.To study the nuances in invoice management and fulfilling customer orders.

Unit	Description	Hours
1	Concept and Scope: Concepts of Logistics and supply chain- Importance of Logistics in these days global Sourcing, Production and consumption- Dimension of Logistics: Macro and Micro aspects- Supply chain contours: Backward and forward linkages- Supply chain efficiency- Logistics as a competitive edge driver- Peculiarities and diversity of needs of Logistics.	09
2	Logistics and Procurement: Logistics as a Support function of Procurement and Vendor Facilitation - Logistics as interface function of Demand Forecasting, Global procurement, Tracking inward shipments and Storage Planning- Logistics as an enabler of Just-in-Time (JIT), Kanban (A scheduling system for lean inventory), Vendor Managed Inventory (VMI) for Vendors and the firm.	09
3	Logistics and Marketing: Logistics as a Support function of Order Fulfillment, Assembling & Labeling from Multi-storage points and Delivery- Logistics as an interface of Market forecasting, Stock level management, invoice or sales documentation, picking products, consolidation, transport-packaging, packing, marking, preparing outbound documentation and shipping out by loading into containers- customer facilitation tracking out-bound shipments.	09
4	EXIM Logistics: Importance of Global Logistics- Export Logistics: Special Aspects of EX-IM logistics- Picking, Packing, Vessel Booking [Less-than Container Load(LCL) / Full Container Load (FCL)], Customs, Documentation, Shipment, Delivery to distribution centers, distributors and lastly the retail outlets- Import Logistics: Documents Collection- Valuing- Bonded Warehousing- Customs Formalities- Clearing- Distribution to Units- Security & Insurance- Multimodal Transport- UN International convention on MT of Goods- Terminal Networks: Types and Roles.	09
5	Invoice management, call centers, warehouse/distribution facilities - Carrier management- 4PL Specialties: Implementation Center: Business process analysis/scoping, Development of all activities into an open systems framework- Product/Skill Centers: Supply chain engineering –4PL Value Added services: Knowledge Transfer, Business Development and Functional Support. <i>Special Logistics: Inter-modal and Multimodal Logistics- Logistics for Trade Fairs and Events - Consolidation and Groupage- Logistics of Time Perishable and Logistics of Quality Perishables- GSI System of world-wide supply-chain standards system- E-Logistics –Warehouse Logistics- Reverse Logistics.</i>	09

## REFERENCES

1. Sahay B.S, *Supply Chain Management for Global Competitiveness*, Macmillan India Ltd., New Delhi.
2. Reguram G , R a n g a r a j N , *Logistics and Supply Chain Management Cases and Concepts*, Macmillan India Ltd., New Delhi..
3. Coyle, Bradi&Longby, T h e *Management of Business Logistics*, West Publishing Co. Martin Christopher, *Logistics and Supply Chain Management*
4. Paul R. MurphyJr. and Donald Wood, *Contemporary Logistics*
5. Harvard Business Review, *Managing Supply Chains*
6. Alan E. Branch, *Global Supply Chain Management and International Logistics*
7. Simchi-Levi, Kaminsky&Simchi-Levi, *Managing the Supply Chain: The Definitive Guide*

# **THIRD SEMESTER**



**Logistics and Supply Chain Management**



## MLSM 201 Strategic Management in logistics

**Objectives:**

1. To describe the conceptual and theoretical backgrounds of strategy and strategic management.
2. To help the students understand and appreciate the process of strategic planning and execution.
3. To facilitate application of strategy in logistics function ranging from planning to execution and control.

Unit	Description	Hours
1	Strategy: Introduction - Strategic planning and strategic management: Levels of strategic planning - Process of strategic planning - dimensions of strategic decisions - Strategic management process	09
2	Environmental analysis: environmental scanning - Industry analysis - Competitive analysis - Internal analysis: Resource Based view, SWOT / PEST / ETOP analysis, Value Analysis. Strategy formulation / alternatives: Corporate strategies: grand strategies- stability, expansion, retrenchment and combination	09
3	Business level strategies: - acquiring core competencies – Porter’s Generic Strategies Model – Functional level strategies: Production and Operations – Finance – HR – Marketing and R & D Strategies	09
4	Strategic analysis and choice: Portfolio Analysis-BCG Growth-Share Matrix, GE Business Screen, Shell’s Directional Policy Matrix, Hofer’s Product – Market Matrix Strategic implementation: Steps- structural issues- behavioral issues- strategic leadership.	09
5	Strategic evaluation and control: Balanced Score Card approach – EVA and MVA - ERP– Stake holder analysis – Systems thinking approach, Strategic control - operational control - process and techniques.	09

**Reference:**

1. AzharKazmi, (2007), “Strategic Management and Business Policy – 3<sup>rd</sup> Edition”, Tata MC GRAW HILL New Delhi
2. R. Srinivasan, (2007), “Strategic Management - 3<sup>rd</sup> Edition”, Prentice Hall India, N. Delhi
3. Thomson, Strickland and Pearson, (2005), “Strategic Management”, Tata Mcgraw Hill, New Delhi
4. V.S. Ramasamy and S. Namakumari, “Strategic Planning-Formulation of corporate strategy”, Macmillan India Pvt Ltd

## MLSM 202 PROCUREMENT, STORAGE AND WAREHOUSE MANAGEMENT

### Objectives:

1. Provides know-how required to operate an efficient and cost-effective warehouse as also the role of inventory in warehouse management.
2. It provides guidance on using the latest technology, reducing inventory, people management, location and design and manage uncertainty risks of customer markets
3. Define the right structure of the supply network and inventory control and warehouse management system

Unit	Description	Hours
1	Objectives of Procurement System, Principles of Procurement, History of procurement function: from administrative to strategic, value added role, Procurement Cycle, Procurement Planning, Purchasing Mix: Six Rights, Selecting the right supplier, Source of information and process, Supplier appraisal/vendor capability, Bidding process.	09
2	Introduction to Warehousing Concepts -Role of warehouse-types of warehouse- warehouse location- Need for warehousing- Supply chain trends affecting warehouse –Warehouse functions- Role of warehouse manager-Warehouse process: e-commerce warehouse- Receiving and put away- Warehouse process – pick up preparation-Receiving - Pre-receipt - In- handling - Preparation - offloading - Checking - Cross-docking - Quality control - Put-away - Pick preparation - Pick area layout - Picking strategies and equipment -order picking methods - Warehouse processes- Replenishment to dispatch- Value adding services - Indirect activities - Stock management - Stock or Inventory counting - Perpetual inventory counts - Security - Returns processing – Dispatch.	09
3	Storage Management system – Storage Inventory Management – Functions of storage & Inventory - Classification of Inventory- Methods of Controlling Stock Levels- Always Better Control (ABC) Inventory system- Warehouse Management Systems (WMS) - choosing a WMS- the process implementation-cloud computing- Warehouse layout-Data collection-space calculation-aisle width- finding additional space.	09
4	Storage and Warehousing Information system -Storage Equipment: storage option - shuttle technology - very high bay warehouse - warehouse handling equipment - vertical and horizontal movement - Automated Storage/ Retrieval System (AS/RS)-specialized equipment- Technical advancements- Resourcing a warehouse- warehouse costs- Types of cost - Return on Investment (ROI) - Charging for shared-user warehouse service - Logistics charging methods Warehousing Information System (WIS)- Performance management- outsourcing decisions.	09

<p>Material Handling and Warehouse safety Material handling- Product movement- concept- costs-product load activity—dispatch activity-unload activity-control device-impact of the computer technology-automatic identification-issues and trends in product transport-- Packaging - Pallet - Stretch wraps - Cartons – Labeling- Health and safety- Risk assessment - Layout and design - Fire safety- Slips and trips - Manual handling - Working at height - Vehicles - Forklift trucks - Warehouse equipment legislation. Warehouse safety check list- Warehouse Environment- Energy production - - Product waste - waste disposal - Hazardous waste- Sustainable warehouse Management.</p>	09
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**Text Books:**

1. GWYNNE RICHARDS (2014) Warehouse Management: A Complete Guide to Improve Efficiency and Minimizing Cost in the Modern Warehouse. The Chartered Institute of Logistics and Transport, Kegan page limited.
2. DAVID E. MULCHY & JOACHIM SIDON (2008) A Supply Chain Logistics Program for Warehouse Management. Auerbachian

**Publications References**

1. Bowersox, D.J., Closs, D.J., Cooper, M.B., & Bowersox, J.C. (2013). Supply Chain Logistics Management. (4 th ed.), McGraw Hill/Irwin.
2. Arnold, J.R., Chapman, S.N. (2012). The Introduction to Materials Management. (7 th ed.), Prentice-Hall. Coyle, J.J., Jr. Langley, C.J., Novack, R.A, & Gibson, B.J. (2013). Managing Supply Chains: A Logistics Approach. (9 th ed.), McGrawHill. Edward, F. (2002).
3. World-Class Warehousing and Material Handling. (International ed.), McGraw-Hill. Muller, M. (2011). Essentials of Inventory Management. (2 nd ed.), American Management Association.

## MLSM 203 SEA PORT AND AIRPORT MANAGEMENT FOR LOGISTICS

**Objective:**

1. To Understand the nature of Port and Airport Management and their application in the Logistics Environment.
2. To understand the issues and deal with the peculiarities, diversity of the needs of the Port Logistics and their significance role in various Logistics Operation

Unit	Description	Hours
1	Port Structure and Functions: Definition - Types and Layout of the Ports – Organizational Structure-Fundamental observations. Main functions and features of ports: Infrastructure and connectivity Administrative functions - Operational functions. Main services: Services and facilities for ships - Administrative formalities - Cargo transfer - Services and facilities for cargo - Additional “added value” service- Ports and their stakeholders like PHO, Immigration, Ship agents, Stevedores, CHA.	09
2	Port Operations: Berths and Terminals - Berth Facilities and Equipment - ship Operation – Pre-shipment planning, the stowage plan and on-board stowage - cargo positioning and stowage on the terminal - Developments in cargo/container handling and terminal operation - Safety of cargo operations - Cargo security: Measuring and evaluating performance and productivity.	09
3	Port Development: Phases of port development - Growth in world trade - Changes in growth Development in terminal operation. Shipping technology and port: Ship knowledge Ship development and port development - Port time and ship speed - Other technical development affecting port.	09
4	Port Administration Ownership and Management Port ownership structure- Types of port ownership and administration – Organizations concerning ports - Boards governing the ports - Port management development Rise and fall of Ports - information technology in ports. Port ownership in Indian context: Acts governing the Ports in India - Port ownership structure in India. Port reform: Framework for port reform - Evolution of ports in a competitive world Alternative Port Management Structure and Ownership Models.	09
5	Air Transport: Introduction to Air Transport – Air Freight – IATA – Cargo Handling at Goods at Air Port – Information Management of Air Cargo – System and Modules – Distribution of Goods.	09

**Text Books:**

PATRICK M. ALDERTON. 2008, Port Management and Operations. Information Law Category, U.K.

**Reference Books**

1. WORLD BANK. 2007, Port Reform Tool Kit. World Bank, Washington.
2. MARIA G. BURNS. 2014., Port Management and Operations. CRS Press, U.K.
3. ALAN E. BRANCH. 2008, Elements of Shipping. Chapman and Hall, Fairplay Publications, U.K.
4. DE MONIE. 1989., Measuring and Evaluating Port Performance and Productivity. UNCTAD, New York.

## MLSM 204 MARITIME LOGISTICS AND DOCUMENTATION

### Objectives:

1. To Recognize the fundamental technical issues of handling each type of cargo within the modern port
2. To Gain a working knowledge of ship operations, port management, supply services and the chartering process
3. To Identify the essential elements of documentation associated with maritime trade Recognize the contractual and legal environment under which shipping functions

Unit	Description	Hours
1	<p><b>Maritime Logistics:</b> Concept, objectives, Importance and relevance to global marketing and Supply chain management- Coastal and Ocean transportation- World Sea-borne Transport- Global Sea Routes and the trade volume- Characteristics of shipping transport- Types of Ships- Container, Roll-on/roll-off (ro-ro) vessels, General cargo ships, Bulk carriers, Tankers, etc- Busiest Sea routes: East-West and North-South and Intra Region- International Maritime Organization (IMO): Formation and functions- Regulations concerning dangerous and polluting cargoes, including the class structure</p>	09
2	<p><b>Chartering Principles and Practices</b> – Types of Charters- Voyage, Time and Bare Boat charters- Freight Determination and Determinants- Conference System Vs Competitive System- Freight structure and practice – Rate Dynamics- Multi-modal Transport system- Technological developments in ocean transportation: Size, Tracking, Speed and Security.</p>	09
3	<p><b>Arrangement for shipment of Cargo</b> - Role of Intermediary Functions and services of clearing and forwarding agents, freight brokers, stevedores, shipping agents and surveyors- House and Terminal Stuffing- Port: Types of port – Major Port of India and world- Structural and cargo handling facilities - Warehousing and storage in ports - Demurrage - Loading and unloading in warehouses- Organization, functions and Performance outruns- chart of Ministry of Shipping.</p>	09
4	<p><b>Maritime Insurance:</b> Cargo insurance - Marine Insurance - Institute cargo clauses - specific policy - Open policy - procedure for cargo insurance - Procedure for marine insurance claims - Necessary documents for filing claim. <b>Choice of a Shipping Service:</b> Factors influencing: Reliable Worldwide Network, One-stop for Total Logistics Solutions, Committed to High Quality Services, Transparency, Positive Approach, Highly Trained, Motivated and Result Oriented Staff, Competitive Rates, Excellent Team Work, Provide alternatives / options to the client.</p>	09
5	<p><b>Export Procedure and documentation:</b> Offer and receipt of orders - Shipment procedure -Banking Procedure Export Documentation - Framework - Standardized pre-shipment Export Documents - Commercial and Regulatory Documents - Export credit instruments and procedures: Letters of credit and types - Documents required for export credit. Export credit insurance - services of Export Credit and Guarantee Corporation in export credit insurance - Specific Policy and Small</p>	09

Exporters Policy - Guarantees - Procedure for availing credit insurance and necessary documents- Multimodal transport - Procedure and documentation - Central Excise and Customs clearance of export cargo - Procedure and documents.	
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**REFERENCES**

1. Edmund J. Gubbins, Shipping Industry (Transportation Studies) Rutledge, 1986.
2. Martin Stop ford, Maritime Economics, Rutledge, 2008
3. Alan E. Branch, Elements of Shipping, Rutledge, 2007
4. Peter Lorange, Shipping Strategy: Innovating for Success, Rutledge, 2007
5. Lane C. Kendall, the Business of Shipping, Cornell Maritime Press, 2001

# **FOURTH SEMESTER**



**Logistics and Supply Chain Management**

<b>MLSM 207 CONTAINERISATION AND MULTIMODAL TRANSPORT</b>		
<b>Objectives:</b> This subject is tailored to deliver theoretical and practical knowledge in handling methods, transportation modes and various conventions pertaining to carriage of cargo. Containerisation is taught in the perspective of growing importance of transportation in world trade.		
<b>Unit</b>	<b>Description</b>	<b>Hours</b>
1	Basic concepts of Containerisation :Meaning - Major Container Trades - Container Operators - Container Ships - Terminal- Consideration of Container Terminal Planning - Container Distribution – Containertypes - ISO Container Dimension by types - Non- Containerisable cargo - Features of Containerization - Equipment for non-containerisable cargo.	09
2	Cargos: International Trade Distribution - Stowage: Meaning - Stowage of cargo – Factor Consideration - Types of cargo - Characteristics - Cargo and Container handling equipment - Types of Packing- Marking of cargo - Dangerous Cargo - IMDG Code –Classes.	09
3	Multi modalism: Multi-modal Trade Routes - Evolution - Basic Intermodal System - Modal Interface Factors outline why shipper favor Multi-modalism - Factors in Development Features -Multi-Modalism Strategy – Components.	09
4	Physical multi modal operations: Liners - Tramps - Specialized Vessels - Terms - Road transport vehicle – Road Transport Weight and Measurement - Rail Transport Vehicle and Equipment - Air Transport - Ports - LCL - FCL - NVOCC - Freight forwarders - Consolidator - ICD CFS- Free Trade Area - SEZ - Factors affecting mode and route choice.	09
5	Conventions relating to multimodal transport: Cargo Liability Convention: International Conventions relating to Bill of Lading (TheHague and Hague/Visby Rules (Appendix 8) - Hamburg Rule - Convention relating to Through Transport operation by Land, Rail, Air - Conventions relation to Dangerous Cargo - Carriage of Perishable Goods - International Convention for safe containers 1972 (CSC).	09
<b>Text Books:</b>		
<p>1 ALAN E BRANCH &amp; MICHAEL ROBARTS (2014) Branch’s Elements of Shipping. 9th Edition, Routledge Publication.</p> <p>2. CLAUS, HYLDAGER (2013) Logistics and Multi-modal Transport. 2013 Edition, Institute of Chartered Shipbrokers.</p> <p>Reference Books</p> <p>1. HARIHARAN, K. V. (2002) A Text Book on Containerization and Multimodal Transport. Shroff Publishers and Distributors: New Delhi.</p> <p>2. HARIHARAN, K. V. (2002) Containerization, Multimodal Transport and Infrastructure Development in India. 5th edition, Shroff Publishers and Distributors Pvt. Ltd.</p>		



**MLSM 208 SUPPLY CHAIN RISK MODELING AND MANAGEMENT**

Objectives: As the nature of supply chains evolves with increasing globalization, consolidation and just in time inventories, the amount of risk continues to increase. This course enables the students to get an insight on valuable perspectives on supply chain vulnerabilities. With emphasis on data, models and modeling systems the students can analyze supply chain planning problems.

Unit	Description	Hours
1	Supply Chain Management - Integrated Planning and Models - Supply Chain Models & modeling Systems – Supply Chain Decision Databases – Data Aggregations, Facility Data, Transportation Network data, Supplier Data – Integrating Supply Chain & Demand Management, Price & location Sensitive Revenue Curves,	09
2	Fundamentals of Optimization Models – Linear programming Modelling – Resource Allocation Model, Infeasible & Unbounded Models, Multiperiod Resource Allocation Model, Network Models., Properties of Linear Programming Models, Dual Linear Programming Model, Parametric Sensitivity Analysis., Spread sheet and Multiple Objective, unified Optimization, Stochastic Programming. Mixed Integer Programming Modelling, Distribution Centre Location Models, Supply Chain Network Optimization Models, Optimization Software.	09
3	Optimization Models for Competitive Analysis, Scenario Planning, Decision trees & Stochastic Programming, Supply Chain Strategies for managing Product Variety. Simulation Models & Systems – Deterministic Simulation, Monte Carlo Simulation, Simulation Software, Simulation Vs Optimization, Inventory Theory Models –Deterministic Models, Probabilistic Models, ABC Classification.	09
4	Risk and Management - Risk in the Supply Chain, Features of Risk, Decisions & Risk, Structure of Decisions, Decisions with uncertainty, Risk, ignorance, Managing Risk Structure of a Supply Chain, Increasing Risk, Trends in Supply Chain Management. Integration of supply Chains, Cost Reduction, Agile logistics, E – Business, Globalization, Outsourcing, Changing practices in Logistics. Approaches to Risk Management.	09
5	Identifying Risks – Types of Risks, Tools for analyzing past events, Operations, Problems with Risk Identification, Measuring Risk, Consequences of Risk, Responding to Risk – Alternative responses, Defining Options, Choosing the best response, Implementation & Activation, A Network view of Risk – Shared Risks, Achieving an Integrated approach, Analyzing & responding to risks.	09

**Text Books:**

1. Gregory L. Schlegel, Robert J. Trent Supply Chain Risk Management: An Emerging Discipline (Resource Management) Hardcover – Import, 3 Nov 2014.
2. Donald Waters – Supply Chain Risk Management, Published by the Chartered Institute of Logistics & Transport, U.K
3. Jeremy F.Shapiro, Modelling the Supply Chain, Duxbury.

# **ELECTIVES**

## MLSM 301 APPLIED GIS AND SPATIAL DATA ANALAYTICS

### Objectives:

To understand trends and patterns of trade and also to manage business information effectively. To map manufacturing, clients, processing units, supplier locations, distribution centers, and routing of vehicles.

Unit	Description	Hours
1	GIS -Definition – Principles – Concepts –Components of GIS, Functions of GIS, Uses of GIS; Important GIS Vendors – ESRI – ArcGIS, MAPINFO, GEOMEDIA - Open source GIS-QGIS	09
2	Data sources (Open Source for Vector data - GLCF, Google Earth, Bing Maps, Bhuvan for Raster data) Data acquisition from data sources – (Topographic, Cartographic, remotely sensed, Census, other records and Surveys). Data input -Scanning, Registration, Digitizing, Editing.	09
3	GIS data– Spatial and Attribute data. Data types- spatial, attribute, topology - Spatial data models – Raster and vector – advantages and disadvantages Data conversion. R2V, V2R. shp, dxf etc., Attribute data models – Hierarchical, relational and network. Database Management Systems: types -merits and demerits.	09
4	GIS data analysis – Query (onscreen query, attribute query, spatial query) Classification, reclass, Overlay, Buffer, interpolation Advanced analysis – Network analysis, Terrain analysis, Morphometric analysis, creation of TIN and DEM and multi criteria evaluation (MCE)	09
5	GIS Application: GIS as a Decision Support System, GIS for Business solutions, application of GIS in Land Information System and site suitability analysis, probability analysis, Location and Network analysis Application of mapping in Retail business and international trade. Tracking. Environmental Management, coastal management, Emergency Response System.	09

### REFERENCES:

1. Burrough P.A. Principles of Geographic information Systems for Land Resource Assessment Oxford University Press, New York, 1986
2. Aronoff S. Geographic Information Systems: A Management Perspective, DDL Publication Ottawa, 1989.
3. Chang, & K.-T. (2008). Introduction to geographic information systems. Boston: McGraw-Hill.
4. Davis, B. E. (2001). GIS: A visual approach. Albany, NY: Delmar Thomson Learning.
5. Fraser Taylor D.R. Geographic information Systems. Pergamon Press, Oxford, 1991.
6. Maquire D.J.M.F. Goodchild and D.W. Rhind (eds.). Geographic information Systems: Principles and Application. Taylor & Francis, Washington, 1991.
7. Mark S Monmonier. Computer-assisted Cartography. Prentice-Hall, Englewood Cliff, New Jersey, 1982.
8. Peuquet D.J and D.F. Marble, Introductory Reading in Geographic Information Systems. Taylor & Francis, Washington, 1990.
9. Star J and J. Estes. Geographic Information Systems: An Introduction. Prentice Hall, Englewood Cliff, New Jersey, 1994.

## MLSM 302 PUBLIC PRIVATE PARTNERSHIP AND PORT DEVELOPMENT

### Objectives:

To introduce the unique characteristics, models, financial approach, institutional and legal framework and lessons learned from the PPP projects.

Unit	Description	Hours
1	Introduction to Public Private Partnership: Definition - History - Roles - Benefits - Output-based approach - PPP and Privatization- PPP Models - Indian Scenario - Stumbling Blocks - Government initiative - Policy framework - Partnership architecture - Procedural network - Institutional structure.	09
2	Risk Identification and Financial Approach: Risk: Identification - Mitigation - Allocation. Financial Approach: General Factors Deciding determinants - Financial involvements - Sources and tools – Cost components and financing sequence.	09
3	Contractual, Legal and Regulatory Framework: Contractual Framework: Concession contract's Features - Concession contract and a Commercial contract - Concession arrangement - Critical issues – Unsolicited proposals - Contractual Structure. Legal Framework: Existing legal framework Infirmities. Regulatory Framework: Regulatory body - Functions Contracting out regulatory functions - Regulation by contract - Indian Scenario – Independent regulators.	09
4	Infrastructure: Salient Features - Importance - Types - Commercialisation of Infrastructure Infrastructure and Environment - Infrastructure and the poor- Policy framework Indian Scenario - Phases of project development - Slow progress.	09
5	Indian Port Sector and PPP projects: Indian Ports: Major ports - Corporate ports - Non-major ports - Changing Trends Port Management Models. Indian Ports and PPP: Nhava Sheva International Container Terminal - Kakinada Deep Water Port - Gangavaram Port.	09

### Text Books:

1. JOSHI, R. N. (2013) Public Private Partnership in Infrastructure: Perspectives, Principles and Practices. Vision Books: New Delhi.
2. ASIAN DEVELOPMENT BANK (2008) Public-Private Partnership Handbook. ADB: Manila.

### Reference Books

1. ASIAN DEVELOPMENT BANK (2012) Public - Private Partnership Operational Plan 2012 - 2020. ADB: Manila
2. WORLD BANK (2007) Port Reform Tool Kit. World Bank: Washington.
3. INFRASTRUCTURE DEVELOPMENT FINANCE COMPANY LIMITED (2012) Evolving Perspectives in the Development of Indian Infrastructure Vol. I&II. Orient Blackswan Private Limited: Hyderabad, India.

## MLSM 303 MODELING TECHNIQUES AND IT FOR OPERATIONS MANAGEMENT

### Objectives:

To help students to understand the modelling techniques like business modelling, Linear programming, Decision trees, Dynamic programming and IT in operations management.

To learn the features of Enterprise Resource Planning

To understand the significance of IT in operations Management

Unit	Description	Hours
1	Introduction to Business Modeling: Modelling – meaning and process, Certainty and uncertainty in models, importance of understanding data before modelling, Modelling with spreadsheet in simple decision-making situations.	09
2	Linear Programming: Application of LPP in operations management, Formulation of LPP, simplex method, duality, Sensitivity Analysis. Trans-shipment problems. Concept of Goal programming, Goal programming model formulation.	09
3	Decision Trees: Concept, Application of Decision Trees in operations management. Sequencing problems: Concept, Application- Job Sheet Scheduling: Priority Dispatching rules, None-Delay schedule generation algorithm	09
4	Concept and Introduction- Salient features of ERP systems offered by leading vendors, prerequisites and process of implementation. Dynamic Programming: Terminologies of Dynamic Programming- Applications in Capital Budgeting Problems, Reliability improving problems. Simulation- types of Simulation, Steps of stimulation, Flow Chart for single server queuing Model, Flowchart for Parallel Server queuing model.	09
5	IT in Operations: Importance of IT in operations, IT as a competitive edge, Role of IT in – Design, Production Planning, Layout and Logistical operations- Software in operations: Introduction, characteristics and key features of software's for Project Scheduling, Logistics / Supply chain management and Quality management	09

1. N.D. Vohra, (2009) “Quantitative Techniques in Management”, McGraw Hill Education; 4th edition
2. Bal Krishnan, Render, Stair, (2012) “Managerial Decisions Modelling with Spreadsheets, Pearson; 3rd edition
1. Chase, Aquilano, Jacobs, Agarwal, (2006) “Operations Management for Competitive Advantage” the McGraw-Hill; 11th edition
2. Gillette B.E, (1976) “Introduction to Operations Research” McGraw-Hill Inc., US
3. Taha Hatndy, (2010) “Operations Research” An Introduction- Pearson; 9th edition
4. Render, Stair, (2014) Jr “Quantitative Analysis for Management” Pearson; 12th edition

## MLSM 304 CUSTOMER RELATIONSHIP MANAGEMENT

### Objectives:

- To Understand the shifting focus from Conquest Marketing to Relation Marketing.
- To Analysis of how to maintain relationships with the customers inorder to retain them.
- To help the students to Correlate the Customer Data Analysis

Unit	Description	Hours
1	Definitions - Concepts and Context of relationship Management – Evolution of CRM Transactional Vs Relationship Approach – CRM as a strategic marketing tool – CRM significance to the stakeholders	09
2	Customer information Database – Customer Profile Analysis - Customer perception, Expectations analysis – Customer behavior in relationship perspectives; individual and group customer’s - Customer life time value – Selection of Profitable customer segments	09
3	Elements of CRM – CRM Process – Strategies for Customer Acquisition – Retention and Prevention of defection – Models of CRM – CRM road map for business applications.	09
4	Strategic CRM planning process – Implementation issues – CRM Tools- Analytical CRM – Operational CRM – Call center management – Role of CRM Managers.	09
5	e- CRM Solutions – Data Warehousing – Data mining for CRM – an introduction to CRM software packages.	09

### Text Books

1. G.Shainesh, Jagdish, N.Sheth, Customer Relationships Management Strategic Perspective, Macmillan.
  2. Alok Kumar et al, Customer Relationship Management: Concepts and applications,
    1. H.Peeru Mohamed and A.Sahadevan, Customer Relation Management, Vikas Publishing
    2. Jim Cathcart, The Eight Competencies of Relationship selling, Macmillan India,
    3. Assel, Consumer Behavior, Cengage Learning, 6<sup>th</sup> Edition.
    4. Kumar, Customer Relationship Management - A Database Approach, Wiley India.
    5. Francis Buttle, Customer Relationship Management: Concepts & Tools, Elsevier
-

## MLSM 305 INVENTORY MANAGEMENT & MATERIAL REQUIREMENTS PLANNING

### Objectives:

- To introduce the fundamental nature of inventory from a financial, physical, forecasting, and material requirement planning standpoint
- To emphasize the significance of inventory management for smooth operation of business
- To introduce various inventory management and requirement planning techniques and tools to students

Unit	Description	Hours
1	Inventory Management: Inventory concept; need for inventory; types of inventory, functions, use; Dependent and Independent Demand, Responsibility for inventory management. Strategic Inventory Management: Objectives and Importance of the inventory management function about Profitability, Strategy, customer satisfaction and Competitive Advantage.	09
2	Inventory Control Techniques: Inventory classification and its use in controlling inventory, Setup time and inventory control, safety stock determination considering service level. Strategies to increase Inventory Turns, reduce through put time, Reduce WIP, eliminate waste, and reduce inventory level in service and manufacturing organizations.	09
3	Inventory Models: Inventory models – Fixed Order Versus Fixed Interval systems – Developing Special Quantity Discount Models – Inventory Model for Manufactured Items – Economic Lot Size when Stock Replenishment is instantaneous – Non-instantaneous Replenishment Models – Inventory Models with uncertainty – Probabilistic Inventory Models – Models with Service Levels and Safety Stock.	09
4	Material Requirement Planning Systems (MRP): Meaning, purpose and advantage of MRP, Data Requirements and Management – Updating Inventory Records – Bill of Materials, types of BOM, Modular BOM	09
5	Materials Management in JIT Environment: Zero inventory concept, Excess Inventory: A Roadblock to World-Class Manufacturing, Materials management in JIT environment, Vendor Managed Inventory, vendor relationship in JIT context. Performance: Evaluation of Performance of Materials Function - Criteria and methodology of evaluation, AHP for Vendor Evaluating and Selection.	09

### Text Books

1. Zipkin (2000), "Foundations of Inventory Management", McGraw-Hill Higher Education
  2. Seetharama L Narsimhan, Dennis W McLeavy, Peter J Billington,(1994) "Production Planning and Inventory Control"; Prentice Hall
  3. J. R. Tony Arnold, Stephen N. Chapman (2010), "Introduction to Materials Management"-
- 
1. Richard J. Tersine, (1993) "Principles of Inventory and Materials Management" Prentice Hall; 4th edition
  2. Max Muller, (2011) "Essentials of Inventory Management", AMACOM; 2 editions
  3. Plossl,(1994) "Orliky'sMRP"McGraw-Hill; 2 edition
  4. J H Greene, Homewood III: Richard D Irwin, (1986) "Production and Inventory Control" McGraw-Hill US

## MLSM 306 DISTRIBUTION MANAGEMENT FOR GLOBAL SUPPLY CHAIN

### Objectives:

To understand the strategic role of logistics management

To study the important modes of logistics operations

To Know supply chain techniques in an international perspective.

Unit	Description	Hours
1	Need for physical distribution – functions of distribution –marketing forces affecting distribution. The distribution concept – Systems perspective. Physical distribution trends.	09
2	Channels of distribution: role of marketing channels – channel functions – channel structure –designing distribution channel – choice of distribution channels – factors affecting. Intermediaries: functions of intermediaries – types of intermediaries – variables in selecting channel members – motivating – training – evaluating channel members – modifying channel arrangements.	09
3	Distribution control & Evaluation: Distribution control – stages of control process – standards & goals– performance report - measurement – monitoring – corrective action. Organization for Distribution: Distribution Organization structure – Private & Public organizations - conflict resolution – rising costs& need for control – complexities of physical distribution.	09
4	Role of Material Handling in Logistics – Material Handling Guide lines – Material Handling Equipment and Systems – Automated Material Handling, Benefits of Logistics Outsourcing – Third Party Logistics – Fourth Party Logistics – Value Added Services.	09
5	Role of Logistics in Distribution Channel – Distribution Channel Structure – Logistic Requirements of Channel Members – Logistics Support to Distribution Channel.	09

### Text Books:

- 1.Kapoor Satish K., and KansalPurva, ‘Basics of Distribution Management: A Logistical Approach’, Prentice Hall of India
2. D K Agrawal, ‘Distribution and Logistics Management: A Strategic Marketing Approach’, Macmillan publishers India
3. Alan Ruston, Phil Crouches, Peter Baker, ‘The Handbook of Logistics and Distribution Management kogan page
4. Kapoor Satish K., and KansalPurva, ‘Basics of Distribution Management: A Logistical Approach’, prentice hall off India
5. D K Agrawal, ‘Distribution and Logistics Management: A Strategic Marketing Approach’, Macmillan publishers India



## MLSM 307 ENTERPRISE RESOURCE PLANNING

### Objectives:

To make the students to participate in planning and implementation of advanced enterprise wide systems and technologies in their career.

To grasp the activities of ERP project management cycle.

To understand the emerging trends in ERP developments

Unit	Description	Hours
1	Enterprise resource planning – Evolution of ERP, MRP – problems of systems islands – need for system integration and interface	09
2	ERP – Packages – products and market opportunities – problems of ERP selection and implementation – identifying ERP benefits.	09
3	ERP process – implementation – managing changes in IT organisations – preparing IT infrastructure – measuring benefits of ERP. Modules of ERP.	09
4	The emergence of reengineering concepts – concepts of business process – rethinking of processes – identification of reengineering needs – preparing for reengineering. Implementing change.	09
5	Supply chain management – Indian perspective – CRM solutions – E-business – business opportunities – basic and advanced models in internet – internet banking and solutions – Future and growth of E-business	09

### Text Books

1. Hammer, Michael – Reengineering the corporation.
  2. E-commerce strategy, technologies and applications by David Whitley.
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## MLSM 308 SUPPLY CHAIN SOFTWARES

**Objectives:** To familiarize the students with ERP, ERP Module, SCM and CRM and its application in business related decisions.

Unit	Description	Hours
1	Overview of enterprise systems – Evolution - Risks and benefits - Fundamental technology - Issues to be consider in planning design and implementation of cross functional integrated ERP systems.	09
2	Overview of ERP software solutions- Small medium and large enterprise vendor solutions, BPR, Business Engineering and best Business practices - Business process Management. Overview of ERP modules -sales and Marketing, Accounting, Finance, Materials and Production management etc	09
3	Planning Evaluation and selection of ERP systems-Implementation life cycle – ERP implementation, Methodology and Frame work- Training – Data Migration. People Organization in implementation- Consultants, Vendors and Employees-Case studies.	09
4	Maintenance of ERP- Organizational and Industrial impact; Success and Failure factors of and ERP Implementation -case studies.	09
5	Extended ERP systems and ERP bolt –on -CRM, SCM, Business analytics etc-Future trends in ERP systems-web enabled, Wireless technologies so on-Case studies.	09

**Text Books:**

1. Alexis Leon, Enterprise Resource Planning, second edition, Tata McGraw-Hill, 2008.
2. Alexis Leon, ERP demystified, second Edition Tata McGraw-Hill, 2006.
3. Jagan Nathan Vaman, ERP in Practice, Tata McGraw-Hill, 2008
4. Mahadeo Jaiswal and Ganesh Vanapalli, ERP Macmillan India, 2006.
5. Summer, ERP, Pearson Education, 2008.

## MLSM 309 QUALITY MANAGEMENT

### Objectives:

- To recognize the importance of Quality Management
- To have comprehensive knowledge of quality management
- To study the tools and techniques which are needed for enhancing quality.

Unit	Description	Hours
1	Stages of quality control, History of quality, Quality management and its importance, Contributions of quality gurus, Impact of quality on business performance, Distinction between product quality and service quality, Desirable qualities of a leader, Leadership grid, Quality information system, Strategy development and deployment, need for quality approach to strategy, Quality and its types, Supporting policies	09
2	Functions of human resource management (HRM), recruitment and selection, Training Methods, quality circles- Steps of quality circle meetings, Implementation of quality circle, Rewards and recognition, Customer Focus - Customer focus Vs Process focus, Internal customers and management, Quality edge, Factors affecting customer satisfaction, Role of marketing for customer satisfaction, Importance of customer retention, Impact of Customer Retention on Profitability, Steps of developing customer focus	09
3	Process and Statistical Quality Control- quality system, control chart for variables (X andR) and (X and S charts ), control charts for attributes (p, c and u charts), Quality function deployment, Six Sigma - elements of sig sigma, DMAIC Methodology, DMADV Methodology, six sigma technical tools, Benchmarking - types of benchmarking, stages of benchmarking process, Cost of quality- Activity based costing, Introduction to Shainin techniques, Business performance management - performance measures and their importance, balanced score card, quality control activities during product cycle and balanced score card	09
4	Total productive maintenance - objectives of TPM, performance measures of maintenance system, pillars of TPM, stages of implementation of TPM, reliability, Failure modes and effects analysis (FMEA), Analysis of Variance (ANOVA) - complete factorial experiment with three factors, Orthogonal arrays - design of orthogonal arrays, ANOVA for orthogonal array with two-level factors, ISO 9000 series and ISO 9000:2000.	09
5	Malcolm Baldrige National Quality Award - Baldrige criteria, criteria of Baldrige award for performance excellence, steps of effective Baldrige assessment, Business process reengineering- steps of business process reengineering, measures of performance of BPR, applications of BPR, Building and sustaining total quality - role of quality professionals for quality organization, relevance of organizational culture to quality management, cultural change, employees role in cultural change, Sustaining quality organization - steps to Sustain Quality Organization, Quality Organization Sustenance Tools	09

**Text Books:**

1. Panneerselvam, R. and Sivasankaran, P (2014). "Quality Management", PHI Learning, New Delhi,
2. Besterfield, D.H., Carol Bsterfield- Michna, Besterfield, G.H., Mary Besterfiled-Sacre, (2003)" Total Quality Management, Pearson Education, Inc., USA, 2003.
1. Feigenbaum, A.V. (1983), "Total Quality Control", McGraw-Hill, New York,
2. Phillip J. Ross, Taguchi (2005) "Techniques for Quality Engineering", Tata McGraw-Hill (Second Edition), New Delhi,
3. Saaty, T.L., (2000) "Fundamentals of Decision Making and Priority Theory with the Analytic Hierarchy Process", Vol.6, RWS Publications, Pittsburg, PA.,
4. Summers, C.S., (2005) "Quality Management: creating and Sustaining Organizational Effectiveness", Prentice-Hall of India, New Delhi,

## MLSM 310 ADVANCED OPERATIONS RESEARCH

### Objectives:

- To introduce various optimization techniques of operations research
- To facilitate the use of Quantitative Technique in various functional areas
- To evaluate the situation and utilize the resources for maximum output

Unit	Description	Hours
1	Stages of Development of Operations Research, Applications of Operations Research, Limitations of Operations, Introduction to Linear Programming, Graphical Method, Simplex Method, Duality.	09
2	Transportation Problem, Assignment Problem, Inventory Control – Introduction to Inventory Management, Basic Deterministic Models, Purchase Models, Manufacturing Models without Shortages and with Shortages.	09
3	Shortest Path Problem, Floyd’s Algorithm, Minimum Spanning Tree Problem, CPM/PERT, Crashing of a Project network.	09
4	Dynamic Programming, Capital Budgeting Problem, Shortest Path Problem, Reliability Problem, Optimal subdividing problems. Game Theory: Two Person Zero-sum Games, Graphical Solution of $(2 \times n)$ and $(m \times 2)$ Games	09
5	Introduction to Queuing Theory, Basic Waiting Line Models: $(M/M/1) : (GD/\alpha/\alpha)$ , $(M/M/1) : (GD/N/\alpha)$ , $(M/M/C) : (GD/\alpha/\alpha)$ , $(M/M/C) : (GD/N/\alpha)$ , Introduction to queuing system simulation – Introduction to Basic Replacement Analysis: Economic Life of an Asset.	09

1. Panneerselvam, R., (2006) “Operations Research”, PHI Learning Pvt. Ltd., New Delhi,
2. Hillier and Lieberman (2009), “Introduction to Operations Research”, Tata

1. Hamdy A. Taha, (2004) “Operations Research – An Introduction”, Prentice Hall of India, New Delhi,
2. Frank S. Budrick, Dennis McLeavy & Richard Mojena, (1998) “Principles of Operations Research for Management”; II Ed., Richard D. Irwin Inc.,
3. Hillier and Hillier, (2005), “Introduction to Management Science”, McGraw Hill International, New York, (2nd Edition)
4. Wagner, Harvey M. (2004), “Principles of Operations Research”, Prentice Hall of India, New Delhi, (2nd Edition)
5. Kanti Swarup, et al, Operations Research, Sultan Chand and Sons, New Delhi

## MLSM 311 INTERNATIONAL LOGISTICS AND MANAGEMENT

Objectives:

1. To Understand the Marketing logistics concept, objective, scope and its elements
2. To Learn Interface between international marketing and logistics & supply chain management.
3. To Learn the Role of transport in logistics & Concept of customer service

Unit	Description	Hours
1	International Trade: Need and Importance – Recent Trends in World Trade – Leading players – India’s Foreign Trade – Commodity Composition and Destination - Overview of International Logistics-Components, Importance, Objectives; Logistic Subsystem-Integrated Logistics; - Barrier to Internal Integration – Logistics Documents for International Trade.	09
2	Marketing and Logistics Customer Focused Marketing; International Marketing: International Marketing Channel: Role of Clearing Agent, Various Modes of Transport, Choice and Issues for Each Mode, Transport Cost Characteristics	09
3	Basics of Transportation, Transportation Functionality and Principles; Multimodal Transport: Modal Characteristics; Modal Comparisons; Legal Classifications; International Air Transport; Air Cargo Tariff Structure; Freight: Definition, Rate; Freight Structure and Practice	09
4	Containerization and Chartering Containerization: Genesis, Concept, Classification, Benefits and Constraints; Inland Container Depot (ICD): Roles and Functions, CFS, Export Clearance at ICD; CONCOR; ICDs under CONCOR; Chartering: Kinds of Charter, Charter Party, and Arbitration.	09
5	Inventory Management and Packaging Inventory Management: Introduction, Characteristics, Functionality, Components, Planning; Packaging and Packing: Labels, Functions of Packaging, Designs, Kinds of Packaging; Packing for Transportation and Marking: Types of Boxes, Container, Procedure, Cost, Types of Marking, Features of Marking -Dynamic Component for Continuous Internal Assessment only: Contemporary Developments Related to the Course during the Semester concerned	09

### REFERENCES

1. International Marketing by Sak Onk visit & John J. Shaw, Publisher: Prentice Hall of India
2. International Marketing by Gupta and Varshing, Publisher: Sultan Chand and Sons
3. Logistic Management and World Sea Borne Trade by Multiah Krishnaveni, Publisher: Himalaya Publication
4. Logistic and Supply Chain Management by Donald J. Bowerson, Publisher: Prentice Hall of India