HUMAN RESOURCE MANAGEMENT			
Course Code	**MLS 201**	**CIE Marks**	**50**
Teaching Hours/Week(L:P:SDA)	**4:0:0**	**SEE Marks**	**50**
Total Hours of Pedagogy	**50**	**Total Marks**	**100**
Credits	**04**	**Exam Hours**	**03**

Course Learning objectives : The student will be able to

- Recite the theories and various functions of Human Resources Management
- Describe and explain in her/his own words, the relevance and importance of Human Resources Management at workplace
- Apply and solve the work place problems through Human Resources Management intervention
- Compare and contrast different approaches of HRM for solving the complex issues and problems at the workplace
- Design and develop an original frame work and modeling dealing with the problems in the organization.

Module-1 **8 Hours**

Introduction HRM: Introduction, meaning, nature, scope of HRM, Importance and Evolution of the concept of HRM, Major functions of HRM, Principles of HRM. Human Resource Management and Personnel Management, Models of Human Resource Management, HRM in India, The Factors Influencing Human Resource Management, The HR Competencies, Human Resource Management And Firm Performance.

Module-2 **9 Hours**

HR Planning: Importance of HR Planning, Manpower Planning to HR Planning, Factors Affecting HR Planning, Benefits of HR Planning ,HRP Process, Tools for Demand Forecasting, Attributes of an Effective HR Planning, Barriers to HR Planning, The Challenges for HR, Process of Job Analysis, Job Description and Job Evaluation.

Recruitment and Selection: Importance of Recruitment, Recruitment Policies, Factors Influencing Recruitment, Recruitment Process, Sources, Evaluation of Recruitment Process, Recruitment Strategy, Future Trends in Recruitment; Selection Process; Selection Tests; Factors Influencing Selections.

Module-3 **9 Hours**

Performance Management and Appraisal: Objectives of Performance Management, Performance Management and Performance Appraisal, Common Problems with Performance Appraisals, Performance Management Process, Types of Performance Rating Systems, Future of Performance Management.

Compensation and Benefits: Introduction, Definitions, Total Compensation, Total Rewards System, Forms of Pay, External and Internal Factors, Establishing Pay Rates, Employee Benefits.

Industrial Relations: Decent Workplace, International Labour Organisation, Industrial Relations, The Objectives of Industrial Relations, Approaches of Industrial Relations Systems, The Actors in Industrial Relations, Indian Context, Industrial Relations and Human Resource Management.

Module-4 **9 Hours**

Human Resource Management in Small and Medium Enterprises: Introduction to SMEs, The Difference in Adoption of Human Resource Management, SMEs and Large Firms, Indian Experience, Impact of Weak Adoption of Human Resource Management in SMEs,

Human Resource Management in the Service Sector: Introduction, The Emergence of the Services Sector, Implications for Human Resource, Management Function, Differences Between Services Sector and the Manufacturing Sector, Difference in Human Resource Management in Services and Manufacturing Sectors, Human Resource Management and Service Quality Correlation, Trade Unions in Services Sector, Models of Union Strategies.

Module-5 **8 Hours**

Human Resource Management and Innovations: Factors Affecting the Innovation Process in organisations, Current Trends in Human Resource Management, Innovative Human Resource Management Practices in India, Sustainable and innovative Human Resource Management.

Module-6 **7 Hours**

Future trends in Human Resource Management: Hybrid work model, Employee skill development, Internal mobility, Diversity and inclusion in workforce, People analytics, Employee well-being, Multi-generational workforces and All-in-One HR tools.

Assessment Details(both CIE and SEE)

The weight age of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing marks for the CIE is 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE.A student shall be deemed to have satisfied the academic requirements (passed) and earned the credits allotted to each course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

There shall be a maximum of 50 CIE Marks. A candidate shall obtain not less than 50% of the maximum marks prescribed for the CIE.

CIE Marks shall be based on:

a) Tests(for25Marks)and

b) Assignments, presentations, Quiz, Simulation, Experimentation, Mini project, oral examination, field work and class participation etc., (for 25 Marks) conducted in the respective course. Course instructors are given autonomy in choosing a few of the above based on the subject relevance and should maintain necessary supporting documents for same.

Semester End Examination:

The SEE question paper will be set for 100 marks and the marks scored will be proportionately reduced to 50.

- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks with 3 sub questions.
- Each full question will have sub question covering all the topics.
- The students will have to answer five full questions; selecting four full questions from question number one to seven in the pattern of 3, 7 & 10 Marks and question number eight is compulsory.
- 100 Percent theory in SEE

Suggested Learning Resources:

Books

1. Human Resource Management: Concepts authored by Amitabha Sengupta by Sage Publication India Pvt. Ltd. 2019 edition
2. Human Resource Management: Theory and Practices authored by R. C. Sharma, Nipun Sharma by Sage Publication India Pvt. Ltd., 2019 edition.
3. Leadership: Theory and Practices authored by Peter G. Nort house by Sage Publication, 2016 edition.
4. Human Resources Management authored by T.P Renuka MurthybyHPH, 2015 edition.
5. The HR Scorecard: Linking People, Strategy, and Performance by Brian Becker, Dave Ulrich, and Mark A. Huselid by Harvard Business School Press, 2001 edition.
6. The HR Answer Book: An Indispensable Guide for Managers and Human Resources Professionals by Shawn Smith and Rebecca Mazin by AMACOM publishers, 2011 edition.
7. Performance Management and Appraisal Systems HR Tools for Global Competitiveness byT. V.Rao, First edition 2004.
8. Human Resource Management by Appasaba L.V and Kadako by College Book House, 2016 edition.
9. Human Resource Management by V.S.P Rao, 2014 edition.

Web links and Video Lectures (e-Resources):

- https://youtu.be/hHE4ilceiXs
- https://youtu.be/_d5QMwLC19Y
- https://youtu.be/uMQMDQI7Hpk
- https://youtu.be/vXgt9yASs_k
- https://youtu.be/pqtYQb9nbRk
- https://youtu.be/e1F3xnF5LKg
- https://youtu.be/4Kr0VpM14LI

Skill Development Activities Suggested

- Make students visit an organization and know the various HR roles in the organization
- Conduct mock interviews.
- Role play for acquainting and addressing HR challenges.

Course out come

At the end of the course the student will be able to:

Sl. No.	Description	Blooms Level
CO1	Understand and gain practical experience in the field of Human Resource Concepts, functions and theories.	L1
CO2	Acquire conceptually sight of Human Resource and various functions of HR.	L3
CO3	Apply personnel, managerial and welfare aspects of HR.	L2
CO4	Perceive greater understanding about HR practices.	L5
CO5	Perceive knowledgeable out the future trends in HRM	L5

Mapping of COS and Pos

	PO1	PO2	PO3	PO4	PO5	PSO 1	PSO 2	PSO 3	PSO 4
CO1	**1**				**2**	**3**			
CO2	**1**		**2**				**2**		
CO3		**2**		**3**				**2**	
CO4	**1**	**2**		**2**					**3**
CO5		**2**			**2**				

BASICS OF LOGISTICS AND SUPPLY CHAIN MANAGEMENT

Course Code	**MLS 202**	**CIE Marks**	**50**
Teaching Hours/Week (L:P:SDA)	**4:0:0**	**SEE Marks**	**50**
Total Hours of Pedagogy	**50**	**Total Marks**	**100**
Credits	**4**	**Exam Hours**	**3**

Course Learning Objectives:

- Understand the basic concepts and definitions of logistics and supply chain management.
- Identify key components of logistics and their role within the supply chain.
- Appreciate the importance of logistics and supply chain management in modern businesses.

MODUEL-1 **7 Hours**

Supply Chain Concepts: Objectives of a Supply Chain, Stages of Supply chain, Value Chain Process, Cycle view of Supply Chain Process, Key issues in SCM, logistics & SCM, Supply Chain Drivers and obstacles, Supply chain strategies, strategic fit, Best practices in SCM, Obstacles of streamlined SCM

MODULE-2 **9 Hours**

Logistics :Evolution, Objectives, Components and Functions of Logistics Management, Distribution related Issues and Challenges; Gaining competitive advantage through Logistics Management, Transportation-Functions, Costs, and Mode; Network and Decision, Containerization, Cross docking

MODUEL-3 **8 Hours**

Supply Chain Performance: Bullwhip effect and reduction, Performance measurement: Dimension, Tools of performance measurement, SCOR Model. Demand chain management, Global Supply chain- Challenges in establishing Global Supply Chain, Factors that influences designing Global Supply Chain Network.

MODUEL-4 **9 Hours**

Warehousing: Concept and types, Warehousing strategy, Warehouse facility location & network design, Reverse logistics, Outsourcing- Nature and concept, Strategic decision to Outsourcing, Third party logistics (3PL), Fourth party logistics (4PL). Supply Chain and CRM- Linkage, IT infrastructure used for Supply Chain and CRM, Functional components for CRM, Green supply chain management, Supply Chain sustainability

MODULE-5 **8 Hours**

Technology in Logistics and Supply Chain Management. Information Systems in SCM Enterprise Resource Planning (ERP) systems. Supply Chain Management software (SCM software solutions).Role of IT in tracking and optimizing supply chain performance. Automation in Logistics, Emerging Technologies in Supply Chain. Internet of Things (IoT) in supply chains Block chain technology and its applications in SCM. Big Data and Artificial Intelligence (AI) for predictive analytics and decision-making.

MODULE-6 **9 Hours**

Supply Chain Sustainability and Ethics. Ethical Issues in Supply Chain Management**.** Ethical sourcing and procurement practices. Labor standards and human rights in global supply chains.Anti-corruption measures in supply chain management, Supply Chain Resilience, Building resilient supply chains to withstand disruptions, Strategies for risk mitigation and recovery

Assessment Details (both CIE and SEE)

The weight age of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing marks for the CIE is 50% of the maximum marks. Minimum passing Marks in SEE is 40% of the maximum marks of SEE. A student shall be deemed to have satisfied the

academic requirements (passed) and earned the credits allotted to each course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

There shall be a maximum of 50 CIE Marks. A candidate shall obtain not less than 50% of the Maximum marks prescribed for the CIE.

CIE Marks shall be based on:

a) Tests (for 25Marks) and

b) Assignments, presentations, Quiz, Simulation, Experimentation, Mini project, oral examination, Field work and class participation etc., (for 25 Marks) conducted in the respective course. Course instructors are given autonomy in choosing a few of the above based on the subject relevance and Should maintain necessary supporting documents for same.

Semester End Examination:

The SEE question paper will be set for 100 marks and the marks scored will be proportionately Reduced to 50.

- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks with 3 sub questions.
- Each full question will have sub question covering all the topics.
- The students will have to answer five full questions; selecting four full questions from question number one to seven in the pattern of 3, 7 & 10 Marks and question number eight is Compulsory.
- 100 Percent theory in SEE

Suggested Learning Resources:

Books:

1. Supply Chain Management: Strategy, Planning, and Operation" by Sunil Chopra and Peter Meindl
2. Essentials of Supply Chain Management" by Michael H. Hugos
3. The Handbook of Logistics and Distribution Management" by Alan Rushton, Phil Croucher, and Peter Baker
4. Global Logistics and Supply Chain Management" by John Mangan

Web links and Video Lectures (e-Resources)

1. https://www.youtube.com/watch?v=4-QU7WiVxh8
2. https://www.youtube.com/watch?v=cCwutIfQlXc&list=PLim9gWjsjN-O1NSYhjU7qXUdWpkJVVqHg
3. https://www.youtube.com/watch?v=QzL4fvDl3VU&list=PLqfRMiCDeAG1e3li9VZUbKRYWkTRtk9Wg
4. https://www.youtube.com/watch?v=4-QU7WiVxh8&list=PL38ngI1g1aXqGEi07If0FISGX4aHYeGvN
5. https://www.youtube.com/watch?v=52VcoVTsVUY

Skill Development Activates Suggested

1. Ask students to use forecasting methods (e.g., moving averages, exponential smoothing) to predict future demand
2. Students should select warehouse locations, suppliers, and distribution centers based on factors like transportation costs, lead times, and customer proximity.
3. Use tools like Google Maps, Excel, or route optimization software to plan the most efficient route.
4. Ask them to design a layout for the warehouse to optimize space utilization, minimize travel time for

order pickers, and increase operational efficiency.

5. Ask students to role-play as procurement managers who need to negotiate better terms with suppliers. Have them conduct mock negotiations to practice negotiation tactics, such as price reductions, extended payment terms, or volume discounts.

Course outcomes

At the end of the course the student will be able to:

S. No	Description	Blooms Level
CO1	Demonstrate knowledge of the functions of logistics and supply chain Management.	L1/L2
CO2	Relate concepts and activities of the supply chain to actual organizations	L3
CO3	Analyse the role of technology in logistics and supply chain management	L4
CO4	Evaluate cases for effective supply chain management and its Implementation.	L4

Mapping of COS and Pos

	PO1	PO2	PO3	PO4	PO5	PSO 1	PSO 2	POS 3	POS 4
CO1	1				2	3			
CO2			2						
CO3							2		
CO4				3				2	
CO5		2		2					3

Research Methodology and IPR			
Course Code	**MBA 203**	CIE Marks	**50**
Teaching Hours/Week(L:P:SDA)	**4:0:0**	SEE Marks	**50**
Total Hours of Pedagogy	**50**	Total Marks	**100**
Credits	**04**	Exam Hours	**03**

Course Learning objectives:

- To understand the basic components of research design
- To Gain an insight into the applications of research methods
- To equip students with various research analytical tools used in business research
- To provide the insights of IPR and IPR system in India

Module-1 **7 Hours**

Introduction to Business Research: Meaning, types, process of research- management problem, defining the research problem, formulating the research Hypothesis, developing the research proposals, research design formulation, sampling design, planning and collecting the data for research, data analysis and interpretation. Research Application in business decisions, Ethical issues in business research. Features of a good research study.

Module-2 **9 Hours**

Business Research Design: Meaning, types and significance of research design, errors affecting research design.

Exploratory Research: Meaning, purpose, methods, Literature search, experience survey, focus groups and comprehensive case methods.

Conclusive Research Design: Descriptive Research, Meaning, Types, Cross sectional studies and longitudinal studies.

Experimental Research Design: Meaning and classification of experimental designs, formal and informal, Pre experimental design, True experimental design, Quasi-experimental design, Statistical experimental design.

Module-3 **7 Hours**

Sampling: Concepts, Types of Sampling, **Probability Sampling**: simple random sampling, systematic sampling, stratified random sampling, cluster sampling,

Non Probability Sampling: convenience sampling- judgmental sampling, snowball sampling, quota sampling, Errors in sampling.

Module-4 **9 Hours**

Data Collection: Meaning, types, And Data collection methods: Observations, survey and interview techniques, **Questionnaire design**: Meaning, process of designing questionnaire. Qualitative Techniques of data collection Secondary data Sources: advantages and disadvantages.

Measurement and Scaling Techniques: Basic measurement scales-Nominal scale, Ordinal scale, Interval scale, Ratio scale. Attitude measurement scale - Likert Scale, Semantic Differential Scale, Thurston scale, **Multi-Dimensional Scaling:** Non comparative scaling techniques

Module-5 **9 Hours**

Data Analysis and Report Writing: Editing, Coding, Classification, Tabulation, Validation. Analysis and Interpretation, Report writing and presentation of results, Importance of report writing, types of research reports, Report structure, Guidelines for effective documentation.

Module-6 **9 Hours**

Intellectual Property Rights: Meaning and Concepts of Intellectual Property, Nature and Characteristics of Intellectual Property, Origin and Development of Intellectual Property, Kinds of Intellectual Property, Intellectual Property System in India, IPRs- Invention and Creativity- Intellectual Property-Importance and Protection of Intellectual Property Rights (IPRs)- **A brief summary of**: Patents, Copyrights, Trademarks, TRIPS and TRIMS , Industrial Designs- Integrated Circuits-Geographical Indications-Establishment of WIPO- Application and Procedures.

Assessment Details (both CIE and SEE)

The weight age of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing marks for the CIE is 50% of the maximum marks. Minimum passing marks in SEE is 40% of the maximum marks of SEE.A student shall be deemed to have satisfied the academic requirements (passed) and earned the credits allotted to each course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

There shall be a maximum of 50 CIE Marks. A candidate shall obtain not less than 50% of the maximum marks prescribed for the CIE.

CIE Marks shall be based on:

a) Tests (for 25 Marks) and

b) Assignments, presentations, Quiz, Simulation, Experimentation, Mini project, oral examination, field work and class participation etc., (for 25 Marks) conducted in the respective course. Course instructors are given autonomy in choosing a few of the above based on the subject relevance and should maintain necessary supporting documents for same.

Semester End Examination:

The SEE question paper will be set for100marks and the marks scored will be proportionately reduced to 50.

- The question paper will have 8 full questions carrying equal marks.
- Each full question for 20 marks with 3 sub questions.
- Each full question will have sub question covering all the topics.
- The students will have to answer five full questions; selecting four full questions from question number one to seven in the pattern of 3, 7& 10 Marks and question number eight is compulsory.
- 100 Percent theory.

Suggested Learning Resources:

Books

1. Research Methodology: CR Kothari, Viswa Prakasam Publication, 2014.
2. Business Research Methods: Donald R. Cooper & Pamelas Schindler, TMH/9e/2007
3. Business Research Methods :S. N. Murthy &U. Bhojanna, Excel Books, 3e,2016
4. Research Methods: M M Munshi & K Gayathri Reddy, HPH, 2015.
5. Intellectual Property Rights. India, IN: Neeraj. P& Khusdeep. D. (2014).PHI learning Private Limited.
6. David I. Bainbridge, Intellectual Property, Longman, 9th Edition, 2012.
7. Intellectual Property Rights: Protection and Management. India, IN: Nithyananda, KV Cengage Learning India Private Limited, 2019.
8. Principles of Intellectual Property N.S. Gopala
9. Krishnan &T.G. Ajitha, Eastern Book Company, 2nd Edition, 2014.

Web links and Video Lectures(e-Resources):

- https://ccsuniversity.ac.in/bridge-library/pdf/Research-Methodology-CR-Kothari.pdf
- https://onlinecourses.nptel.ac.in/noc22_ge08/preview
- https://www.digimat.in/nptel/courses/video/121106007/L01.html
- https://www.coursera.org/learn/research-methods
- https://www.researchgate.net/publication/319207471_HANDBOOK_OF_RESEARCH_METHODOLOGY
- https://www.pdfdrive.com/research-methodology-books.html
- https://dst.gov.in/sites/default/files/E-BOOK%20IPR.pdf
- https://www.icsi.edu/media/webmodules/IPRLP_NOV29.pdf
- https://sagepub.libguides.com/c.php?g=964634&p=6968892
- https://www.youtube.com/watch?v=GSeeyJVD0JU
- https://www.icsi.edu/docs/webmodules/Publications/9.4%20Intellectual%20Property%20Rights.pdf

Note: The aforesaid links and study material are suggestive in nature, they may be used with due regards to copyrights, patenting and other IPR rules.

Skill Development Activities Suggested

- Identify research problem and collect relevant literatures for data analysis.
- Write the research design by using Exploratory and Descriptive Research methods.
- Prepare the questionnaire on brand awareness, effectiveness of training in public Sector organization, Investors attitude towards Mutual funds in any financial institutions.
- Conduct Market survey and to investigate consumer perception towards any FMCG.
- Demonstrate Report writing and Presentation methods.
- Study Intellectual Property challenges in the field of business.

Course outcome (Course Skill Set)

At the end of the course the student will be able to:

Sl. No.	Description	Blooms Level
CO1	Understand various research approaches, techniques and strategies in the appropriate in business.	L 2
CO2	Applyarangeofquantitative/qualitativeresearchtechniquestobusiness And day to day management problems.	L 3
CO3	Demonstrateknowledgeandunderstandingofdataanalysis,interpretation And report writing.	L 2
CO4	Developnecessarycriticalthinkingskillsinordertoevaluatedifferent research approaches in Business.	L 3
CO5	Discuss various forms of the intellectual property, its relevance and business impact in the changing global business environment and leading International Instruments concerning IPR.	L 6

Mapping of COS and POs

	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	PSO4
CO1	**1**				**2**	**3**			
CO2			**2**				**2**		
CO3				**3**				**2**	
CO4		**2**		**2**					**3**
CO5	**2**		**3**		**2**			**3**	

Procurement, Storage and Warehouse			
Course Code	**MLS 204**	**CIE Marks**	**50**
Teaching Hours/Week (L:P:SDA)	**4:0:0**	**SEE Marks**	**50**
Total Hours of Pedagogy	**50**	**Total Marks**	**100**
Credits	**4**	**Exam Hours**	**3**

Course Learning Objectives:

- Understanding the importance of procurement management process in supply chain management.
- Buying decision making in process of procurement and vendor selection.
- Provides know-how required to operate an efficient and cost-effective warehouse as also the role of storage in warehouse management.
- Implementing warehousing concepts and use of technologies for best practices in warehouse
- Analyze and define the right structure of the supply network from procurement to inventory control and warehouse management system.

MODUEL-1 **9 Hours**

Procurement Management System: Introduction to Sourcing, Sourcing v/s Procurement, 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, Role of a Purchasing Manager, Risks associated with purchasing process and its mitigation, Supplier appraisal/vendor capability, Bidding process, Placing Orders, Budgets and Expense Allocation, Establishing Concept and applications of Make or Buy Decision.

MODULE-2 **8 Hours**

Processes and Vendor Selection in Procurement: Market Analysis and Supplier Research, Request for Proposal, Different Methods of Buying, Fundamental Steps of the Buying Process, Terms and Condition of Purchase, Buying Documentation, Negotiation in Procurement.

Vendor Selection Process, Evaluation of Existing Vendors, Developing Vendor Performance Measures, New Vendor Development Process, Working with Suppliers to Manage Quality, JIT and TQM in Sourcing, Vendor Monitoring. Environmental Issues & Green Purchasing, Industry Best Practices.

MODUEL-3 **8 Hours**

Storage Management System: Introduction – 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.

MODUEL-4 **9 Hours**

Storage and Warehousing Information System: Introduction -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

MODULE-5 **8 Hours**

Warehousing Concepts : 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.

MODULE-6 **8 Hours**

Warehousing Information System: Information System (WIS) - Performance management-outsourcing decisions. 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.

Assessment Details (both CIE and SEE)

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Continuous Internal Evaluation:

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- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks with 3 sub questions.

- Each full question will have sub question covering all the topics.
- The students will have to answer five full questions; selecting four full questions from question number one to seven in the pattern of 3, 7 & 10 Marks and question number eight is Compulsory.
- 100 Percent theory in SEE

Suggested Learning Resources:
Books:

1. 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
3. Bowersox, D.J., Closs, D.J., Cooper, M.B., & Bowersox, J.C. (2013). Supply Chain Logistics Management. (4th ed.), McGraw Hill/Irwin.
4. Arnold, J.R., Chapman, S.N. (2012). The Introduction to Materials Management. (7thed.), Prentice-Hall. Coyle, J.J., Jr. Langley, C.J., Novack, R.A, & Gibson, B.J. (2013). Managing Supply Chains: A Logistics Approach. (9th ed.), McGraw-Hill. Edward, F. (2002).
5. World-Class Warehousing and Material Handling. (International ed.), McGraw-Hill. Muller, M. (2011). Essentials of Inventory Management. (2nd ed.), American Management Association.
6. Chopra and Miendl, Supply Chain Management: Strategy, planning and operation, Pearson Books.
7. by Sherry R. Gordon, Supplier Evaluation and Performance Excellence: A Guide to Meaningful Metrics and Successful Results.
8. B S Sahay, Emerging Issues in Supply Chain Management (McMillan)
9. Alan Harrison, Logistics Management and Strategy (Pearson)

Web links and Video Lectures (e-Resources)

1. https://www.youtube.com/watch?v=Hsq-oqlLP0A
2. https://www.youtube.com/watch?v=E8ZxQtIdUpo
3. https://www.youtube.com/watch?v=fzKGxvF_NPU
4. https://www.youtube.com/watch?v=0vCUBDfhyFg
5. https://www.youtube.com/watch?v=2zyMXSDn1MA

Course outcomes

At the end of the course the student will be able to:

Sl.No	Description	Blooms Level
CO1	Appreciate the role of procurement plays in an organization for making purchasing decision	L2
CO2	Building the ability of understanding the concepts of inventory management used in industrial practices	L2
CO3	Recognizing and implementing the principles of warehouse management system by using the technology and standard procedures	L3
CO4	Understand how procurement, storage, and warehousing activities fit into the broader supply chain and contribute to overall business efficiency.	L2
CO5	Understand how to negotiate better contracts with suppliers, reduce excess inventory, and streamline warehouse operations to achieve cost savings	L3

Mapping of COS and Pos

	PO1	PO2	PO3	PO4	PO5	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1	2				1			
CO2	2	1	3		1		2		1
CO3	1	2			1			2	
CO4	2	1				1			
CO5					3			2	

PRODUCTION AND OPERATIONS MANAGEMENT

Course Code	**MLS 205**	**CIE Marks**	**50**
Teaching Hours/Week (L:P:SDA)	**4:0:0**	**SEE Marks**	**50**
Total Hours of Pedagogy	**50**	**Total Marks**	**100**
Credits	**4**	**Exam Hours**	**3**

Course Learning Objectives:

- Grasp fundamental concepts and terminologies in production and operations management
- Learn to assess and manage capacity to meet demand while minimizing costs and maximizing efficiency.
- Recognize the importance of sustainability and ethical considerations in operations management.
- Analyze the challenges and strategies of managing operations in a global context.
- Develop project management skills, including planning, execution, and risk management for operational projects.
- Gain knowledge of quality management principles, including TQM and Six Sigma, to improve product/service quality.

MODUEL-1 **7 Hours**

Introduction to Operations Management: - Overview of Operations Management Role and importance in business, Key concepts and terminology, Process types (manufacturing vs. service).Process analysis and design, Capacity planning and management, Flowcharting and process mapping, Bottleneck identification and management

MODULE-2 **9 Hours**

Supply Chain and Inventory Management- Supply chain fundamentals, Logistics and distribution strategies, Inventory management techniques Supplier relationship management.

MODUEL-3 **9 Hours**

Quality Management & Lean and Agile Operations: - Total Quality Management (TQM) principles, Six Sigma and continuous improvement, Quality assurance vs. quality control, Statistical Process Control (SPC) methods, Lean Manufacturing principles, Waste reduction techniques, Just-in-Time (JIT) production, Agile methodologies in operations.

MODUEL-4 **9 Hours**

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.

MODULE-5 **8 Hours**

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

MODULE-6 **8 Hours**

Transportation Problems: Formulation of transportation problem, types, initial basic feasible solution using North-West Corner Rule (NWCR), Least Cost Method (LCM) and Vogel‟s Approximation method (VAM). Optimality in Transportation problem by Modified Distribution (MODI) method. (Theory and Problems).

Assessment Details (both CIE and SEE)

The weight age of Continuous Internal Evaluation (CIE) is 50% and for Semester End Exam (SEE) is 50%. The minimum passing marks for the CIE is 50% of the maximum marks. Minimum passing Marks in SEE is 40% of the maximum marks of SEE. A student shall be deemed to have satisfied the academic requirements (passed) and earned the credits allotted to each course if the student secures not less than 50% in the sum total of the CIE (Continuous Internal Evaluation) and SEE (Semester End Examination) taken together.

Continuous Internal Evaluation:

There shall be a maximum of 50 CIE Marks. A candidate shall obtain not less than 50% of the Maximum marks prescribed for the CIE.

CIE Marks shall be based on:

a) Tests (for 25Marks) and

b) Assignments, presentations, Quiz, Simulation, Experimentation, Mini project, oral examination, Field work and class participation etc., (for 25 Marks) conducted in the respective course. Course instructors are given autonomy in choosing a few of the above based on the subject relevance and Should maintain necessary supporting documents for same.

Semester End Examination:

The SEE question paper will be set for 100 marks and the marks scored will be proportionately Reduced to 50.

- The question paper will have 8 full questions carrying equal marks.
- Each full question is for 20 marks with 3 sub questions.
- Each full question will have sub question covering all the topics.
- The students will have to answer five full questions; selecting four full questions from question number one to seven in the pattern of 3, 7 & 10 Marks and question number eight is Compulsory.
- The SEE Question paper should have the weight age of 50% theory and 50% problems

Suggested Learning Resources:

Books:

1. Operations Management by William J. Stevenson
2. Lean Thinking" by James P. Womack and Daniel T. Jones
3. The Goal" by Eliyahu M. Goldratt
4. Chary S, "Production and Operations Management", McGraw Hill Education
5. Chunawalla S A and Pate D R, "Production and Operation Management", Himalaya Publishing House

Web links and Video Lectures (e-Resources)

1. https://www.youtube.com/watch?v=2lJie1Rn3xM
2. https://www.youtube.com/watch?v=_VJkKZFuRvE&list=PLSGws_74K01_MBJaKLVaP0iCupVawlL6i
3. https://www.youtube.com/watch?v=aSd8Hbg-tuY&list=PLLy_2iUCG87A-kHGx4YUY97ShTTqBfA6-
4. https://www.youtube.com/watch?v=eywQyLuTHNQ&list=PLPf7aahSRKFVuCziM_YMAoYYnlLeX5j8F

5. https://www.youtube.com/watch?v=S1ejZAkGtiU&list=PLim9gWjsjN-OKNiSdjrv8Imb304zFteyI

Skill Development Activates Suggested

1. To comprehend the operation research models
2. Analyze various organisational problems using LPP, Assignments and Game theory principles.
3. Applying techniques of OR for project management
4. Evaluate the constraints and challenges faced by the manufacturing and service organisation using methods of operation research.

Course outcomes

At the end of the course the student will be able to:

S. No	Description	Blooms Level
CO1	Get an insight into the fundamentals of Operations Research and its definition, characteristics and phases	L1
CO2	Use appropriate quantitative techniques to get feasible and optimal solutions	L3
CO3	Understand the usage of game theory , Queuing Theory and Simulation for Solving Business Problems	L2
CO4	Understand and apply the network diagram for project completion	L4

Mapping of COs and Pos

	PO1	PO2	PO3	PO4	PO5	PS01	PS02	PS03	PS04
CO1		1		3					
CO2	1				2	3			
CO3		2	2				2		
CO4				3		3		2	

Managing Digital Transformation

Course Code	**MLS 206**	**CIE Marks**	**50**
Teaching Hours/Week (L:P:SDA)	**4:0:0**	**SEE Marks**	**50**
Total Hours of Pedagogy	**50**	**Total Marks**	**100**
Credits	**4**	**Exam Hours**	**3**

Course Learning Objectives:

- Enable students to evaluate the likely impact of future IT innovations on firms and industries.
- Identify key drivers of technology's impact on the business ecosystem.
- Formulate appropriate frameworks to categorize technological innovation and its impact along a variety of metrics including competitive environment, business model disruption
- Understand digital product development in practice
- Develop business communication skills to effectively communicate recommendations in both written and spoken forms.

MODUEL-1 **8 Hours**

Introduction to Digital Transformation: Definition and importance of digital transformation, Historical context and evolution of digital technologies Overview of digital transformation frameworks, Understanding digital maturity assessment models and tools. Current trends in digital transformation

MODULE-2 **8 Hours**

Digital Business Models and Innovation: Characteristics of traditional vs. digital business models, Platform business models: understanding the economics of network effects, Digital ecosystems: partnerships and collaborations in digital economies, The role of data in value creation for digital business models, Innovation methodologies: Agile, Lean Startup, and Design Thinking for rapid iteration, Case studies of digitally innovative companies (e.g. Airbnb, Alibaba, Spotify).

MODUEL-3 **9 Hours**

Digital Transformation Technologies : Overview of key technologies: Cloud, Big Data, Artificial Intelligence, Machine Learning, Internet of Things (IoT), Blockchain, Cloud computing for scalability and flexibility in digital transformation, Artificial intelligence and automation: applications in customer service, process automation, and decision-making, IoT and Industry 4.0: transforming manufacturing and logistics, Block chain applications in supply chain, finance, and security Cyber security challenges and best practices in a digital world

MODUEL-4 **8 Hours**

Organizational Change and Leadership in Digital Transformation : Leadership in the digital age: roles of CIO, CTO, and CDO in driving change, Leading organizational change: Kotter's 8-step process for change management, Building a digital-first culture: fostering innovation and agility Talent management: up skilling and re skilling the workforce for digital readiness, Overcoming organizational inertia and resistance to digital transformation Collaboration between IT, marketing, operations, and strategy teams

MODULE-5	8 Hours
Data-Driven Decision Making and Digital Strategy: The importance of data as an asset in the digital economy, Business analytics and business intelligence: tools and techniques for data-driven decision-making, Predictive analytics, machine learning, and AI for strategic insights, Developing a comprehensive digital transformation strategy: aligning with business goals, Digital roadmaps: planning and executing step-by-step transformations, KPIs for measuring digital transformation success	
MODULE-6	**9 Hours**
Digital Transformation and Customer Experience : The role of customer experience (CX) in driving digital transformation, Personalization at scale: using data to create individualized customer experiences, Omnichannel strategies: integrating digital and physical customer touch points, Customer journey mapping: designing a seamless, end-to-end digital experience, Digital marketing: leveraging social media, SEO, and analytics for customer acquisition and retention, Metrics for evaluating customer experience in digital initiatives.	

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- The students will have to answer five full questions; selecting four full questions from question number one to seven in the pattern of 3, 7 & 10 Marks and question number eight is Compulsory.

- 100 Percent theory in SEE

Suggested Learning Resources:

Books:

1. The Digital Transformation Playbook: Rethink Your Business for the Digital Age" by David L. Rogers.
2. Digital Transformation: Survive and Thrive in an Era of Mass Extinction by Thomas M. Siebel
3. Digital Business Models: Concepts, Models, and the Alphabet Theory by Annabeth Aagaard
4. The Fourth Industrial Revolution by Klaus Schwab
5. Leading Digital: Turning Technology into Business Transformation by George Westerman, Didier Bonnet, and Andrew McAfee
6. Competing on Analytics: The New Science of Winning by Thomas H. Davenport and Jeanne G. Harris
7. The Digital Transformation Playbook: Rethink Your Business for the Digital Age by David L. Rogers

Web links and Video Lectures (e-Resources)

1. https://youtu.be/vdrjCtvlhYQ
2. https://youtu.be/lIE4CqW_Rk0
3. https://youtu.be/QHSHltUvUoQ
4. https://youtu.be/aR0rHvHDorA?list=PLV7MEIFKSjBSH28ijSJtkbqMjfqrbCwNL
5. https://youtu.be/qsBL3sxEXFQ
6. https://youtu.be/YZkCBnSEC9A
7. https://youtu.be/YyTWI9K8zQ0
8. https://youtu.be/t2Cc39r5oCI

Skill Development Activates Suggested

- Explain and define change drivers in the environment of companies that influence digital transformation
- Define digital transformation and give concrete examples
- Define, repeat and illustrate what digital strategies are based on concrete examples and use cases
- Explain and discuss the key messages and research domains of service systems engineering and how it contributes to synthesize and evaluate solution designs
- Recall and describe a systematic way how companies can transform their value creation processes
- Summarize and argue the role of enterprise architecture to overcome challenges of digital transformation
- Define and discuss new capabilities that companies need to execute digital strategies
- Recall, name and define pivotal concepts and their impact on digital transformation
- Classify digital business models based on introduced frameworks and dimensions
- Analyze and discuss digital business models based on real life examples and referring to case studies of the course

Course outcomes

At the end of the course the student will be able to:

S.No	Description	Blooms Level
CO1	Evaluate the Impact of Digital Transformation on Businesses and Industries	L5
CO2	Understand and Apply Digital Business Models and Innovation Frameworks	L2,L3
CO3	Analyze Key Digital Transformation Technologies and Their Applications	L4
CO4	Lead Organizational Change and Foster Digital Transformation	L3
CO5	Develop Data-Driven Digital Strategies for Business Decision-Making	L6

Mapping of COS and Pos

	PO1	PO2	PO3	PO4	PO5	PSO 1	PSO 2	PSO 3	PSO 4
CO1	1				2	3			
CO2			2				2		
CO3				3				2	
CO4		2		2					3
CO5			2				3		