M.Phil(Management) COURSE STRUCTURE:

1st Year (Total Credits – 22)			
1st Semester	**Credit**	**2nd Semester**	**Credit**
MPHL-101 Research Methodology – I	3 credits	MPHL-201 Research Methodology – II	3 credits
MPHL-102 Fundamentals of Management	3 credits	MPHL-202MM-I/FIN-I/HR-I/DA-I	3 credits
MPHL-103 Contemporary Issues in Management	3 credits	MPHL-203 MM-II/FIN-II/HR-II/DA-II	3 credits
MPHL-104 Online course*	2 credits	MPHL-204 Online Course*	2 credits
Total	11 credits	Total	11 credits

MM – Marketing Management

FIN – Financial Management

HR – Human Resource Management

DA – Data Analytics

2nd Year (Total Credits – 18)	
3rd Semester (9 credits)	**4thSemester (9 credits)**
MPHL 301 (6 credits) M.Phil Thesis (Progress Assessment)	MPHL 401 (6 credits) M.Phil Thesis (Final Assessment)
MPHL 302 (3 credits) Subject Viva Voce	MPHL 402 (3 credits) Thesis Viva Voce

*Online course to be taken from the dynamically uploaded MOOCS basket provided in MAKAUT,WB website

TOTAL CREDIT SUMMARY	
1ST SEMESTER	11
2nd SEMESTER	11
3rd SEMESTER	9
4th SEMESTER	9
Total	**40**

MPHL 101: RESEARCH METHODOLOGY -I (3 Credits: 30 hrs)

Module I

1. **Introduction:** Meaning, Process and Types of Research. Concept of Data and Information, Validity and Reliability, Deduction and Induction, Quantitative and Quantitative Methods.

2. **Research Designs:** Types of research design, Exploratory Studies, Descriptive Studies, Causal studies, constructing an appropriate Research Design.

3. **Sampling Designs:** Sample survey and Complete Enumeration,Concept of sampling design, steps in sampling design, cost effective and optimum size. The basic framework and Different Methods of sampling.

4. **Data Collection:** Types of Data, Methods of Data Collection, Sources of secondary Data, Collecting Data Using Attitudinal Scales, Content analysis, Observation, Secondary data. Errors in Data: Measurement Error Introduction, Error identification , Problem of Outlier, Sources of Non sampling Error, Response and Non-Response error, Other checks on data.

5. **Measurement and Scaling Technique:** Introduction, Measurement scales, Scaling of Techniques, More on Specialized Scales – Ordinal scale and Thurstone Scale.

Module II

6. **Probability Distribution:** Concept of basic probability. Conditional Probability, Meaning of Distribution, binomial, poisson, multinomial, geometric, hypergeometric, negative binomial, normal, exponential, gamma

7. **Estimation and Testing:** concepts of unbiasedness / consistency / efficiency / sufficiency, introduction to various methods of estimation like method of moments / maximum likelihood / least squares, concepts of linear models and BLUE, error of estimates, point and interval estimation, concepts of tests of hypotheses, power of

tests, type I and type II errors, NP lemma, most powerful and UMP tests, examples of test design – tests of equality of means / standard deviation / proportions / goodness of fit tests etc.

8. **Non Parametric Test: S**ign test, rank sum test, run test, Mann- Whitney U test. Goodness of fit tests using KS, AD etc. Concepts of binomial tests, Techniques of probability plotting.

Suggested Readings

1. Montgomary, Douglas C:Design and Analysis of Experiments ,Wiley India

2. Montgomary, Douglas C. &Runger, George C: Applied Statistics & probability for Engineers, Wiley India

3. Kothari C.K: Research Methodology – Methods and Techniques, New Age International.

4. Krishnswamy, K.N., Shivkumar, AppaIyer and Mathiranjan M: Management Research Methodology; Integration of Principles, Methods and Techniques, Pearson Education.

5. Taylor, Bill, Sinha, G and Ghoshal, Taposh : Research Methodology, Prentice Hall of India.

MPHL 102: <u>FUNDAMENTALS OF MANAGEMENT</u>   (3 Credits: 30 hrs)

Module –I :Principles of Management

1. **Management –** Definition; Importance; Functions; Nature - as profession, Science and art; Universality of management; Levels of management; Managerial tasks and skills.

2. **Different Schools of Thoughts** - Classical School - contributions of Taylor and Henri Fayol; Neo - classical school - Human Relations approach and Behavioral Science Approach; Modern School; System approach and Contingency approach.

Module –II: Organizational Behaviour

1. **OB- Concept**: Contributing Disciplines - Applications in Industry.

2. **Human Traits** : Personality ;Perception : Process & Perceptual Selectivity; Learning ;concept- theories ; Work Motivation;Leadership

Module –III : Basics of Corporate Finance and Financial Market

1. **Financial Accounting:** Concepts, Conventions, Importance and scope, Accounting Principles, Double entry system, Brief overview of accounting cycle, Introduction to Balance Sheet and Income Statement, Ratio Analysis.

2. **Cost Accounting:** Concept, Cost Unit, Technique of Costing, Method of Costing, Cost center, Cost Sheet preparation ,Marginal Costing ,Budgeting, Standard Costing

3. **Financial Management:** Objectives ,Functions, Source of Finance, Indian Financial System

Module –IV Marketing Management

1. **Basic Concepts –** Market, Product and Brand ; Marketing Environment, STPD Concept

2. **Consumer Behaviour and Market Research –** Overview and Concepts

3. **Advertising and Sales Promotion –** Promotional Mix Elements, Advertising Models, Concept of Digital Marketing

4. **Sales & Marketing Channels –** Overview of Selling Process, Channel Design and Functions.

Module –V Human Resource Management

1. **HR Planning and Management –** Scope, Objectives and Functions ; Recruitment & Selection – Process and Methods

2. **Human Resource Development, Performance Appraisal & Compensation Management –** Concept, Process, Methods and Objectives.

3. **Industrial Relations –** Trends and Policies.

Module –VI Computer Application / Information Technology

1. **E-commerce & Internet:** (Definition, Classification of E-commerce, Application of Internet, SEO, Affiliate marketing through internet)

2. **Computer Networks and Communication**: LAN, MAN, WAN, Data Communication –uses and application in business

3. **Scope of Artificial Intelligence or Machine Intelligence**: Information system framework (like DSS, MIS, image recognition, voice recognition, Transport System, Mobile game)

Suggested Readings:

Principle of Management

1. Kaul, Principle and Practice of Management, Vikash
2. Koontz, Weirich&Cannice, Management, McGraw Hill
3. Stoner & Freeman, Management , PHI
4. Drucker, P.F., Managing Challanges for the 21stCentury, Butterworth, Oxford

Organizational Behaviour

1. Robbins, S.P. Judge,T.A. &Sanghi, s.: Organizational Behaviour, Pearson
2. Luthans, Fred: Organizational Behaviour, McgrawHill
3. Aswathappa ,K : Organisational Behaviour ,Himalaya Publishing House
4. Shukla, madhukar : understanding organizations -organizational theory & practice inIndia, prentice hall

Accounting and Finance

1. A.Tandon:Cost and Management Accounting, Anmol Publications Pvt.Ltd.
2. M.Hanif& A. Mukherjee : Financial Accounting, Mc Graw Hill Education
3. B. Banerjee: Cost Accounting: Theory & Practice, PHI
4. I.M. Pandey:FinancialManagement:Vikas Publishing

Marketing

1. Kotler, P., Keller, K., Koshy, A. &Jha, M. - Marketing Management, Pearson
2. Saxena, R. - Marketing Management, TMH
3. Ramaswamy&Namakumari - Marketing Management; McMillan
4. GovindarajanMadabusi: Marketing Management, Prentice-Hall of India Pvt.Ltd

Human Resource Management

1. Agarwala T. - Strategic Human Resource Management, OUP
2. Aswathappa, K. - Human Resource Management, Tata McGraw Hill
3. Ramaswamy, E.A. - Managing Human Resources, OUP

4. Saiyadain, M.S - Human Resource Management , Tata McGraw Hill

Information Technology

1. P.K Sinha –Computer Fundamentals, BPB Publication.

2. V. Rajaraman-Fundamentals of Computers, PHI, Sixth Edition

3. AmitGoel, Computer Fundamentals , Pearson

4. Summer M., Englewood Cliffs, Computers, Concepts and Users ,Prentice Hall inc.

MPHL 103: <u>CONTEMPORARY ISSUES IN MANAGEMENT</u> (3 Credits: 30 hrs)

<u>Recent Trend in management</u>

1. Market Busket Analysis
2. Digital Marketing
3. International Financial Reporting Standard (IFRS)
4. Block Chain and Crypto Currency
5. Human Resource Information System (HRIS)
6. Artificial Intelligence
7. Cloud computing & Fog Computing
8. Performance Management System (PHS)
9. Compensation Management
10. Value and Ethics in Business
11. Financial Time Series   (Efficiency, Volatility, Long Memory, Complex System)

<u>Management Books</u>

1. Michael E. Porter : Competitive Strategy , 1980
2. Tom Peters : In Search of Excellence ,1982
3. Lee Iacocca : Iacocca – Autobiography (with WilliumNovan) , 1986
4. Akio Morita : Made in Japan , 1986
5. Peter M. Senge : The Fifth Discipline , 1990
6. C.K Prahlad : The Core Competence of the Corporation ,1994
7. Bill Gates : The Road Ahead , 1995
8. Peter Drucker : Management Challenges for 21st Century , 1999
9. Jim Collins : Good to Great ,2001

10. SumantraGhosal : Managing Across Borders:The Transactional Solution,2002

11. Jack Welch : Wining,2005

NB: College will offer three areas from the above list, depending on the student interest and available faculty expertise.

NB: MPHIL-103 is a seminar course. A student has to present two seminars before a Select Panel.

MPHL201: RESEARCH METHODOLOGY- II   (3 Credits: 30 hrs)

Module I

1.**Bivariate Data:** Analysis and presentation of Bivariate data, Correlation and Regression techniques.

2.**Multiple Regression Analysis:** Model building, Usage of dummy variables. Model validation through residual analysis,

3.**Analysis of Variance:** one way classified data, two way classified data, and concept of homoscedasticity.

4.**Association and Contingency Tables:** Contingency tables, tests of independence, χ^2 analysis, goodness of fit, continuity correction, Mantel-Haenszel method.

Module II

5.Multivariate Analysis: Factor Analysis, Structural Equation Modelling, Discriminant analysis, Conjoint Analysis, Cluster Analysis.

6. Time series Forecasting: Stationarity, Lung Box tests, Box Jenkins models (AR / MA / ARMA / ARIMA models) ,ARCH, GARCH, Vector Autoregressive models, Beysian GARCH models.

7. Report Writing: Formatting, Title Page, Abstract, Body, Introduction, Methods, Sample, Measures, Design, Results, Conclusions, References, Tables, Figures, Appendices.

Suggested reading:

1. Trochim, W.M.K : Research Methods, Biztantra

2. Montgomary, Douglas C. &Runger, George C: Applied Statistics & probability for Engineers ,Wiley India

3. Kothari C.K:Research Methodology – Methods and Techniques, New Age International.

4. Krishnswamy, K.N., Shivkumar, AppaIyer and Mathiranjan M: Management Research Methodology; Integration of Principles, Methods and Techniques, Pearson Education.

5. Khashnabish, R. &Saha, S.: Research Methodology, University Press

6. William W.S. Wei: Time Series Analysis: Univariate and Multivariate   Methods,

Pearson

MPHL /MM –I 202: BRAND, PRODUCT AND SERVICES MARKETING

(3 Credits: 30 hrs)

Module I

1. **Introduction to Product:** Competition & Product Strategy, product in theory & in practice, Product life cycle, product portfolio

2. **Product Management & New Product Development**: New product development process, New product strategy, commercialization, managing Growth, Managing the mature product

3. **Branding & Brand Management**: The concept of Brand Equity, Creating brands in a competitive market, Brand Positioning and Brand Associations, Using Brand Elements to create brand equity, Leveraging Secondary Brand Associations Growing and Sustaining

4. **Brand Equity**: Designing and Implementing Branding Strategies, Launching Brand Extensions Products, Managing brands overtime and Geographic boundaries. Developing Brand Equity Management System, Measuring Sources of Brand Equity and Brand Equity measurement approaches

Module II

5. **Service economy and the nature of services**: The service economy, nature of services, characteristics of services, services marketing mix.

6. **Assessing business opportunities**: Competitive strategies, marketing research, perceptual mapping, segmenting and targeting the market, preparing a business plan

7. **Understanding customer requirements**: Customers expectations and perceptions of service, customer research, customer defined service standards.

8. **Quality management**: Service quality, technical and functional quality, determinants of service quality, gap model, Kano's model.

9. **Service design and development:** Challenges to services design, new service development, developing the service blueprint, quality function deployment, service innovations.

10. **Service delivery channels**: Direct channels, franchising, agents and brokers, Internet channels, channel conflict and its resolution, assuring quality and consistency across channels.

Suggested Readings:

1.Paul Trott:Innovation Management and New Product Development , Pearson

2.H. V. Verma: Brand Management,New Delhi: Excel Books

3.Hoffman, K.D. &BatesonJ.E.G: Marketing of Services ,Cengage Learning, New Delhi

4.Nargundkar, R :Services Marketing – Text and Cases , Tata McGraw Hill, New Delhi

5.RajanSaxena :Marketing Management,McGraw Hill Education

6.Tapan K. Panda: Product and Brand Management,Oxford University Press

MPHL /FM-I 202: MANAGEMENT ACCOUNTING AND MANAGERIAL FINANCE

(3 Credits: 30 hrs)

Module I

1. **Management Accounting:** Functionsand Scope, Differentiation among Financial Accounting, Cost Accounting and Management Accounting

2. **Ratio Analysis:** ComputationandInterpretationof Ratios, Application of Ratios in Research and Corporate

3. **Fund Flow and Cash Flow Analysis:** Computation of Fund Flow and Cash Flow Statement, Interpretations of Cash Flow and Fund Flow Statement

4. **Marginal Costing:** Cost-Volume –Profit and Break Even Analysis

5. **Standard Costing and Variance Analysis:** Material Variance, Labour Variance, Overhead Variance

6. **Budgetary Control:** Fixed &Flexible Budget, Cash Budget and Master Budget, Zero Based Budgeting

Module II

7. **Valuation of Securities:** Valuation of Bonds and Debt , Valuation of Shares

8. **Cost of Capital:** Cost of Equity, Cost of Reserve, Cost of Preference Share, Cost of Debt, Overall Cost of Capital

9. **Leverage:** Computation of Operating Leverage, Financial Leverage, Combined Leverage and its application

10. **Capital Structure:** Theories of Capital Structure, NI Approach, NOI Approach, Tradition Approach, M-M Approach and computation

11. **Capital Budgeting:** Methods of Capital Budgeting, Probabilistic Approach of Capital Budgeting, Application of Capital Budgetingin real life projects

12. Dividend Decisions: Walter Model, Gordon's Model Miller and Modigliani Model, Application of Dividend theorem in research

<u>**Suggested Reading**</u>

1. B.Banerjee:Fundamentals of Financial Management, PHI
2. I.M.Pandey: Financial Management, Vikas Publishing House Pvt Ltd
3. R.S.N. Pillai& V. Bagavathi:Management Accounting,S. Chand
4. T.P. Ghosh: Fundamentals of Management Accounting,Excel Books
5. M.Y. Khan (Author), P K Jain: Financial Management: Text, Problems and Cases,McGraw Hill Education
6. Prasanna Chandra:Financial Management: Theory and Practice,McGraw Hill Education

MPHL /HR-I 202-HR PLANNING, DEVELOPMENT & COMPENSATION ADMINISTRATION

(3 Credits: 30 hrs)

Module-I

1. **Basics in HR Planning:** Macro Level Scenario of HRP, Concepts and Process of HRP, Considerations – Technology, Finance, Product Demand.

2. **Techniques and Measurements of HRP**: Demand Forecasting : Managerial Estimates, Trend Analysis, Utilization Analysis : Work Study, Job Analysis, Supply Forecasting : Inventory Analysis, Wastage Analysis, Markov Analysis, Balancing Supply & Demand, Issues of Shortage and Surplus, HR audit, HR accounting.

3. **HRIS & Strategic HRP**: Concept and Procedures, Planning tools & Evaluation.

Module-II

4. **Human Resource Development**: Meaning, Scope and Purpose, HRD Process, Techniques of Assessment of HRD Needs – Organizational Analysis, Task Analysis, Individual Analysis. .

5. **Strategies of HRD**: Organizational Development, Individual Development, Team Development, Organizational Culture Building.

6. **Training and Evaluation**: Designing Training Programme; On-the-Job, Off-the-Job; Methods – Lecture, Case Analysis, Role Play, Games, Exercises; Role of Trainer, MDPs, Out-Bound Training, Criteria, Technique of Evaluation,

Impediments to Effective Training, Improving Effectiveness of Training

Module-III

7. **Compensation**: Wage/Salary, Real Wage, Components of Wages: Basic, Dearness Allowances, House Rent Allowances, City Compensatory Allowance, Other Allowances, Wage Fixation, Pay for different types of employees, Managerial Compensation.

8. **Dearness Allowance**: Methods of DA payment, Consumer Price Index, Neutralization.

9. **Employee Benefits**: Statutory & Voluntary Benefits, Retirement Benefits – Provident Fund, Gratuity, Pension, Medical Insurance; Reward Management

Suggested Readings:

1. Belcher, D.W.: Wage and Salary Administration, Prentice Hall

2. Mondy, R.W. &Noe, R.M. : Human Resource Management, Pearson

3. Bennison, M. &Casson, J. : The Manpower Planning Handbook, McGraw Hill.

4. Rao, T. V. : Readings in HRD, Oxford & IBH.

5. Aswathappa :Human Resource Management: Text and Cases, McGraw Hill Education

6. Gary Dessler:Human Resource Management , Pearson Education

MPHL/ DA-I 202- <u>DATA ANALYTICS I</u>

(3 Credits: 30 hrs)

1. Big Data and Business Innovations
2. Data Visualization with R and Tableau
3. Introduction to Python Programming and its Application in Business

<u>Suggested Readings</u>:

1. Dinesh Kumar : Business Analytics – The Science of Data Driven Decision making.
2. Anil Maheshwari : Data Analytics Made Accessible
3. John W Foreman : Data Smart
4. Peter Dalgaard : Statistics with R
5. Bart Baesens : Analytics in Big Data World
6. R Nagotkar : Marketing Research

(3 Credits: 30 hrs)

<u>Module I</u>

1. **Introduction to the Study of Consumer Behavior**: Defining Consumer Behavior. Scope and Application of Consumer Behavior Evolution of Consumer Behavior as a Field of Study and its relationship with Marketing: Behavioral Dimension, Interdisciplinary Nature of Consumer Behavior

2. **Market Research and Consumer Behavior**: Relevance of Market Research with Consumer Behavior, Approaches to Consumer Behavior Research, Quantitative Research Qualitative Research

3. **The Consumer Decision Making Process:** Buying Motives, Buying Roles, Consumer Decision Making Process, Levels of Consumer Decision Making. Perspectives to Consumer Decision Making, Consumer Decision Making Process

4. **Models of Consumer Behavior:** The Economic Model, Learning Model, Psychoanalytic Model, The Sociological Model, The Howard Sheth Model of Buying Behaviour, The Nicosia Model, The Engel - Kollat - Blackwell Model, Engel, Blackwell and Miniard (EBM) model.

<u>Module II</u>

5. **Psychological Influences on Consumer Decision Making:**Consumers Needs & motivation, Emotions and Mood, Consumer Involvement, Consumer Learning, Personality, Self-concept and Self-image, Consumer Perception, Risk and Imagery, Consumer Attitude: Belief, Affect, Attitude and Intention, Attitude

Formation and Attitude Change, Consumer Communication.

6. **Sociological Influences on Consumer Decision Making:** Consumer groups, Consumer reference groups, Family and Life cycle, Social class and mobility, lifestyle analysis, Culture; Sub-Culture, Cross Culture. Interpersonal Communication and influence, Opinion Leadership

7. **Diffusion of Innovation**: Diffusion Process, Adoption Process, Consumer Innovators. Multiplicative innovation adoption (MIA) model

8. **Consumer Behavior Analysis and Marketing Strategy**: Consumer Behavior and Product Strategy, Consumer Behavior and Pricing Strategy, Consumer Behavior and Distribution Channel Strategy, Consumer Behavior and Promotion Strategy

Suggested Readings:

1. Bennet and Kassarjian : Consumer Behaviour , Prentice Hall of India, New Delhi
2. Michael R. Solomon : Consumer Behaviour, PHI Learning Private Limited, New Delhi
3. RamanujMajumdar : Consumer Behaviour , Prentice Hall of India, New Delhi
4. Loudon and Della Bitta : Consumer Behaviour , Concepts and Applications, Tata McGraw Hill. New Delhi
5. S. Ramesh Kumar: Consumer Behaviour: The Indian Context,Pearson Education
6. Rajneesh Krishna: Consumer Behaviour,Oxford University Press

MPHL /FM-II 203: FINANCIAL MARKETS AND PORTFOLIO MANAGEMENT

(3 Credits: 30 hrs)

Module I

1. **Indian Financial Market:** Indian Money Market, Indian Capital Market, Financial Instruments, Concepts of Financial Derivatives.

2. **Exchanges & SEBI**: Stock Exchanges of India, Construction of stock index and its interpretation, Working Mechanism of Clearing Houses, functions of SEBI, Listing of Securities, and IPOs.

3. **Fundamental Analysis:**Economic Analysis, Industry Analysis, Company Analysis, Industry Life Cycle, Structural Analysis.

4. **Technical Analysis**: Efficient Market Hypothesis, Random Walk Theory, Dow Theory, tools & techniques of technical analysis.

Module –II

5. **Portfolio Management**: Risk Return Matrix, CAPM, Markowitz model, Sharpe Single Index model

6. **Production and Cost analysis**:Short Run and Long Run Production Function, Concepts of ISO Quant and ISO Cost.

7. **Market Structure**: Different Forms of Market, Determination of Equilibrium Price and Output, Short Run and Long Run Equilibrium of Industry.

8. **Macro EconomicAnalysis**: Monetary and Fiscal Policy, Exchange Rate Theories, Concepts of Public Finance.

Suggested Readings

1. Chandra: Investment Analysis and Portfolio Management, Tata McGraw-Hill

2. Fischer & Jordan: Security Analysis & Portfolio Management, PHI

3. S.Damodaran: Managerial Economics, Oxford University Press

4. V.K.Bhalla:Investment Management: Security Analysis and Portfolio Management,S Chand

5. P.pandian: Security Analysis and Portfolio management,Vikas Publication

6.Kevin S :Security Analysis and Portfolio Management,Prentice Hall India Learning Private Limited

MPHL /HR-II 203: <u>INDUSTRIAL RELATIONS & LABOUR LAWS</u>

(3 Credits: 30 hrs)

<u>Module –I</u>

1. **Industrial Relations and Trade Unionism in India**: Rise of Industrial Workers, Profile of Industrial Workers in India, Problems of Industrial Workers (absenteeism, commitment, Work Ethics), System Model of IR, Origin, Growth, Structure and Management of Trade Unions, Recognitions, Leadership, Trade Unionisms, Employers' Organisations in India, Managerial Associations.

2. **Industrial Disputes & Collective Bargaining**: Causes, Types, Trends and Settlement of Disputes (Internal Options, Third Party Machinery. Prerequisites, Process, Negotiating Skills and Strategies, Agreement – content, Validity, Implementation, Productivity Bargaining, Growth of Collective Bargaining in India.

3. **Workers participation in Management**: Concept, Purpose and Practices in other countries; Workers' Participation Schemes in India – Works Committee, Joint Management Council, Worker – Director, Shop Council and Joint Council, WPM, EPM; Problems and Prospects in India; Quality Circles – Concept and Practices in India.

<u>Module –II</u>

4. **Legal Framework and Establishment Act:** Evolution of Labour Laws in India, Factories Act, 1948; Plantations Labour Act, 1951;Mines Act, 1952; Shops & Establishment Act   1963

5. **Remuneration and Social Security Act**: Employees' Compensation Act, 1923; Payment of Wages Act, 1936; Minimum Wages Act, 1948; Employees' State

Insurance Act, 1948;Employees' Provident Funds & Misc. Provisions Act, 1952; Payment of Bonus Act, 1965;Payment of Gratuity Act, 1972

6. **Laws related to Industrial Relations**: Trade Unions Act, 1926 ;Industrial Employment (Standing Orders) Act, 1946; Industrial Disputes Act, 1947.

Suggested Readings:

1. Marchington, M. : Managing Industrial Relations, McGraw Hill.

2. VenkataRatnam, CS: Industrial Relations, OUP

3. Pathak, A. : Legal Aspects of Business, Tata McGraw Hill

4. Srivastava, S. C. : Labour Law in Factories, Mines, Plantations etc., Printice Hall.

5. Piyali Ghosh& Shefali Nandan: Industrial Relations and Labour Laws,McGraw Hill Education

6. P. K. Padhi : Labour and Industrial Laws, PHI Learning

MPHL/ DA-II 203- <u>DATA ANALYTICS II</u>

(3 Credits: 30 hrs)

1. Data Mining and Machine Learning Applications in Business
2. Analytics in Marketing HR, Finance and Operations
3. Introduction to Deep Learning and Artificial Intelligence

<u>Suggested Readings:</u>

1. Dinesh Kumar : Business Analytics – The Science of Data Driven Decision making.
2. Anil Maheshwari : Data Analytics Made Accessible
3. John W Foreman : Data Smart
4. Peter Dalgaard : Statistics with R
5. Bart Baesens : Analytics in Big Data World
6. John Slavio : Deep Learning and Artificial Intelligence. A Beginner's Guide to Neural Networks and Deep Learning.