JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

SEMESTER – I

S. No.	Course codes	Course Name	Category	Hours per week			Credits
				L	**T**	**P**	
1	21E00101	Management & Organizational Behaviour	CC	4	0	0	4
2	21E00102	Business Environment & Law	CC	4	0	0	4
3	21E00103	Managerial Economics	CC	4	0	0	4
4	21E00104	Financial Accounting for Managers	CC	4	0	0	4
5	21E00105	Statistics for Managers	CC	4	0	0	4
6	21E00106	Management Information Systems	CC	4	0	0	4
7	21E00107	Business Communication Practice	LC	0	1	2	2
8	21E00108	Information Technology Lab	LC	0	1	2	2
		TOTAL		**24**	**2**	**4**	**28**

SEMESTER – II

S.No.	Course codes	Course Name	Category	Hours per			Credits
				L	**T**	**P**	
1.	21E04201	Econometrics for Business Forecasting	CC	4	0	0	4
2.	21E00205	Operations Research	CC	4	0	0	4
3.	21E04203	Business Analytics and Data Science	CC	4	0	0	4
4.	21E00204	Business Research Methods	CC	4	0	0	4
5.	21E04204	Data Warehousing and Data Mining	CC	4	0	0	4
6.	21E03202	R- Programming	CC	4	0	0	4
7.	21E00207a 21E00207b 21E00207c	**General Elective – I** Advanced Communication E-Business Industry 4.0 & Innovation	GE	2	0	0	2
8.	21E00208	Data Analytics Lab	LC	0	1	2	2
		TOTAL		**24**	**1**	**2**	**28**

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)
SEMESTER - III

S.No.	Course codes	Course Name	Category	Hours per week			Credits
				L	T	P	
1	21E00301	Strategic Management	CC	4	0	0	4
2	21E04301	Data Visualization	CC	4	0	0	4
3	21E04302	Predictive Analytics	SC	4	0	0	4
4	21E04303	Marketing Analytics	SC	4	0	0	4
5	21E04304	Financial Analytics	SC	4	0	0	4
6	21E04305	Human Capital Analytics	SC	4	0	0	4
7		**General Elective – II** (MOOCS)	GE	2	0	0	2
	21E00307a	Entrepreneurship Development					
	21E00307b	Project Management					
	21E00307c	Business Ethics & Corporate Governance					
8	21E00308	Business Simulation Lab	LC	0	0	2	1
9	21E04309	Experiential Learning Project	PR	0	0	2	1
		TOTAL		**24**	**0**	**4**	**28**

SEMESTER - IV

S.No.	Course codes	Course Name	Category	Hours per week			Credits
				L	T	P	
1.	21E04401	* Big Data Analytics	SC	4	0	0	4
2.	21E04402	* Supply Chain Analytics	SC	4	0	0	4
3.	21E04403	Project Work	PR	0	0	20	10
		TOTAL		**8**	**0**	**20**	**18**

*Students going for Industrial Project can complete these courses through MOOCs during the period of III and IV semester.

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	MANAGEMENT & ORGANIZATIONAL BEHAVIOUR	L	T	P	C
21E00101		**4**	**0**	**0**	**4**
	Semester		**I**		

Course Objectives:
- To impart basic conceptual knowledge on Management theories and Practices
- To achieve higher productivity and accomplishing the goals of the organization.

Course Outcomes (CO): Student will be able to
- Understand concepts, theories and practices
- Apply theoretical knowledge in managing the organization and Know the behaviour of employees at individual, group and organisational levels at work place under different leadership styles.

UNIT - I		Lecture Hrs: 8

Role of Management – Concept – Significance – Functions – Principles of Management - Patterns of Management: Scientific – Behavioural – Systems – Contingency.

UNIT - II		Lecture Hrs: 12

Decision Making & Controlling – Process – Techniques. Planning – Process – Problems — Making It Effective Controlling - System of Controlling – Controlling Techniques – Making Controlling Effective.

UNIT - III		Lecture Hrs:12

Individual Behaviour & Motivation –Understanding Individual Behaviour – Perception – Learning – Personality Types – Johari window- Transactional Analysis- Motivation– Concept of Motivation - Motivational Theories of Maslow, Herzberg, David McClelland, and Porter and Lawler

UNIT - IV		Lecture Hrs:12

Group Behavior& Leadership: Benefits of Groups – Types of Groups – Group Formation and Development. Leadership and Organizational Culture and Climate: Leadership – Traits Theory – Managerial Grid – Transactional Vs Transformational Leadership – Qualities of good leader- Women Leadership in India.

UNIT - V		Lecture Hrs:12

Organisational Behaviour–Organizing Process – Departmentation Types – Making Organizing Effective –Organisational culture- Types of culture – Organisational Culture Vs Organisational climate - Conflict management -Change Management.

Textbooks:
1. Principles of Management, Koonz,Weihrich and Aryasri, Tata McGraw Hill.
2. Organizational Behaviour: Design, Structure and Culture, Gupta, Willey
3. Management and Organisational Behaviour, Subbarao P, Himalaya Publishing House

Reference Books:
1. Organisational Behaviour ,S.S.Khanka, S.Chand
2. Organisational Behaviour, Stephen P. Robbins, Pearson Education
3. Organisational Behaviour , Mishra .M.N ,Vikas
4. Management and Organisational behaviour, Pierce Gordner, Cengage.
5. Behaviour in Organizations, Hiriyappa .B.New Age Publications
6. Organisational Behaviour,Sarma, Jaico Publications.
7. Principles of Management ,Murugesan ,Laxmi Publications

Online Learning Resources:

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

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https://onlinecourses.swayam2.ac.in/cec20_mg03/preview
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https://onlinecourses.nptel.ac.in/noc21_mg30/preview

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	BUSINESS ENVIRONMENT & LAW	L	T	P	C
21E00102		4	0	0	4
	Semester		I		

Course Objectives:
- To Introduce business environment and various business environment factors and laws relating to business that have major repercussions on business enlighten.
- To explain and update the changes that occur constantly in the sphere of business environment and laws .

Course Outcomes (CO): Student will be able to
- Acquire the knowledge on business policies and environment factors to carryout a business.
- Understand the various laws relating to business activities
- Conduct and plan business effectively and efficiently in the light of information on various business policies and laws.

UNIT - I		Lecture Hrs: 8

Introduction to Business Environment:-Meaning, Components of Business Environment.-Industrial policy of 1991, Liberalization, Privatization and Globalization.

UNIT - II		Lecture Hrs: 12

Monetary, Fiscal and Trade Policy**:** Monetary& Fiscal Policy –,EXIM Policy, Role of EXIM Bank. Balance of Payments: **WTO:** Role and functions of WTO in promoting world trade –TRIPS, TRIMS and GATS, - Dumping and Anti-dumping measures.

UNIT - III		Lecture Hrs:12

Law-Definition -Need, classification and sources of Business Law, Law of Contract -1872 (Part-I)**:** Nature of Contract and essential elements of a valid Contract, Offer and Acceptance. Law of Contract – 1872 (part-II): Consideration, Capacity to Contract and free consent, Legality of the object.

UNIT - IV		Lecture Hrs:12

Companies Act, 1956 (Part-I): Kinds of Companies, Formulation of Companies, Incorporation, Company Documents**.** Company Act, 1956 (Part-II): Company Management, Directors, Company meetings, Resolutions, Auditors, Modes of Winding-up of a company.

UNIT - V		Lecture Hrs:12

Information Technology Act, 2000: Scope and Application of ITAct, 2000- Digital signature e-governance, penalties and adjudication, cyber regulations appellate, tribunals, duties of subscribers-Right to Information Act,2005 –GST Act 2017.

Textbooks:
1. Essentials of Business Environment, K.Aswathappa, Himalaya publishers.
2. Economic Environment of Business, 7th Edition , Ahuja H.L. S.chand
3. Mechantile Law- Garg, Sareen, Sharma, Chawla, Kalyani publishers.

Reference Books:
- Indian Economy, Dutt and Sundaram, S. Chand, New Delhi.
- Business Environment – Text and Cases, Justin Paul, TMH.
- Indian Economy- Misra and Puri, Himalaya.
- Legal Aspects of Business, Ravinder Kumar, Cengage.
- A Manual of Business Laws,S.N.Maheshwari& Maheshwari, Himalaya.
- Business law for management, K.R.Bulchandani-Himalaya Publishing.
- Business law, R.S.N Pillai, Bhagavathi, S.Chand

Online Learning Resources:

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MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

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JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	MANAGERIAL ECONOMICS	L	T	P	C
21E00103		**4**	**0**	**0**	**4**
	Semester			I	

Course Objectives:
- To impart decision making skills at all levels of management
- To infuse managerial theories, behavioural theories and optimization methods for effective and efficient functioning of firms.
- To explain concept of demand, techniques to forecast demand and production analysis considering time factor.
- To introduce market structures and price strategies applicable under different business scenarios for various products.

Course Outcomes (CO): Student will be able to
- Understand the relationship of Managerial economics with other functional areas.
- Learn the techniques and methods to predict the demand scientifically.
- Ascertain production levels and analyse the relationship of Cost-Volume Profit.
- Take informed decisions on price fixation under different market structures of the economy under different scenario.

UNIT - I		Lecture Hrs: 8

Introduction to Managerial Economics**:** Definition, Nature and Scope, Relationship with other areas in Economics, Production Management, Marketing, Finance and Personnel, Operations research - The role of managerial economist. Objectives of the firm**:** Managerial theories of firm, Behavioural theories of firm, optimization techniques, New management tools of optimization.

UNIT - II		Lecture Hrs: 12

Theory of Demand: Demand Analysis – Law of Demand - Elasticity of demand, types and significance of Elasticity of Demand. Demand estimation – Marketing research approaches to demand estimation. Need for Demand forecasting, forecasting techniques.

UNIT - III		Lecture Hrs:12

Production Analysis: Production function, Isoquants and Isocosts, Production function with one/two variables, Cobb-Douglas Production Function, Returns to Scale and Returns to Factors, Economies of scale- Cost concepts - cost-output relationship in the short run and long run, Average cost curves - Break Even Analysis.

UNIT - IV		Lecture Hrs:12

Market Structure and Pricing practices: Features and Types of different competitive situations - Price-Output determination in Perfect competition, Monopoly, Monopolistic competition and Oligopoly. Pricing philosophy – Pricing methods in practice: Price discrimination, product line pricing. Pricing strategies: skimming pricing, penetration pricing, Loss Leader pricing. Pricing of multiple products.

UNIT - V		Lecture Hrs:12

Inflation and Business Cycles**:-**Definition and meaning-characteristics of Inflation- types of inflation - effects of inflation- Anti-Inflationary methods - Definition and characteristics of business cycles- phases of business cycle - steps to avoid business cycle

Textbooks:
1. Managerial Economics, Dwivedi D.N. Vikas Publishers
2. Managerial Economics, Gupta, TMH

Reference Books:
1. Managerial Economics, Pearson Education, James L.Pappas and EngeneF.Brigham
2. Managerial Economics, Suma Damodaran, Oxford.
3. Macro Economics by MN Jhingan-Oxford
4. Managerial Economics- Dr.DM.Mithani-Himalaya Publishers

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

5. Managerial Economics-Dr.H.L Ahuja-S.Chand and Com pvt ltd, NewDelhi
6. Managerial Economics by Dominick Salvatore, Ravikesh Srivastava- Oxford University press. Managerial Economics by Hirschey- Cengage Learning
Online Learning Resources:
https://onlinecourses.nptel.ac.in/noc21_mg90/preview   https://onlinecourses.nptel.ac.in/noc20_mg67/preview

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	FINANCIAL ACCOUNTING FOR MANAGERS	L	T	P	C
21E00104		4	0	0	4
	Semester			I	

Course Objectives:
- To introduce accounting , accounting rules, accounting process and preparation of financial statements.
- To explain methods of valuation of assets,
- To explore the meaning and interpretation of financial statements through ratio analysis technique.

Course Outcomes (CO): Student will be able to
- Prepare the financial statements with accounting knowledge
- Value the assets of the business organizations under different methods
- Analyse the financial performance and position of the business organization and interpret the results from the point of company and investor

UNIT - I		Lecture Hrs: 8

Introduction to Accounting: Definition, Importance, Objectives and principles of accounting, uses of accounting and book keeping Vs Accounting, Single entry and Double entry systems, classification of accounts – rules of debit & credit. (Only theory)

UNIT - II		Lecture Hrs: 12

The Accounting Process: Overview, Books of Original Record; Journal and Subsidiary books, ledger, Trial Balance, Final accounts: Trading accounts- Profit & loss accounts- Balance sheets with adjustments. (Problems on Only Final Accounts)

UNIT - III		Lecture Hrs:12

Valuation of Assets: Introduction to Depreciation- Methods (Simple problems from Straight line method, Diminishing balance method and Annuity method). Inventory Valuation: Methods of inventory valuation (Simple problems from LIFO, FIFO).

UNIT - IV		Lecture Hrs:12

Financial Analysis -I   Analysis and interpretation of financial statements from investor and company point of view, Liquidity, leverage, solvency and profitability ratios – Du Pont Chart (A Case study on Ratio Analysis).

UNIT - V		Lecture Hrs:12

Financial Analysis-II: Objectives of fund flow statement - Steps in preparation of fund flow statement, Objectives of Cash flow statement- Steps in Preparation of Cash flow statement – Analysis of Cash flow and Funds flow statements - Funds flow statement Vs Cash flow statement. (Only theory).

Textbooks:
1. Financial Accounting, Dr.S.N. Maheshwari and Dr.S.K. Maheshwari, Vikas Publishing House Pvt. Ltd.,
2. Accountancy .M P Gupta &Agarwal ,S.Chand

Reference Books:
1. Financial Accounting ,P.C.Tulisan ,S.Chand
2. Financial Accounting for Business Managers, Asish K. Bhattacharyya, PHI
3. Financial Accounting Management An Analytical Perspective, Ambrish Gupta, Pearson Education
4. Accounting and Financial Management, Thukaram Rao, New Age Internationals.
5. Financial Accounting Reporting & Analysis, Stice&Stice, Thomson
6. Accounting for Management, Vijaya Kumar,TMH
7. Accounting for Managers, Made Gowda, Himalaya
8. Accounting for Management ,N.P.Srinivasan, &M.ShakthivelMurugan, S.Chand

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

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ANANTHAPURAMU – 515 002 (A.P) INDIA

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Course Code	STATISTICS FOR MANAGERS	L	T	P	C
21E00105		**4**	**0**	**0**	**4**
	Semester		**I**		

Course Objectives:
- To explain descriptive statistics and inferential statistics
- To introduce various measurements used to describe the data and inter the results of the data analysis.
- To describe the concept of probability, theorems, and types of probability distributions of data.
- To impart the computational, analytical and interpretation skills using the data

Course Outcomes (CO): Student will be able to
- Understand statistical techniques popularly used to describe the data in managerial decision making.
- Know the procedure involved in inferential statistics and appropriate tests for given data.
- Learn the computational skill , interpretation of results of the data analysis.
- Analyse and differentiate various types of data distribution and its probability distribution.

UNIT - I		Lecture Hrs: 12

Introduction of statistics – Nature & Significance of Statistics to Business, , Measures of Central Tendency: Mean – Median – Mode ; Measures of Dispersion: range, quartile deviation, mean deviation, standard deviation, coefficient of variation.

UNIT - II		Lecture Hrs: 12

Correlation & Regression : Introduction, Significance and types of correlation – Measures of correlation – Co-efficient of correlation. Regression analysis – Meaning and utility of regression analysis – Comparison between correlation and regression – Properties of regression coefficients-Rank Correlation.

UNIT - III		Lecture Hrs:12

Probability – Meaning and definition of probability – Significance of probability in business application – Theory of probability: Addition and multiplication – Binominal distribution– Poisson distribution – Normal distribution.

UNIT - IV		Lecture Hrs:12

Testing of Hypothesis- Hypothesis testing: One sample and Two sample tests for means and proportions of large samples (z-test), One sample and Two sample tests for means of small samples (t-test), ANOVA Test : One-way and two way ANOVA .

UNIT - V		Lecture Hrs: 08

Non-Parametric Methods: Importance of Non-Parametric method – difference between parametric and non-parametric methods; Chi-square test : Test of Goodness of fit - test for Independence of Attributes; Sign test: One sample and paired samples data.

Textbooks:
1. Statistical Methods, Gupta S.P., S.Chand.Publications
2. Business Statistics, J.K.Sharma, Vikas house publications house Pvt Ltd

Reference Books:
1. Statistics for Management, Richard I Levin, David S.Rubin, Pearson,
2. Complete Business Statistics, Amir D. Aezel, Jayavel, TMH,
3. Statistics for Management, P.N.Arora, S.Arora, S.Chand
4. Statistics for Management ,Lerin, Pearson Company, New Delhi.
5. Business Statistics for Contemporary decision making, Black Ken, New age publishers.
6. Business Statistics, Gupta S.C & Indra Gupta, Himalaya Publishing House, Mumbai

Online Learning Resources:

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

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https://iimbx.iimb.ac.in/statistics-for-business-i/

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	MANAGEMENT INFORMATION SYSTEMS	L	T	P	C
21E00106		**4**	**0**	**0**	**4**
	Semester		**I**		

Course Objectives:
- To provide the basic concepts of data and Management Information System and utility of the MIS for the managerial decisions.
- To Explain Management of Information system, MIS design and implementation process in an organisation.
- To discuss security, ethical and social issues in management of Information system.

Course Outcomes (CO): Student will be able to
- Know Management of Information system scope, application and challenges in managing MIS.
- Understand traditional and modern approaches for data resource management and models.
- Evaluate product based and process based cost and benefit to implement and maintain MIS in an organization.

UNIT - I		Lecture Hrs: 8

MIS An overview- Introduction, Need for MIS and IT nature and scope of MIS, MIS characteristics, Structure of MIS, role of MIS in global business. Challenges of Managing MIS.

UNIT - II		Lecture Hrs: 12

Data resource management- Data base concepts, The traditional approaches, the modern approaches (Data base management approaches) DBMS, Data models, Data ware housing and mining.

UNIT - III		Lecture Hrs:12

Business application of IS- Enterprise systems, ERP, CRM, SCM, DSS, Types of decisions, Decision support techniques, Decision making and Role of MIS, Business intelligence and Knowledge management systems.

UNIT - IV		Lecture Hrs:12

Management of IS- Project planning, SDLC, System development models, Project management, system analysis, system design, Implementation process, Product based MIS evaluation, Cost /Benefit based evaluation, Process based calculation, System maintenance

UNIT - V		Lecture Hrs:12

Security, Ethical &Social Issues : IS security threats, Protecting IS,IS Security Technologies, The disaster recovery plan, IS Ethical Issues, social issues.

Textbooks:
1. MIS –Managerial Perspective, D.P.Goyal,Vikas Publications.
2. Management Information Systems Text & Cases, W S Jawadekar, Tata McGraw-Hill.

Reference Books:
1. Management Information Systems, C Laudon and Jane P.Laudon, et al, Pearson Education.
2. MIS, Hossein Bidgoli, Nilanjan Chattopadhyay, Cengage Learning
3. Introduction to Information Systems, Rainer, Turban, Potter, WILEY-India.
4. Management Information Systems, James A. Obrein, Tata McGraw-Hill .
5. Cases in MIS, Mahapartra,PHI.
6. Management Information Systems, Gordon B. Davis & Margrethe H.Olson, Tata McGraw-Hill .

Online Learning Resources:
https://onlinecourses.nptel.ac.in/noc20_mg60/preview
https://nptel.ac.in/courses/110/105/110105148/
https://onlinecourses.swayam2.ac.in/cec21_ge05/preview

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

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MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	SKILL ORIENTED COURSE	L	T	P	C
21E00107	**BUSINESS COMMUNICATION PRACTICE**	**0**	**1**	**2**	**2**
	Semester		**I**		

Course Objectives:
- To explain communication concepts
- To develop the students' competence in communication at an advanced level.
- To demonstrate communication skills viz., listening, speaking, reading and writing with teaching aids.

Course Outcomes (CO): Student will be able to
- Understand the communication concepts and
- Improve communication and competence skills
- Obtain and apply proficiency in business communication at the workplace and professional contexts.

UNIT - I		Lecture Hrs: 8

Concept of Communication – Significance, Scope – Communication Process – Essentials of good communication – Channels of Communication –Organisation Structure - Formal, Informal Communication – Upward, Downward, Horizontal Communication.

UNIT - II		Lecture Hrs: 10

Types of communication: Verbal – Oral Communication: Advantages and Limitations of Oral Communication, Written Communication – Characteristics, Advantages & Limitations Non verbal Communication: Sign language – Body language – Kinesics – Proxemics – Hepatics: Chronimics.

UNIT - III		Lecture Hrs:8

Interpersonal Communication: Communication Styles, Managing Motivation to Influence Interpersonal Communication – Role of emotion in Inter personal Communication – Leadership styles.

UNIT - IV		Lecture Hrs:8

Barriers of Communication: Types of barriers – Technological – Socio-Psychological barriers – Overcoming barriers, Types of listening.

UNIT - V		Lecture Hrs:8

Report writing – Formal reports – Writing effective letters – Different types of business letters - Interview techniques – Communication etiquettes.

Textbooks:
1. Business Communication: A Practical Approach, Naik, Willey
2. Business Communication, C.S.Rayudu, HPH.
3. Business Communication, Meenakshi Raman, Oxford University Press.

Reference Books:
1. Business communication, Shalini Varma, Vikas.
2. Business Communication, Raymond V.Lesikar, Neeraja Pandit et al.,TMH
3. Business Communications, Hudson, Jaico Publications
4. Business communication for managers, Penrose, Raspbery, Myers, Cengage
5. Effective Communication, Harward Business School, Harward Business Review No.1214.
6. Essentials of Business Communication, Rajendra Pal, JS.Korlahhi, S.Chand

Online Learning Resources:
https://onlinecourses.swayam2.ac.in/imb19_mg14/preview
https://online-degree.swayam.gov.in/dyp20_d02_s1_hs01/preview

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	INFORMATION TECHNOLOGY LAB		L	T	P	C
21E00108			0	1	2	2
		Semester		I		

Course Objectives:
- To provide knowledge on applications of information technology and
- To demonstrate the MS Office applications with hands on experience in the lab.
- To explain and exhibit statistical functions of association, testing hypothesis for the data and analyse and interpret the outcome of the data.

Course Outcomes (CO):
- Prepare and edit the documents with effective presentation to superiors.
- Obtain hands of experience in designing and editing the templates and data in the excel sheets with formulae and functions.
- To test and interpret the business data outcome statistically in an effective and efficient manner.

List of Experiments:

Unit -1
Introduction to Hardware Component: (need to explain using images or videos) Various Input output devices and their usage in corporate world- Memories (RAM/ROM) and its types– Various types of processes- Storage devices Internal vs External

Unit 2
Instruction to Operating System (need to explain using videos) – overview of Windows 7/8.2/10/server- Ubuntu – Linux- various versions of Android- IoS – Capturing GPS enabled pictures- tools for filesharing to Mobile to Mobile- System to Mobile

Unit – 3
MS WORD I- Over views of various Ribbons- paste special- formatting- usage of Font -Textbox- equations -line spacing – bullets- -– page layouts-styles- header and footers – watermark-margins- indent- print preview-split -views- keyboard shortcut keys

Unit -4
MS WORD – II Mail Merge- Macros- Designing a company letter pad- Time table – letter writing- overview of power point -preparation of company presentation –

Unit – 5
MS Power Point-Creation of slides-Use of templates and slide designs for creating power point slides- use of drawings and graphics. Developing a Professional presentation on Business Plans, Institutions, Products. Power point shortcut keys

References:
- Cox et all- 2007 Microsoft Office System Step-by- Step, First Edition, PHI.
- David Whigam-Business Data Analysis Using Excel, First Edition, Oxford University Press.
- Alexisleon, TMH, 2008, Enterprise resource planning.
- The Oxford Hand Book of Internet studies, William.H.Dulton, Oxford.

Online learning resources/Virtual labs:
https://www.coursera.org/specializations/excel
https://www.coursera.org/specializations/everyday-excel
https://www.coursera.org/learn/excel-basics-data-analysis-ibm

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	ECONOMETRICS FOR BUSINESS FORECASTING	L	T	P	C
21E04201		4	0	0	4
	Semester		II		

Course Objectives:
- To explain econometrics and application areas of econometrics in real world
- To give knowledge on predicting techniques appropriate for the business data.
- To demonstrate the procedure of hypothesis testing using regression with real data.
- To discuss types of regression models and functional forms applicable for the data.
- To impart knowledge on time series and index numbers.

Course Outcomes (CO): Student will be able to
- Understand concept of econometrics and need and application in real world
- Learn different predicting techniques and functional forms applicable to the given data.
- Gain knowledge on testing hypothesis procedure and interpretation.
- Know different types of regression models applicable for different types of data variables.
- Construct and compute the different index values and issues involved in construction of and using of index numbers.

UNIT - I		Lecture Hrs:12

Introduction: Introduction – meaning ,scope and importance of Econometrics –Methodology of econometrics – Application areas of Econometrics; Specification: Meaning – Specification Bias - Population Regression, Sample Regression, Error Term.

UNIT - II		Lecture Hrs: 12

Simple Linear Regression Model: Simple Linear Regression Model (SLRM) –Assumptions of S LR model - Point estimation - Ordinary Least Squares Estimation: Point Estimation of OLS estimators – Population parameters; Goodness of Fit – Coefficient of Determination (R^2) - Hypothesis testing procedure - Testing the individual Regression Parameters – Testing the significance of R^2. (problems only).

UNIT - III		Lecture Hrs:12

Multiple Linear Regression Model: Multiple Regression Models – Assumptions of MLR model and Violation of Assumptions (In brief only) - Model with two independent variables and K-Independent variables – Interpretation of MLR equations- Goodness of Fit – Coefficient of Determination (R^2) - Adjusted Coefficient of Determination; Hypothesis testing in MLR model (Problems only).

UNIT - IV		Lecture Hrs:12

Special Topics in Econometrics: Introduction to Dummy Variables – Qualitative dependent variable models:- Logit – Features of Logit model – Estimation of logit for Individual data; Probit model - Compare and contrast logit and probit models - Application areas of logit and probit models.

UNIT - V		Lecture Hrs:08

Business Forecasting: Introduction to Time series –Components of Time series; Index Numbers: Introduction – types of index number - Unweighted and Weighted Index; Average of Relatives Methods; Quantity and Value Indices; Issues in Constructing and Using Index Numbers(Case study).

Textbooks:
1. Damodar N. Gujarati, **Basic Econometrics**, 3rd Edition, 1995, Mcgraw-Hill.
2. WALTER ENDERS, "**Applied Econometric Time Series**", Wiley India.
3. John E.Silivia,Azhar Iqbal, "Econometrics and business forecasting" Wiley 2014

Reference Books:
1. Ramanathan, Ramu, "**Introductory Econometrics With Applications**", 4th Edition Harcourt College Publishers.
2. Robert Pyndick, **Econometric Models and Economic forecasts, 4th Edition , Pearsons**

Online Learning Resources:

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

https://onlinecourses.swayam2.ac.in/cec20_hs14/preview
https://onlinecourses.swayam2.ac.in/cec20_hs35/preview
https://onlinecourses.nptel.ac.in/noc21_hs01/preview
https://onlinecourses.nptel.ac.in/noc21_mg77/preview

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	OPERATIONS RESEARCH	L	T	P	C
21E00205		4	0	0	4
	Semester		II		

Course Objectives:
- To provide the basic knowledge about Operation Research, importance, application areas of Operations research and various optimizing techniques in the business operations.
- To impart different optimization models under typical situations in the business organization.
- To describe different game strategies under cut-throat competitive business environment
- To explain optimization tools in solving the management problems through modelling and using mathematical approach.

Course Outcomes (CO): Student will be able to
- Understand nature, scope and significance of Operation Research and formulation of given business problem in a LPP model and solving methods.
- Learn different optimizing solutions for various business problems using appropriate modelling techniques.
- Acquire the skills to complete a project effectively and efficiently with in the given resources.

UNIT - I		Lecture Hrs:12

Introduction to OR: Meaning, Nature, Scope & Significance of OR - Typical applications of Operations Research. The Linear Programming Problem – Introduction, Formulation of Linear Programming problem, Limitations of L.P.P, Graphical method, Simplex method: Maximization and Minimization model(exclude Duality problems), Big-M method and Two Phase method.

UNIT - II		Lecture Hrs:12

Transportation Problem: Introduction, Transportation Model, Finding initial basic feasible solutions, Moving towards optimality, Unbalanced Transportation problems, Transportation problems with maximization, Degeneracy.
Assignment Problem – Introduction, Mathematical formulation of the problem, Solution of an Assignment problem, Hungarian Algorithm, Multiple Solution, Unbalanced Assignment problems, Maximization in Assignment Model.

UNIT - III		Lecture Hrs:10

Sequencing – Job sequencing, Johnsons Algorithm for n Jobs and Two machines, n Jobs and Three Machines, n jobs through m machines, Two jobs and m Machines Problems.

UNIT - IV		Lecture Hrs:10

Game Theory: Concepts, Definitions and Terminology, Two Person Zero Sum Games, Pure Strategy Games (with Saddle Point), Principal of Dominance, Mixed Strategy Games (Game without Saddle Point), Significance of Game Theory in Managerial Application.

UNIT - V		Lecture Hrs:12

Project Management: Network Analysis – Definition –objectives -Rules for constructing network diagram- Determining Critical Path – Earliest & Latest Times – Floats - Application of CPM and PERT techniques in Project Planning and Control – PERT Vs CPM. (exclude Project Crashing).

Textbooks:
1. Operations Research / R.Pannerselvam, PHI Publications.
2. Operations Research / S.D.Sharma-Kedarnath
3. Operations Research /A.M.Natarajan,P.Balasubramani,A. Tamilarasi/Pearson Education.

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Reference Books:
1. Introduction to O.R/Hiller &Libermann (TMH). 2. Operations Research: Methods & Problems / Maurice Saseini, ArhurYaspan& Lawrence Friedman. Pearson 3. Quantitative Analysis For Management/ Barry Render, Ralph M. Stair, Jr and Michael E. Hanna/ 4. Operations Research / Wagner/ PHI Publications.
Online Learning Resources:
https://onlinecourses.swayam2.ac.in/cec20_ma10/preview https://onlinecourses.nptel.ac.in/noc20_ma23/preview https://onlinecourses.nptel.ac.in/noc19_ma29/preview

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	BUSINESS ANALYTICS AND DATA SCIENCE	L	T	P	C
21E04203		4	0	0	4
	Semester		II		

Course Objectives:
- To enable the student to understand the roles & responsibilities of Business Analyst and Data Scientist in business,
- To explain the basic concept of data management and data mining techniques, machine learning and
- To make possible for the application of business analytics in various business areas.

Course Outcomes (CO): Student will be able to
- Learn business analytics career opportunities in business analytics
- Understand data, big data and the way to manage the data in the organisation.
- Gain knowledge on data visualisation, classification, evaluation and interpretation
- Know data mining, multidimensional data analysis and concepts of association analysis and cluster analysis.
- Obtain knowledge on machine learning, artificial Intelligence and Frameworks for building Machine Learning Systems.

UNIT - I		Lecture Hrs:

Introduction: What is business analytics? Historical Overview of data analysis, Data Scientist vs. Data Engineer vs. Business Analyst, Career in Business Analytics, What is data science, Why Data Science, Applications for data science, Data Scientists Roles and Responsibility

UNIT - II		Lecture Hrs:

Data: Data Collection, Data Management, Big Data Management, Organization/sources of data, Importance of data quality, Dealing with missing or incomplete data, Data Visualization, Data Classification Data Science Project Life Cycle: Business Requirement, Data Acquisition, Data Preparation, Hypothesis and Modeling, Evaluation and Interpretation, Deployment, Operations, Optimization.

UNIT - III		Lecture Hrs:

Introduction to Data Mining: The origins of Data Mining, Data Mining Tasks, OLAP and Multidimensional data analysis, Basic concept of Association Analysis and Cluster Analysis.

UNIT - IV		Lecture Hrs:

Introduction to Machine Learning: History and Evolution, AI Evolution, Statistics Vs Data Mining Vs, Data Analytics Vs, Data Science, Supervised Learning, Unsupervised Learning, Reinforcement Learning, Frameworks for building Machine Learning Systems

UNIT - V		Lecture Hrs:

Application of Business Analysis: Retail Analytics, Marketing Analytics, Financial Analytics, Healthcare Analytics, Supply Chain Analytics

Textbooks:

1. Essentials of Business Analytics: An Introduction to the methodology and its application, Bhimasankaram Pochiraju, Sridhar Seshadri, Springer
2. Introduction to Machine Learning with Python: A Guide for Data Scientists 1st Edition, by Andreas C. Müller, Sarah Guido, O'Reilly
3. Introduction to Data Science, Laura Igual Santi Seguí, Springer.

Reference Books:

1. Introduction to Data Mining, Pang-Ning Tan, Michael Steinbach, Vipin Kumar, Pearson Education India
2. An Introduction to Business Analytics, Ger Koole, Lulu.com, 2019

Online Learning Resources:

https://nptel.ac.in/courses/110/105/110105089/
https://nptel.ac.in/noc/courses/noc17/SEM2/noc17-mg24/

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(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

https://nptel.ac.in/noc/courses/noc20/SEM1/noc20-mg11/

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	BUSINESS RESEARCH METHODS	L	T	P	C
21E00204		4	0	0	4
	Semester	II			

Course Objectives:
- To introduce business research, types and technology used in business research.
- To explain in detail on research process involved in business research.
- To discuss sources of data and instruments to collect data
- To provide knowledge on analysis and interpretation of outcome of the data in a scientific way.
- To provide knowledge on descriptive and inferential statistical analysis.
- To impart competence skills to undertake business research problem and carryout scientific research.

*Standard Statistical tables shall be allowed in the examination

Course Outcomes (CO): Student will be able to
- Learn types of business research, technology used in business research in technological era.
- Identify research problem, appropriate research design and sample design for the problem, formulate hypothesis, testing process of hypothesis.
- Understand sources of data, instruments to collect data, analyse and interpretation of data.
- Prepare and present the research report effectively and efficiently.

UNIT - I	Lecture Hrs:08

Introduction to Business Research: Definition-Types of Business Research. Scientific Investigation, Technology and Business Research: Information needs of Business - Technologies used in Business Research: The Internet, E-mail, Browsers and Websites. Role of Business Research in Managerial Decisions.

UNIT - II	Lecture Hrs:12

The Research Process: Problem Identification: Broad Problem Area-Preliminary Data Gathering. Literature Survey - Hypothesis Development - Statement of Hypothesis- Procedure for Testing of Hypothesis. The Research Design: Types of Research Designs: Exploratory, Descriptive, Experimental Designs and Case Study -Measurement of Variables- Operational Definitions and Scales-Nominal and Ordinal Scales- Rating Scales- Ranking Scales- Reliability and Validity - Sampling and Methods of sampling

UNIT - III	Lecture Hrs:12

Collection and Analysis of Data Sources of Data-Primary and Secondary Sources of Data - Data Collection Methods- Interviews: Structured Interviews and Unstructured Interviews- Observational Surveys: Questionnaire Construction: Organizing Questions- Structured and Unstructured Questionnaires – Guidelines for Construction of Questionnaires.

UNIT - IV	Lecture Hrs:12

Data Preparation and Analysis: Data preparation process, problems in preparation process - An overview of Descriptive, Associational and Inferential- Statistical Measures.

UNIT - V	Lecture Hrs:12

The Research Report: Research Reports-Components-The Title Page-Table of Contents-The Executive Summary-The Introductory Section-The Body of the Report-The Final Part of the Report-Acknowledgements – References-Appendix - Guidelines for Preparing a Good Research report - Oral Presentation.

Textbooks:
1. Research Methodology – methods & Techniques, C.R. Kothari, Vishwa prakashan.
2. Research Methods for Business–A Skill Building Approach, Uma Sekaran, John Wiley & Sons (Asia) Pvt. Ltd, Singapore.
3. Research Methodology(Concepts and cases) Deepak Chawla NeenaSondhi-Vikas

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MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

publishing

Reference Books:
1. Business Research Methods, Donald R Cooper and Pamela S Schindler,9/e,Tata McGraw-Hill Publishing Company Limited.
2. Methodology and Techniques of Social Science Research, Wilkinson & Bhandarkar, Himalaya Publishing House.
3. Business Research Methods 8e, Zikmund- Babin-Carr- Adhikari-Griffin-Cengage learning.
4. Business Research Methods- Alan Broman, Emma Bell 3e, Oxford university

Online Learning Resources:
https://onlinecourses.swayam2.ac.in/cec20_mg14/preview
https://onlinecourses.nptel.ac.in/noc20_ge01/preview

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	DATA WAREHOUSING AND DATA MINING	L	T	P	C
21E04204		4	0	0	4
	Semester		II		

Course Objectives:
- To give an overview of data warehousing and data mining
- To explain data sets, major tasks in data pre-processing
- To explain basic concepts of data warehousing and On-line Analytical Processing
- To educate on data base structures, multidimensional data structures and concepts of Meta Data.
- To impart analysing skills on context of data warehouse
- To explain procedure of getting data into the data warehouse.

Course Outcomes (CO): Student will be able to
- Understand data warehousing and data mining concepts
- Know data sets, statistical descriptions of data, tasks in pre-processing of data
- Gain knowledge on data warehouse modelling and On-line Analytical Processing of data
- Identify data base structures, multidimensional data structures and learn concepts of Meta data
- Apply procedure of getting data into the data warehouse

UNIT - I		Lecture Hrs:10

Introduction: Motivated data mining -Its importance – Meaning of data mining- Data mining functionalities, what kinds of patterns can be mined? are all of the patterns interesting? Classification of data mining systems, data mining task primitives, integration of a data mining system with a database or data warehouse system.

UNIT - II		Lecture Hrs:12

Data preprocessing: Types of data sets and attribute values, basic statistical descriptions of data, data visualization, measuring data similarity, data quality, major tasks in data preprocessing, data reduction, data transformation and data , discretization, data cleaning and data integration.

UNIT - III		Lecture Hrs:12

Data Warehousing and On-Line Analytical Processing: Data Warehouse- Basic concepts, data warehouse modeling: Data cube and OLAP, data warehouse design and usage, data warehouse implementation, data generalization by attribute-oriented induction, efficient methods for data cube computation, exploration and discovery in multidimensional databases, Data Base Structures – Organizing Relational Data warehouse – Multi-Dimensional Data Structures – Choosing a Structure. Meta Data: Human Meta Data, Computer Based Meta Data for people and computer to use.

UNIT - IV		Lecture Hrs:12

Analyzing the Contexts of the Data warehouse: Active Analysis, User Queries – OLAP Constructing a Data warehouse System: Stages of the Project – Developing a Project Plan, Data warehousing Design Approaches – The Architecture Stage.

UNIT - V		Lecture Hrs:10

Getting Data into the Data warehouse – Extraction, Transformation, Cleaning, Loading and Summarization. Data Mining, Creating a Decision Tree, Correlation and Other Statistical Analysis, Neural Networks, Nearest Neighbor Approaches, Putting the Results to Use.

Textbooks:
1. Jiawei Han &MichelineKamber, "Data Mining – Concepts and Techniques" Morgan Kaufmann Publishers, 2nd Edition, 2006.
2. Margaret H Dunham , "Data Mining Introductory and advanced topics" ,Pearson education
3. James Evans "Business Analytics" Pearson, 2nd Edition, 2017

Reference Books:
1. Foster Provost & Tom Faucett "Data Science for Business" SPD
2. Efram G. Mallach:Decision Support Systems and Data warehouse Systems TMH.
3. T.H.M.Sivanandam, Data Mining Techniques and Tasks Thomson.
4. Richard T Watson :Data Management, Data Bases and Organizations, Wiley.

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

5.	Marakas, Modern Data Warehousing, Mining and Visualization Core Concepts Pearson
6.	Berson Smith, Data warehousing, Data Mining OLAP TMH**.**

Online Learning Resources:

https://onlinecourses.swayam2.ac.in/cec19_cs01/preview#:~:text=Data%20mining%20is%20the%20extraction,predictive%20information%20from%20large%20databases.

https://onlinecourses.nptel.ac.in/noc20_cs12/preview

https://www.classcentral.com/course/swayam-data-mining-13982

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	R- PROGRAMMING	L	T	P	C
21E03202		**4**	**0**	**0**	**4**
	Semester		**II**		

Course Objectives:
- to provide basic knowledge in the area of R-Programming
- to explain methods to explore, import, export and manipulate data and data frames.
- Impart knowledge on hypothesis tests for estimating or predicting statistical methods

Course Outcomes (CO): Student will be able to
- Know about R programming overview
- Learn how to programme In R for data analysis
- Understand concepts and terminology used in R-programming
- Able to demonstrate the procedure to explore ,import, export and manipulate the data.
- To formulate hypothesis and testing of hypothesis for predicting models using Regression and other statistical tools for the given data.

UNIT - I		Lecture Hrs:12

R Programming, Overview and History of R, Getting Help, R Packages: Loading, Installing and Managing.

UNIT - II		Lecture Hrs:10

Data Definition & Control Structures, Data definition types, constants, variables, R data types and objects, Reading and writing data.

UNIT - III		Lecture Hrs:12

Expressions: Arithmetic, Logical, Precedence rules Control Structures: Sequencing, Input and output statements, Assignment statement, Control Structures: Selection, Repetition, Combination, Functions, scoping rules and loop functions, Flow Control

UNIT - IV		Lecture Hrs: 10

Exploring Data with R, Import, export and manipulate data and data frames, Statistical summaries of continuous and categorical data.

UNIT - V		Lecture Hrs: 12

Hypothesis tests, and simple regression models, Linear models like ANOVA, linear regression and mixed models, generalized linear models, Basic graphics & reports of statistical analyses

Textbooks:
1. Gardener, Mark. Beginning R: the statistical programming language. John Wiley & Sons, 2012.
2. Zumel, Nina, John Mount, and Jim Porzak. Practical data science with R. Manning, 2014

Reference Books:
1. Wickham, Hadley, and Garrett Grolemund. "R for Data Science": Import, Tidy, Transform, Visualize, and Model Data. " O'Reilly Media, Inc.", 2016.
2. Matloff, Norman. The art of R programming: A tour of statistical software design. No Starch Press, 2011.

Online Learning Resources:
https://www.youtube.com/watch?v=3iSKFCKLUsI
https://onlinecourses.nptel.ac.in/noc19_ma33/preview

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	General Elective – I	L	T	P	C
21E00207a	**ADVANCED COMMUNICATION**	**2**	**0**	**0**	**2**
	Semester		II		

Course Objectives:
- To explain communication concepts
- To develop the students' competence in communication at an advanced level.
- To demonstrate communication skills viz., listening, speaking, reading and writing with teaching aids.

Course Outcomes (CO): Student will be able to
- Understand the communication concepts and
- Improve communication and competence skills
- Obtain and apply proficiency in business communication   at the workplace and professional contexts.

UNIT - I		Lecture Hrs:6

Concept of Managerial Communication – Effective Listening – Barriers, Steps for Active Listening – Effective Speaking – Body Language & Modulation, Informative, Persuasion Communications – Effective Reading – Obstacles, Effective Reading, Reading Comprehension – Effective Writing – Condensation, Note Making Methods, Executive Summery.

UNIT - II		Lecture Hrs: 6

Business Letters & Reports: Types of Business Letters – Elements; Types of Reports – Informal – Formal Reports – Elements; Annual Reports - Technical Proposals – Structure – Circulars - Notices – Memos.

UNIT - III		Lecture Hrs: 3

Meetings & Reports: Meeting Invitation - Notice – Agenda – Meeting Participants – Roles; Meeting conduction & Etiquette - Minutes of the Meeting – Documentation – Filing;

UNIT - IV		Lecture Hrs: 3

Communication Strategies: Conflict Resolution – Win-Win strategy; Managerial Negotiations – Bargaining, Distributive, Integrative Strategies; Interviews – Types – purpose – process;

UNIT - V		Lecture Hrs: 6

Technology for Communication: Conventional Modes Vs Computer based Technologies – Email, Social Media, Micro Soft & Google Tools – Data – Collection – Organizing – Analyzing - Presentations using Technology.

Textbooks:
1. Managerial Communication – Strategies and Applications, Geraldine E.Hynes, McGrawHill
2. Business Communication, C.S.Rayudu, HPH.
3. Business Communication, Meenakshi Raman, Oxford University Press.

Reference Books:
1. Business communication, Shalini Varma, Vikas.
2. Business Communication, Raymond V.Lesikar, Neeraja Pandit et al.,TMH
3. Business Communications, Hudson, Jaico Publications
4. Business communication Sehgal, khetarpal, Excel Books
5. Effective Communication, Harward Business School, Harward Business Review No.1214.
6. Communication skills, Sanjay Kumar, Pushpalata, Oxford

Online Learning Resources:
https://onlinecourses.swayam2.ac.in/imb19_mg14/preview
https://www.youtube.com/watch?v=ITHnugowc_Q

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	General Elective – I	L	T	P	C
21E00207b	**E-BUSINESS**	**2**	**0**	**0**	**2**
	Semester		**II**		

Course Objectives:
- To imparts the concepts and various application issues of e-business and various online strategies for e-business.
- To explain various electronic payment systems.

Course Outcomes (CO): Student will be able to
- Understand electronic business and related concepts in detail.
- Identify security threat in e-business and steps, methods to overcome security issues.
- Know various electronic payment system and business models in the present technology business world.
- Know the e-business infrastructure requirements for e-business.

UNIT - I	Lecture Hrs: 6

Introduction to e-business : Electronic business, Electronic commerce, difference between e-business & e-commerce, electronic commerce models, types of electronic commerce,value chains in electronic commerce,E-commerce in India, internet,web based tools for electronic commerce.Electronic data, Interchange, components of electronic data interchange, electronic data interchange process.

UNIT - II	Lecture Hrs: 6

Security threats to e- business: Security overview, Electronic commerce threats, Encryption, Cryptography, public key and private key Cryptography digital signatures, digital certificates, security protocols over public networks : HTTP, SSL,Firewall as security control, public key infrastructure (PKI) For Security.

UNIT - III	Lecture Hrs: 6

Electronic payment system : Concept of money, electronic payment systems, types of electronic payment systems,smart cards and electronic payment systems, infrastructure issues in EPS, Electronic fund transfer.

UNIT - IV	Lecture Hrs: 4

E-business applications and strategies : Business models & revenue models over internet, emerging trends in e- businesse- governance, digital commerce, mobile commerce, strategies for business over web, internet based business models.

UNIT - V	Lecture Hrs: 6

E –business infrastructure and e- marketing : Hard works system software infrastructure, ISP's, managing e-business applications infrastructure, what is e- marketing, e-marketing planning, tactics, strategies.

Textbooks:
1. Dave chaffey :e-business & e-commerce management- Pearson.
2. E- commerce- e-business :Dr.C.S.Rayudu, Himalaya.

Reference Books:
1. Whitley, David (2000) ,e-commerce strategy,Technologies and applications.TMH.
2. Schneider Gary P.and Perry, James T(1ST edition 2000) Electronic commerce, Thomson Learning.
3. Bajaj, Kamlesh K and Nag, Debjani (1st edition 1999) ,e- commerce, The cutting edge of business,TMH Publishing company

Online Learning Resources:
https://onlinecourses.nptel.ac.in/noc19_mg54/preview
https://www.classcentral.com/course/swayam-e-business-14018

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(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	General Elective – I	L	T	P	C
21E00207c	**INDUSTRY 4.0 & INNOVATION**	**2**	**0**	**0**	**2**
	Semester		**II**		

Course Objectives:	

- To provide an overview of industry 4.0 and technology based innovations.
- To Align the theory and concepts with Industrial application of computers
- To Introduce the basic concepts of Industry 4.0, Artificial Intelligence, Big Data and Internet of Things.
- To Discuss and demonstrate the applications and tools of Industry 4.0.
- To Impart knowledge on innovation types, stages of innovation process, and competitive advantage

Course Outcomes (CO): Student will be able to

- Understand the basic concepts of Industry 4.0 and new technologies in decision making
- Outline the features of Artificial Intelligence and application domains
- Summarize the Big data domain stack and Internet of Things
- Identify the applications and Tools of Industry 4.0
- Learn and think innovative ideas based on technology
- Apply the knowledge in various industries based on technology to take effective and efficient managerial decision.

UNIT - I		Lecture Hrs:6

Industry 4.0: Need – Reason for Adopting Industry 4.0 - Definition – Goals and Design Principles -
Technologies of Industry 4.0 – Big Data – Artificial Intelligence (AI) – Industrial Internet ofThings - Cyber Security – Cloud – Augmented Reality – Mixed Reality.

UNIT - II		Lecture Hrs: 6

Artificial Intelligence: Artificial Intelligence: Artificial Intelligence (AI) – What & Why? - History of AI -Foundations of AI -The AI - Environment - Societal Influences of AI - Application Domains and Tools - Associated Technologies of AI - Future Prospects of AI - Challenges of AI.

UNIT - III		Lecture Hrs: 6

Big Data and IOT: Data : Terminologies - Big Data Definitions - Essential of Big Data in Industry 4.0 - Big Data Merits and Advantages - Big Data Components : Big Data Characteristics - Big Data Processing Frameworks - Big Data Applications - Big Data Tools - Big Data Roles - Learning Platforms; Internet of Things (IoT) : Introduction to IoT - Architecture of IoT - Technologies for IoT - Security in IoT.

UNIT - IV		Lecture Hrs: 6

Applications of IoT – Manufacturing – Healthcare – Education – Aerospace and Defence – Agriculture – Transportation and Logistics – Impact of Industry 4.0 on Society: Impact on Business, Government, People. Tools for Artificial Intelligence, Big Data and Data Analytics,
Virtual Reality, Augmented Reality, IoT, Robotics.

UNIT - V		Lecture Hrs: 4

Innovation: Meaning - Stages of Innovation Life cycle – Types of Innovations - Innovation as a knowledge-based process – Innovation and competitive advantage.

Textbooks:

1. Managing Innovation -,By Joe Tidd, John Bessant & et.al., Wiley India Publishers, New Delhi, Third Edition.

2. Introduction to Industry 4.0 and Industrial Internet of Things by Prof.SudipMisra, IIT Kharagpur.

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(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Reference Books:
1. Alasdair Gilchrist. Industry 4.0: The Industrial Internet of Things, A press Publications.
Online Learning Resources:
http://assets.press.princeton.edu/chapters/s9221.pdf   https://www.researchgate.net/profile/Joe-Tidd/publication/285052130_Managing_Innovation/links/5662e4a508ae418a786b8dd8/Managing-Innovation.pdf

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Skill Oriented Course		L	T	P	C
	DATA ANALYTICS LAB		**0**	**1**	**2**	**2**
21E00208						
		Semester		**II**		

Course Objectives:

- To explain the procedure in creation of company, ledger accounts and to explore, present financial statements of an business organization
- To give knowledge on using of various financial tools to take long term investment decision
- To demonstrate the process of storing, retrieving the data relating to employees, dealers, customers and consumers in an effective and efficient way
- To impart the knowledge on Systems and MIS and process of designing the MIS in an organization.

Course Outcomes (CO): Student will be able to

- Demonstrate the creation of company, ledger accounts, explore and export financial statements
- Exhibit the calculation of cost of capital and discounting factor techniques in long term investment decision.
- Store and retrieve the data relating to dealers, customers and consumers based on products, geographical criteria.
- Present the data in the form of pivot tables, graphs and charts in effective and efficient way
- Construct and present employee salary administration in an organization in an informative manner.
- Understand information system in the organization, design of MIS and also internet and the tools used in Internet.

List of Experiments:

Unit – 1

Introduction to Excel- Cells – name range – references – Creating and editing worksheets-Cell formatting-Creating and using formulas and functions-Use of Macros –Sorting and querying data-Working with graphs and charts – usage of Paste special

Unit – 2

Basis of Excel: Managing Worksheets and Workbooks. - Worksheet Vs. Workbook - Creating new worksheets and workbooks - Deleting worksheets and workbooks -Naming and renaming a worksheet - Toggling between worksheets and workbooks - Copy and Move Worksheets - Hide, Unhide, Group and Ungroup Cells -Hide and Unhide Worksheets -Save and Save As

Unit – 3

Advanced Excel : Cell Referencing - Data Validation- Naming a Cell or Range of Cells (Name Manager).- Basic formulas (SUM, COUNTA, AVERAGE, MAX, MIN). Text Functions (RIGHT, LEFT, MID, SUBSTITUTE, FIND, LEN). Date Functions (TODAY, NOW, DAY, MONTH, YEAR, EDATE, EOMONTH, TEXT).

Unit – 4

Advanced Excel II : Lookup Functions (VLOOKUP, HLOOKUP, MATCH, INDEX). - Logical Functions (IF, AND, OR). -Data Analysis Functions (SUMIF, SUMIFS, COUNTIF, COUNTIFS).-Conditional Formatting, Filtering and Sorting. - Graphs, Charts and Pivot Tables remove duplicates

Unit – 5

Conducting Online surveys – usage of Google drive – micro soft online surveys – sharing with the help of social media/ internet- getting responses from online survey- sorting and filter online survey

References:

- Ms Office Excel-Frye, PHI publications
- Ms Office Access- Step by step, PHI publications

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

• SPSS User manual
Online learning resources/Virtual labs: https://www.coursera.org/specializations/excel https://www.coursera.org/specializations/everyday-excel https://www.coursera.org/learn/excel-basics-data-analysis-ibm

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Strategic Management	L	T	P	C
21E00301		4	0	0	4
	Semester	III			

Course Objectives:
- To describe and discuss the strategic management process.
- To build skills to develop strategic vision, mission objectives.
- To explain concepts of core competence, strategy for completive advantage.
- To give an understanding about strategic analytical tools and techniques.
- To provide knowledge on strategy formulation, types of strategies to implement.
- To create awareness on various strategy evaluation and controlling approaches.

Course Outcomes (CO): Student will be able to
- Know strategic management process
- Obtain strategy implementation, analytical and evaluating skills about various strategies.
- Understand on establishing strategic controls at national and international context

UNIT - I		Lecture Hrs: 8

Introduction- Concepts in Strategic Management, Strategic Management as a process – Developing a strategic vision, Mission, Objectives, Policies – Factors that shape a company's strategy – Environmental Scanning -Concepts of Core Competence, Crafting a strategy for competitive advantage.

UNIT - II		Lecture Hrs: 12

Strategic Analysis and Choice: Tools and techniques- Porter's Five Force Model, BCG Matrix, GE Model, SWOT Analysis and TOWS Matrix,. Market Life Cycle Model - and Organizational Learning, and the Experience Curve.

UNIT - III		Lecture Hrs:12

Strategy Formulation : Formulation of strategy at corporate, business and functional levels. Strategy Alternatives:- Stability Strategy, Growth Strategy, Retrenchment Strategy, and Combination Strategy, .

UNIT - IV		Lecture Hrs:12

Strategy Implementation : Types of Strategies : Offensive strategy, Defensive strategy, vertical integration, horizontal strategy; Tailoring strategy to fit specific industry and company situations, Strategy and Leadership, Resource Allocation as a vital part of strategy – Planning systems for implementation

UNIT - V		Lecture Hrs:12

Strategy Evaluation and control – Establishing strategic controls - Role of the strategist - benchmarking to evaluate performance - strategic information systems – Guidelines for proper control- Strategic surveillance -strategic audit - Strategy and Corporate Evaluation and feedback in the Indian and international context.

Textbooks:
1. Strategic Management – J.S.Chandan & Nitish sen Gupta, Vikas

Reference Books:
- Strategic Management Concepts and Cases ,Fred R.David, PHI.
- Strategic Management,Hill, Ireand, manikutty, Cengage.
- Concepts in Strategic Management and Business Policy,Wheelen & Hunger, Pearson Education.
- Strategic Management – Text and Cases, V.S.P. Rao, Excel.
- Strategic Management, Ireland, Hoskinsson, Hitt, Cengage.
- Strategic Management – Theory and Application, Habergerg, Rieple, oxford .
- Strategic Management, P. SubbaRao, Himalaya.

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

- Business policy and strategic management, Sukul Lomash, P.K.Mishra, Vikas

Online Learning Resources:

http://rizvihmct.com/wp-content/uploads/2017/02/Semester-VI-strategic-managment.pdf

https://sgp1.digitaloceanspaces.com/cakart/5929/study_contents/Chapter_1__Introduction_to_Strategic_Management.pdf

https://old.mu.ac.in/wp-content/uploads/2014/04/Introduction-to-Strategic-Management-book.pdf

https://www.cimaglobal.com/Documents/ImportedDocuments/cid_tg_strategic_analysis_tools_nov07.pdf.pdf

https://resources.saylor.org/wwwresources/archived/site/wp-content/uploads/2013/09/Saylor.orgs-Strategy-Formulation.pdf

https://resources.saylor.org/wwwresources/archived/site/wp-content/uploads/2013/04/BUS300-2.3_Strategy-Formulation.pdf

https://static.careers360.mobi/media/uploads/froala_editor/files/Strategy-Implementation-and-Control.pdf

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Data Visualization	L	T	P	C
21E04301		4	0	0	4
	Semester	III			

Course Objectives:
- To explain the significance of data, basic concepts of Data Visualization(DV).
- To give knowledge on dashboard designing, data discovery, exploration, bid data lake and pitfalls of data visualization.
- To familiar with DV techniques and procedure to create, add and edit features for effective visualization of data.
- To impart knowledge on Data Visualization Tools focusing on TABLUE, Power BI and Qlikviews.

Course Outcomes (CO): Student will be able to
- Understand importance of data, analyzing, reasoning about data through visualizations.
- Study more insights of the data for effective decision making.
- List out properties of DV, goals, functions and framework of DV.
- Gain knowledge on dashboard designing, data discovery, exploration, bid data lake and pitfalls of data visualization
- Acquire knowledge on DV tools TABLEAU, Power BI and Qlikviews to explore meaningful and insightful information in the data.
- Compare and contrast TABLEAU, Power BI and Qlikviews.

UNIT – I		Lecture Hrs: 8

Introduction: Data Visualization Definition, Graphics and Computing, History ofDataVisualization,AnalyzingMilestoneData,GoalsofDV,FunctionsofDataVisualization,FrameworkofDataVisualization,StagesofDataVisualization,Properties of Data Visualization

UNIT – II		Lecture Hrs: 12

Dashboard: Design principles, Dashboards, SOC Dashboard, Data Discovery and Exploration, Data requirements for visualization, Big Data Lake, Pitfalls of Data visualization.

UNIT – III		Lecture Hrs:12

Data Visualization Techniques &Visualization data: Creatinga Scatterplot, Addingregressionline to the scatter plot, plotting categories, Labelling the graph, Legend Layouts,creatingafacet,theming,Creatingbarcharts,Violinplots,densityplots,BasicGraphics,thegrammarofGraphics&ggplot2package(usingqplot(),usingGeometrics, facets, scaling, Themes and other graphics Transformation), figures with multiple plots.

UNIT – IV		Lecture Hrs:12

DataVisualizationTool: Tableau,GettingstartedwithTableau,Creatingbasiccharts,Creatingcommonvisualizations•Creatingdashboardlayouts,Usingdashboardfilters,Creatingcalculatedfieldsandmeasures•UsingQuickTablecalculations.

UNIT – V		Lecture Hrs:12

DataVisualizationTools:PowerBI&Qlikview: GettingstartedwithPowerBi-UploadingdatatoPowerBI-IntroducingQuickInsights-Introductiontoreports-IntroducingVisualInteractions-Decoratingthereport -Savingthereport-Pinning a report-Filtering a report – Introduction to Qlikview – difference between Qlik, Power BI &Tableau

Textbooks:

1.ColeNussbaumerKnaflic,"StorytellingWithData:ADataVisualizationGuideforBusinessProfessionals",Wileypublications

2. KieranHealy,"DataVisualization-APracticalIntroduction",PrincetonUniversityPress.

3. ScottBerinato,"GoodCharts:TheHBRGuidetoMakingSmarter,MorePersuasiveDataVisualizations", 2016.,

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

4. ClausO.Wilke,"FundamentalsofDataVisualization",O'ReillyMedia,Inc.

Reference Books:
• Anderson,Melissa.2017."DataVisualizationandthe9FundamentalDesignPrinciple.   • AlbertoFerrari&MarcoRusso,"IntroducingMicrosoftPowerBI",Microsoftpress,ISBN:9 78-1-5093-0228-4
Online Learning Resources:
https://www.datavis.ca/papers/hbook.pdf   https://cs.stanford.edu/degrees/phd/cs300/jeffrey-heer.pdf   http://byrneslab.net/classes/biol607/readings/Friendly_2008_dataviz_history.pdf   http://euclid.psych.yorku.ca/www/psy6135/lectures/History-2x2.pdf   https://online.hbs.edu/blog/post/data-visualization-techniques   http://www.ajtmr.com/papers/Vol11Issue1/Vol11Iss1_P4.pdf   https://www.sas.com/content/dam/SAS/en_us/doc/whitepaper1/data-visualization-techniques-106006.pdf   https://datos.gob.es/sites/default/files/doc/file/data_visualization_tool_report.pdf   https://creconline.org/wp-content/uploads/2016/10/Data-Visualization-with-Tableau-Presentation.pdf   https://wmich.edu/sites/default/files/attachments/u1158/2019/Tableau%20WMU_2.pdf   https://ecampusontario.pressbooks.pub/app/uploads/sites/73/2019/02/Tableau-tutorial.pdf   https://www.mukpublications.com/resources/sma%20v25-1-18-final.pdf   https://cedar.princeton.edu/sites/g/files/toruqf1076/files/media/introduction_to_tableau_training_0.pdf   https://smetricinsights.com/wp-content/uploads/2021/03/Tableau-VS-QlikView-VS-Power-BI-2019-Update.pdf

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Predictive Analytics	L	T	P	C
21E04302		**4**	**0**	**0**	**4**
	Semester		III		

Course Objectives:
- To explain concept of analytics and types of analytics
- To impart knowledge on predictive methods of qualitative data
- To infuse knowledge on methods to predict quantitative data
- To discuss document structure, style and document preparation tools

Course Outcomes (CO): Student will be able to
- Understand analytics and classification
- Acquire theoretical and practical knowledge on qualitative and quantitative methods
- Predict future value on time series data using moving averages and least squares
- Demonstrate presentation skills on document preparation , types of documents
- Write research or review papers in prescribed format using MS office

UNIT – I		Lecture Hrs: 8

Introduction to Predictive analytics: Definition of Analytics advantage and limitation of analytics – Definition of predictive analytics –Introduction to Descriptive analytics, Predictive analytics, Prescriptive analytics (theory only) - Applications and limitation of predictive analytics.

UNIT – II		Lecture Hrs: 12

Forecasting with Qualitative methods: Meaning of Qualitative forecasting – Methods of Qualitative forecasting – Criteria to select method of forecasting - Application areas of Qualitative methods - Differentiation between Qualitative and Quantitative forecasting methods.

UNIT – III		Lecture Hrs:12

Linear Regression: Correlation and Regression - Charting the Relationship - Calculating Pearson's Correlation Coefficient- Simple Regression – Array - Entering Formulas- Multiple Regression - LINEST() function with Multiple Predictors - Using Excel.

UNIT – IV		Lecture Hrs:12

Forecasting with Moving Averages: About Moving Averages – Types of moving averages Signal and Noise- Lost Periods -Smoothing Versus Tracking - Criteria for Judging Moving Averages - Mean Absolute Deviation - Least Squares – Using Excel.

UNIT – V		Lecture Hrs:12

Working with Documents: Defining purpose and scope documents, Understanding structure of documents – case studies, articles, white papers, technical reports, minutes of meeting Documentation formats and Styles. Document preparation tools – PowerPoint, Word, Excel.

Textbooks:
1. Camm/cochran/fry/ohlmann/anderson/sweeney/williams, "Essentials of Business analytics descriptive predictive prescriptive", cengage publishing house.(Student's Handbook for Associate Analytics - III).

Reference Books:
- Eric Siegel, "Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, or Die Paperback – Illustrated, January 20, 2016", Wiley Publications.
- Conrad Carlberg, "Predictive Analytics: Microsoft Excel Paperback – Illustrated, July 2, 2012".
- Kotu, Vijay, BalaDeshpande, "Predictive Analytics and Data Mining: Concepts and Practice with RapidMiner", 1st Edition**.**

Online Learning Resources:

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
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MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

https://www.youtube.com/channel/UCLI5I1QwKqQn0Cf4nzdGKeQ/search?query=predictive%20analyics
https://www.youtube.com/channel/UCfrjJZDwYwfMNUkWWuqzPWQ/search?query=predictive%20analytics
https://www.predictiveanalyticsworld.com/book/pdf/Predictive_Analytics_by_Eric_Siegel_Excerpts.pdf
https://bvrithyderabad.edu.in/wp-content/uploads/2018/03/PredictiveAnalytics-HANDOUTS.pdf
https://mycourses.aalto.fi/pluginfile.php/1168274/mod_resource/content/1/PredictiveAnalytics-Part1-2020.pdf
https://mirtech.ir/wp-content/uploads/2018/04/Predictive-Analytics.pdf
https://ncss-wpengine.netdna-ssl.com/wp-content/themes/ncss/pdf/Procedures/NCSS/Logistic_Regression.pdf
https://www.stat.cmu.edu/~cshalizi/uADA/12/lectures/ch12.pdf
https://www.nemoursresearch.org/open/StatClass/January2011/Class8.pdf
https://ftp.idu.ac.id/wp-content/uploads/ebook/ip/REGRESI%20LOGISTIK/Practical%20Guide%20to%20Logistic%20Regression%20(%20PDFDrive%20).pdf
https://www.analyticsvidhya.com/blog/2016/02/guide-build-predictive-models-segmentation/
http://www.cpdftraining.org/downloads/Levenbach_Techniques2017.pdf
https://www.influxdata.com/time-series-forecasting-methods/

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Marketing Analytics	L	T	P	C
21E04303		**4**	**0**	**0**	**4**
Semester		**III**			

Course Objectives:	

- To explain basic concepts in marketing
- To impart knowledge on analyzing consumer and business markets
- To infuse knowledge on pricing strategies and promotional strategies
- To elucidate marketing analytics tools and techniques using excel
- To provide knowledge on demand forecasting tools using excel
- To inject knowledge on tools to recommend buying a product and placing a product

Course Outcomes (CO): Student will be able to

- Understand various concepts of marketing
- Implement promotional strategies and pricing strategies for a product
- Classify and predict type of customers using excel
- Compute customer life time value for a product of a company
- Know the tools to recommend buying a product and placing a product

UNIT – I		Lecture Hrs: 8

Understanding Marketing Management: Concepts of marketing, Marketing environment, Marketing Mix, Product life cycle, Analyzing competitors , Conducting marketing research , Creating long term loyalty relationship.

UNIT – II		Lecture Hrs: 12

Connecting With Customers : Analyzing consumer & Business Markets, Segmentation Targeting & Positioning (STP) , New product development , Developing pricing strategies , Advertising & Sales promotion

UNIT – III		Lecture Hrs:12

Marketing Resources Using Excel : Conjoint analysis **,** Market segmentation using cluster analysis , Allocation of marketing resources customer acquisition and retention, Calculating Customer Life time value (CLTV) using RFM Analysis.

UNIT – IV		Lecture Hrs:12

Demand forecasting using Excel : Modelling trend and seasonality , usage of neural networks , forecasting new product sales - Bass Diffusion model, Nonlinear pricing - Price bundling. (Theory Only)

UNIT – V		Lecture Hrs:12

Recommendation Systems : Classification trees , market basket analysis, Information filtering system – Content based , Collaborative filtering.

Textbooks:
1. Wayne L.Winston (2014), Marketing Analytics, Wiley India Private Ltd.
2. Rajkumar Venkatesan, Paul Farris, Ronald T.Wilcox (2015), Cutting-Edge Marketing Analytics, Pearson.

Reference Books:
1. Gordon S.Linoff, Michael J.A.Berry (2017), Data Mining Techniques for marketing, Sales and Customer Relationship Management, Wiley India Private Ltd.
2. Lilien, Gary L., Arvind Rangaswamy and Arnaud De Bruyn (2013), Principles of Marketing Engineering, Second Edition, published by DecisionPro, Inc.
3. U.Dinesh Kumar (2017) Business Analytics, Wiley India Private Ltd.

Online Learning Resources:

http://www.personal.psu.edu/jxb14/MA/Introduction.pdf
https://engage.marketo.com/rs/460-TDH-945/images/definitive-guide-to-marketing-metrics-marketing-analytics.pdf
https://cdn2.hubspot.net/hub/53/blog/docs/ebooks/introduction-to-marketing-analytics.pdf
https://www.youtube.com/channel/UCgp23vdLNaUitOkCxxVnRrg/search?query=marketig%20analytocs
https://www.google.co.in/books/edition/Marketing_Analytics/w5iOAgAAQBAJ?hl=en&gbpv=1&dq=marketing+analytics+pdf&printsec=frontcover

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Financial Analytics	L	T	P	C
21E04304		**4**	**0**	**0**	**4**
	Semester		III		

Course Objectives:

- To explain concept of financial analytics and investments
- To impart knowledge on securities trading and settlement mechanism
- To discuss concept of mutual fund , trends and stock market indices
- To impart knowledge on derivatives and role of derivatives in Indian economy
- To infuse information on charts and graphs to predict the share value
- To discuss tools and techniques for predicting market price of a share

Course Outcomes (CO): Student will be able to

- Understand concept of financial analytics and investments
- Acquire knowledge on securities trading and settlement mechanism
- know the concept of mutual fund , trends and stock market indices
- Aware of on derivatives and role of derivatives in Indian economy
- Demonstrate and practice charts and graphs to predict the share value
- Compute in predicting market price of a share using indicators

UNIT – I		Lecture Hrs: 12

Introduction to financial and investment analytics:

Meaning, scope, importance of financial analytics-Introduction to Investment - Investment, Speculation and Gambling, Features of Investment, Investment Avenues - Securities Market of India – Securities Trading, and Settlement – Types of Orders - Margin Trading.

UNIT – II		Lecture Hrs: 12

Performance Evaluation:

Mutual Funds, Types of Mutual Funds Schemes, Structure, Trends in Indian Mutual Funds,Net Asset Value - Introduction to AMFI - Brief Induction to Indian Stock Market Indices –BSE – NSE – NIFTY - Bank Nifty (Theory Only)

UNIT – III		Lecture Hrs:12

IntroductiontoDerivatives: DevelopmentandGrowthofDerivativeMarkets,BriefIntroductiontoForward– Futures–Options- Option types,UsesofDerivatives,Derivativemarkets - MCX-FOREX–INDEX– StockOptions,TheRoleofDerivativesMarketinIndia-(Theory only)

UNIT – IV		Lecture Hrs:12

Technical Analysis 1: Chart Patterns Candle Stick reading using open source websitestrading view/money control :

Brief Over view of Chart Screen- loading charts from trading view/ Money Control website -Candle stick structure - doji – hammer - reversal patterns- Low-Close Doji (LCD)- GapsPatterns- Continuation Pattern- Wedges, Triangles, and Pennants- M tops- W Bottoms- Stockmarkettechnicalterminologies-CurrentMarketPrice–TargetPrice–Stop Loss- – Carry forward trading – BTST- STBT.

UNIT – V		Lecture Hrs: 08

Technical Analysis 2: Indices and Technical Indicators using trading view/money controlwebsites :

Why use indicator - Tips for using indicators-Set up, understanding, use ofthetechnicalIndicators – RSI – bollinger bands - Pivot Levels – super trends- MACD- Rain bow (LiveData only) - Scalping – Intraday Trading – Positional Trading – Retail Trader -FII -DIIin stock market

Textbooks:

1. Mastering the Stock Market: High Probability Market Timing and Stock SelectionTools by John L. Person Wiley trading
2. Investment Analysis and portfolio management, Chandra, Tata McGraw Hill .

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Reference Books:
• Investment, Bodie, McGraw Hill Book Company
• Investment Management,V.K.Balla, S.Chand Company LtdSecurity Analysis andPortfolio Management ,PunithavathyPandian, Vikas

Online Learning Resources:
https://josephscollege.ac.in/lms/Uploads/pdf/material/IAPM.pdf
https://www.ugc.ac.in/pdfnews/5897894_Bachelor-of-Business-Administration--_Financial-Investment-.pdf
http://www.csun.edu/~zz1802/Finance%20303/Web-Stuff/Lecture-Notes-Mid1.pdf
https://leeds-faculty.colorado.edu/Bhagat/Evaluating-MFunds.pdf
https://redox-college.s3.ap-south-1.amazonaws.com/kmc/2020/Apr/18/K7QYwjlultBb0xge1tM4.pdf
https://www2.karlin.mff.cuni.cz/~kopa/derivatives.pdf
http://www.caaa.in/Image/05_derivatives.pdf
https://icmai.in/Knowledge-Bank/upload/Financial-Derivatives.pdf
https://www.stat.purdue.edu/~wang913/Projects%20and%20Talks/Technical%20Analysis%201.pdf
https://srcc.edu/sites/default/files/B.Com(Hons)_IIIyearVIsem_FundamentalsofInvestments_Week2_DrKanuJain.pdf
https://www.fidelity.com/bin-public/060_www_fidelity_com/documents/learning-center/Idenitfying-Chart-Patterns.pdf
https://www.elearnmarkets.com/uploads/content_pdf/MxudjQevBU.pdf
https://ifta.org/wp-content/uploads/2018/05/technicalhandbook_2018_NTAA.pdf
https://zerodha.com/varsity/wp-content/uploads/2015/05/module2.2.pdf

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Human Capital Analytics	L	T	P	C
21E04305		**4**	**0**	**0**	**4**
	Semester		**III**		

Course Objectives:
- To explain basic concepts in human resource management and role of HR manager
- To impart knowledge on HR analytics , HR data sources
- To explain models for predicting effectiveness of HRM system
- To discuss importance of HR analytics and scope of big data in HR
- To elucidate methods of performance appraisal system
- To explain and demonstrate dashboard creation on HR data in Excel

Course Outcomes (CO): Student will be able to
- Understand concepts in human resource management and role of HR manager
- Obtain knowledge on HR analytics , HR data sources
- Know the models for predicting effectiveness of HRM system
- Aware of methods of performance appraisal system
- Exhibit skills in creating dashboard on HR data in Excel

UNIT – I		Lecture Hrs: 8

Introduction : Meaning of HR and HRM, Objectives of HRM, Nature & Scope of HRM, Significance of HRM and Functions of HRM

UNIT – II		Lecture Hrs: 12

Motivation for studying HR analytics, emergence of HR analytics, skills require for HR Analytics, Advantages of HR Analytics, Making the Best use of HR Analytics, Challenges to HR Analysts

UNIT – III		Lecture Hrs:12

Employee Data and sources: Importance of data availability and governance, Employee primary sources, Employee data secondary sources, HRMS/HRIS and data sources; Analytics frame works like LAMP, HCM:21 Model.
Types of Analytics, pitfalls of HR Analytics, Future of HR Analytics, The scope of big data in HR Analytics

UNIT – IV		Lecture Hrs:12

Annual Stock taking: Stock taking of performance -Uses –Appraisal system design : Process and approaches - Appraisal methods - MBO and Assessment centre -360 degree appraisal - Balanced score card. Stock taking of potential- Appraisal for reward - Appraisal for Recognition

UNIT – V		Lecture Hrs:12

Important excel formulas useful for creating dash boards, VLOOKUP, INDEX, SUMIF, AVERAGEIF and COUNTIF, Application of Excel Functions in creating HR dash boards, calculation of employee salary and Incentives.

Textbooks:
1. Moore, McCabe, Duckworth, and Alwan. "The Practice of Business Statistics: Using Data for Decisions", Second Edition, New York: W.H.Freeman, 2008.
2. Jac Fitz- enz, John R. Mattox, II, "Predictive analytics for Human Resources" , Wiley Publications, 2014.
3. Gene Pease Boyce Byerly, Jac Fitz-enz, " Human Capital Analytics", Wiley Publications,2013.

Reference Books:
Brian E. Becker, Mark A. Huselid, Mark A Huselid, David Ulrich, "The HR Scorecard: Linking People, Strategy, and Performance", **Harvard Business Review Press; First edition (1 March 2001.**

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Tracey Smith, "HR Analytics: The What, Why and How".
Jac FITZ-ENZ "The New HR Analytics: Predicting the Economic Value of Your Company's Human", 2010.

Online Learning Resources:

https://www.oracle.com/assets/045039.pdf
https://www.aihr.com/resources/The_Basic_principles_of_People_Analytics.pdf
http://u.camdemy.com/sysdata/doc/f/fb30e8a98c5d9a85/pdf.pdf
https://support.sas.com/publishing/pubcat/chaps/65636.pdf

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	General Elective- II (MOOCS)	L	T	P	C
21E00307a	**Entrepreneurship Development**	**2**	**0**	**0**	**2**
	Semester		**III**		

Course Objectives:
- To educate in preparation of business plan, contents and effective presentation of business plan.
- To explore and Generate new business opportunity,
- To explain and discuss strategies for Decisions under Uncertainty and environment instability, Risk Reduction strategies, Market scope strategy & Imitation strategies
- To educate on Women entrepreneurship focusing on Rural Entrepreneurship and Entrepreneurship Development Programmes (EDPs) to transform as entrepreneur.

Course Outcomes (CO): Student will be able to
- Undertake new business ventures with new creative business plan models, contents and effective presentation of business plan.
- To apply various strategies for decisions under different scenarios to reduce risk.
- Analyse challenges faced by Women entrepreneurship focusing on Rural Entrepreneurs
- Know the need of Entrepreneurship Development Programmes (EDPs) to transform as entrepreneur with case studies.

UNIT – I	Lecture Hrs: 4

Nature and Forms of Entrepreneurship: Features - Entrepreneur's competencies, attitude, qualities, functions. Entrepreneurial scenario in India and Abroad. Small Business, Importance in Indian Economy, Types of ownership, sole trading, partnership, Important features of various types of businesses - corporate entrepreneurship, Intrapreneurship - Role of Government in the promotion of Entrepreneur.

UNIT – II	Lecture Hrs: 6

Project Planning and Feasibility Studies: The Concept of Project, Project Life Cycle - Project Planning, Feasibility – Project proposal & preparation of DPR (detailed project report).

UNIT – III	Lecture Hrs:6

Aspects of the Entrepreneurship: Idea generation – opportunities - SWOT Analysis - patents and trademarks, Intellectual Property Rights. Source of Capital, Debt capital, seed capital, venture capital - Informal Agencies In financing entrepreneurs, Technology and business incubators.

UNIT – IV	Lecture Hrs:6

Entrepreneurial Strategy: Generation of new business opportunity, Decisions under Uncertainty, entry strategy, environmental instability - Risk Reduction strategies, Market scope strategy- Imitation strategies

UNIT – V	Lecture Hrs:6

Women and Rural Entrepreneurship and EDPs: Scope-Challenges faced by women entrepreneurs, Institutions supporting women entrepreneurs. Successful cases of women entrepreneurs.-Need, Rural Industrialization – Role of NGO's – Organising EDPs – Need, Objectives, Evaluation of Entrepreneurship Development Programmes.

Textbooks:

1. The Dynamics of Entrepreneurial Development and Management, Vasanth Desai, Himalaya.
2. Entrepreneurship Development & Small Business Enterprises – Second Edition, Poornima M.Charantimath , Pearson

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Reference Books:

- Entrepreneurial Development, S. Chand and Company Limited, S.S. Khanka, .
- Fundamentals of Entrepreneurship, H. Nandan, PHI.
- Entrepreneurship, 6/e, Robert D Hisrich, Michael P Peters, Dean A Shepherd, TMH.
- Entrepreneurship – New venture Creation, Holt, PHI.
- Entrepreseurship- Successfully Launching New Ventures, Barringer, Ireland, Pearson.
- Entrepreneurship, Roy, Oxford.

Online Learning Resources:

https://www.tutorialspoint.com/entrepreneurship_development

https://swayam.gov.in ----Entrepreneurship Development

https://leverageedu.com/blog/entrepreneurship-development

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	General Elective- II (MOOCS)	L	T	P	C
21E00307b	PROJECT MANAGEMENT	2	0	0	2
	Semester	III			

Course Objectives:
- To explain communication concepts
- To develop the students' competence in communication at an advanced level.
- To demonstrate communication skills viz., listening, speaking, reading and writing with teaching aids.

Course Outcomes (CO): Student will be able to
- Understand the communication concepts and
- Improve communication and competence skills
- Obtain and apply proficiency in business communication at the workplace and professional contexts.

UNIT – I	Lecture Hrs: 4

Project management: meaning of project, project management, nature of projects , project management system, project life cycle , project management process.

UNIT – II	Lecture Hrs: 6

Project analysis : types of analysis –technical analysis, economic analysis, financial analysis , sensitivity analysis, social analysis, institutional analysis

UNIT – III	Lecture Hrs:6

Organizing system and processor for project implementation: working of system, design of system, project work system design, work breakdown structure , project execution plan , project procedure manual

UNIT – IV	Lecture Hrs:6

Project risk management: Concept of risk , five stage process in risk management , types of risks , Project risk management – an integrated approach Project risk analysis and management (PRAM)

UNIT – V	Lecture Hrs:6

Monitoring and control: meaning of project monitoring , activities to monitor: project control, the essents of control, post evaluation approach: project benfit monitoring and evaluation-difference between monitoring and evaluation, project benfit monitoring methods :PBM methods-PBM reports-scheduling PBM activities-project completion-impact evaluation

Textbooks:
1. Project management: vasant desai,Himalaya publishing house,edition 2008.

Reference Books:
1. Project management: jack gido, penna state university,edition 2007.
2. Project management : s. chowdary publishers,copyrights1998,by mcgraw hill education pvt ltd.
3. Project management : jeffie k .pinto ,Indian edition ,published by dorling Kindersley india pvt ltd 2009.
4. Project planning scheduling & control: james p .lewis, tata mcgraw hill education pvt ltd.Third edition 2009

Online Learning Resources:

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
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MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

https://archive.nptel.ac.in/project management

https://aims.education/project-management-lecture-notes

https://www.coursera.org/courses?query/project management

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(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	General Elective- II (MOOCS)	L	T	P	C
21E00307c	**BUSINESS ETHICS AND CORPORATE GOVERNANCE**	**2**	**0**	**0**	**2**
	Semester		**III**		

Course Objectives:
- To introduce concept of business ethics, corporate ethics, theories, models and approaches for decision making and ethics in competitive business.
- To Explain role of ethics in business competition.
- To make clear on ethical aspects in various functional areas in the organizations.
- To impart knowledge on Corporate Governance, structure, theories, philosophies and Corporate Social Responsibility (CSR).

Course Outcomes (CO): Student will be able to
- Understand concepts of business ethics, corporate ethics, theories, models and approaches for decision making and ethics in competitive business.
- Recognize the role of ethics in business competition.
- Learn and apply ethical aspects in various functional areas in the corporate business.
- Know Corporate Governance, structure, theories, philosophies and Corporate Social Responsibility (CSR).
- Classify the stakeholders in CSR and correlate CSR with ethical aspects of business.

UNIT – I	Lecture Hrs: 4

Business Ethics:- Ethics meaning, need, scope, nature, importance, functions, need and purpose of business ethics, approaches to business ethics, source of ethical knowledge for business. Evolution of business ethics, Ten popular myths about business ethics, ethical dilemmas ,code of conduct in business, some major unethical business practices.

UNIT – II	Lecture Hrs: 6

Theories of ethics :- Ethical approaches, modern decision making, ten amendments , Aristotle theory of Golden mean, theory of consequentialism, Right Albert Carr's theory of business ethics, W.D Ross seven prima facie duties(rules); Concept of Justice – Types of justice ; Indian Ethos: Advaita vedanta (Shankara), Visishtadvaita Philosophy (Ramanuja), Gandhian Ethics, Ethics of Bhagavat githa, Moral standards in Indian Ethics.

UNIT - III	Lecture Hrs:6

Ethical aspects in Organization:- Ethics issues in marketing and advertisement, Ethical issues in finance and accounting, Ethical issues in HRM, Production and operations management, information technology, Combating frauds, Cyber crime, Whistle blowing., professional ethics and human values, Decision making and types of business companies, Josephson's six Pillars of Character and Business Decision making,

UNIT - IV	Lecture Hrs:6

Corporate Governance:- Purpose- Theories and Philosophies of Corporate Governance, Nature, Characteristics and purpose of corporate governance, Theories of corporate governance, Principles, corporate governance codes and practices.
Share holders- Rights and Protection, issues in corporate governance, The Emerging Trend in corporate governance.

UNIT - V	Lecture Hrs:6

CSR(Corporate Social Responsibility):- Needs, types and nature of social responsibilities, history and evolution of corporate governance in India, Salient features, Structure and Standards of corporate governance in India, Models of corporate governance

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Textbooks:
1. Business Ethics and Corporate Governance –A.C. Fernando, PearsonEducation.

Reference Books:
• "Perspectives in Business Ethics", Laura P Hartman, Tata McGrawHill. • Ethics in management and Indian Ethos, Biswanath Ghosh,Vikas • Bob Tricker, Corporate Governance, Oxford. • Corporate Governance and Social responsibility, Balachandran, Chandrasekharan,PHI • Business Ethics -Concepts and Cases,Weiss,Cengage. • Business Ethics, Himalaya,C.S.V.Murthy. • Ethical Management, Satish Modh,Mcmillan.

Online Learning Resources:
https://ddceutkal.ac.in/Syllabus/BECG-MBA.pdf https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SBAA1503.pdf https://www.bimkadapa.in/materials/BECG%20-5-UNITS-PDF.pdf https://www.augstskola.lv/upload/CSR%20book_FINAL_01.2020.pdf https://www.himpub.com/documents/Chapter2975.pdf https://www.icsi.edu/media/webmodules/publications/EGAS-Final.pdf

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Business Simulation Lab	L	T	P	C
21E00308		**0**	**0**	**2**	**1**
	Semester		**III**		

Course Objectives:
- To expose the students to learn various online/ offline gathering of the data
- To understand various statistical tools including Excel
- To help the students to visualize using various tools including Excel
- To train them into their functional domains Marketing, Finance and HR
- To understand the basic data base system of MS Access

Course Outcomes (CO): Student will be able to
- To familiarize Students with basic to intermediate data gathering skills for using various tools
- To provide students hands on experience on various statistical Utilities
- To gain proficiency in creating solutions for Data Management and Reporting

UNIT – I	Lecture Hrs: 4

Gathering the data (Using Online/Offline)
Create questioner of Marketing/HR/revenant management stream – gathering primary data - Entering online survey data into excel – sorting and filtering the required shape – Colleting and entering the secondary data (Financial data/ balance sheets/stock data/ mutual fund data/Insurance Data)

UNIT – II	Lecture Hrs: 6

Statistical Analysis (Using Excel / SPSS / R-studio Open-Source Online tools)
Formulation of Hypothesis - Statistical Calculation of Uni Variable - Bi Variable – Multi variable – interpretation of the result

UNIT – III	Lecture Hrs:6

Visualization of Data (Using Excel/Power Bi/ Tableau Public/Other Open Source Visualization tools)
 Introduction Charts –Rules for Creating Charts- Labels- Title of the chart- Axis of the chart- Quick Layout- switch to row to column -changing the data – different types charts

UNIT – IV	Lecture Hrs:6

Database Creation : Data base creation in HR,FINANCE & MARKETING **,** Creating Sales Database – filtering the data – Create models using marketing data – Creating HR Data base – create model for HR data - Calculations of NPV, IRR

UNIT – V	Lecture Hrs:6

Introduction to MS- Access & SPSS: Overview of MS Access – getting started – tables – primary key – over view ribbon – creating data base . Overview of SPSS- Data entry and analysis – main features of SPSS Packages

Textbooks:
1. Glyn Davis & Branko Pecar "Business Statistics Using Excel" Oxford University Press.

Reference Books:
- David Whigham "Business Data Analysis Using Excel'' Oxford University Press.
- Winstion "Excel 2010 Data Analysis and Business Modelling" PHI Learning Private Limited.
- Bajpai "Business Statistics" Pearson.
- D P Apte : Statistical Tools for Managers USING MS EXCEL, Excel Books.

Online Learning Resources:

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

https://www.coursera.org/courses?query=microsoftexcel https://onlinecourses.nptel.ac.in
https://swayam.in/Advanced-excel
https://swayam.in/spss-lectures

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Experimental Learning Project	L	T	P	C
21E04309		**0**	**0**	**2**	**1**
	Semester		**III**		

Experiential learning project is a multifaceted assignment that serves as a group academic and intellectual experience. Students are required to take up a mini project work, in which the student or a team of maximum four students can choose any specific problem of Industry / Industry based project work / social problem that interests them. Student or team need to conduct research on the subject, maintain a portfolio of findings or results, create a final product demonstrating their learning acquisition or conclusions (as a paper, short film, or multimedia presentation), and give an oral presentation before the Project Review Committee consisting of Head of the Department, supervisor/mentor and two other senior faculty members of the department

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY ANANTAPUR
(Established by Govt. of A.P., ACT No.30 of 2008)
ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Big data Analytics	L	T	P	C
21E04401		**4**	**0**	**0**	**4**
	Semester	**IV**			

Course Objectives:
- To explain big data futures and classification of analytics
- To impart knowledge on analytics flow for big data and big data stack
- To elucidate big data tool using Hadoop
- To discuss security related aspects in big data
- To explain various application areas of big data

Course Outcomes (CO): Student will be able to
- Understand big data futures and classification of analytics
- Acquire knowledge on analytics flow for big data and big data stack
- Learn big data tool using Hadoop
- Aware of security related aspects in big data
- know the various application areas of big data

UNIT - I		Lecture Hrs:12

Introduction to Big Data: What is Analytics- Descriptive Analytics, Diagnostic Analytics, Predictive Analytics, Prescriptive Analytics. What is Big Data- Characteristics of Big Data- Volume, Velocity, Variety, Veracity, Value.

UNIT - II		Lecture Hrs: 12

Analytics flow and big data stack: Analytics Flow for Big Data- Data Collection, Data Preparation, Analysis Types, Analysis Modes, Visualizations, Big Data Stack- Raw Data Sources, Data Access Connectors, Data Storage, Batch Analytics, Real-time Analytics, Interactive Querying, Serving Databases, Web & Visualization Frameworks

UNIT - III		Lecture Hrs:12

Big Data -Hadoop: NoSQL, Comparison of SQL and NoSQL, Hadoop -RDBMS Versus Hadoop - Distributed Computing Challenges – Hadoop Overview - Hadoop Distributed File System - Processing Data with Hadoop - Managing Resources and Applications with HadoopYARN - Interacting with Hadoop Ecosystem

UNIT - IV		Lecture Hrs:12

Security in Big Data:Security, compliance, auditing, and protection pragmatic steps to securing/ big data - classifying data- protecting big data analytics- big data and compliance-the intellectual property challenge

UNIT - V		Lecture Hrs:08

Big Data Applications: Business Specification Examples of Big Data- Financial, Web, Healthcare, Internet of Things, Environment, Logistics & Transportation, Industry, Retail.

Textbooks:
1. AnandRajaraman and Jeffrey David Ullman, "Mining of Massive Datasets", Cambridge
2. University Press, 2012.
3. David Loshin, "Big Data Analytics: From Strategic Planning to Enterprise Integration with Tools, Techniques, NoSQL, and Graph", Morgan Kaufmann/El sevier Publishers, 2013.
4. Frank J. Ohlhorst, "Big data analytics Training Big Data in to big money", wiley publishing house Raj kamal, preetisaxena,"Big Data analytics", Tata Mcgraw hill publishing house

Reference Books:
1. EMC Education Services, "Data Science and Big Data Analytics: Discovering, Analyzing, Visualizing and Presenting Data", Wiley publishers, 2015.
2. Bart Baesens, "Analytics in a Big Data World: The Essential Guide to Data Science and itsApplications", Wiley Publishers, 2015.
3. DietmarJannach and Markus Zanker, "Recommender Systems: An Introduction", Cambridge University Press, 2010.

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Kim H. Pries and Robert Dunnigan, "Big Data Analytics: A Practical Guide for Managers " CRC Press, 2015.

Jimmy Lin and Chris Dyer, "Data-Intensive Text Processing with MapReduce", Synthesis Lectures on Human Language Technologies, Vol. 3, No. 1, Pages 1-177, Morgan Claypool publishers.

Online Learning Resources:
https://mrcet.com/downloads/digital_notes/IT/(R17A0528)%20BIG%20DATA%20ANALYTICS.pdf
https://people.cs.kuleuven.be/~joost.vennekens/DN/bigdata.pdf
http://www.diag.uniroma1.it//~rosati/dmds-1516/big-data-intro.pdf
https://www.studocu.com/in/document/apj-abdul-kalam-technological-university/big-data-analytics/big-data-analytics-module-3/29363497
https://www.coursehero.com/file/56423140/BDA-Unit-2-Notespdf/
https://www-users.cse.umn.edu/~kumar001/dmbook/ch8.pdf
https://www.studocu.com/in/document/apj-abdul-kalam-technological-university/big-data-analytics/big-data-analytics-module-2/29363495
https://www.studocu.com/in/document/tata-institute-of-social-sciences/big-data-analysis/unit-5-beyond-the-syll/11465888
https://pdfs.semanticscholar.org/51a9/e6e87e5760b04438c44ace999546b3446e61.pdf

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ANANTHAPURAMU – 515 002 (A.P) INDIA

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Supply Chain Analytics	L	T	P	C
21E04402		**4**	**0**	**0**	**4**
	Semester		**IV**		

Course Objectives:
- To explain concept of supply chain management , supply chain planning
- To provide knowledge role of analytics in supply chain
- To infuse theoretical knowledge on supply chain strategies , its development and demand forecasting
- To explain core components of supply chain analytics and types of supply chain analytics
- To enlighten knowledge on metrics and indicators for smooth functioning of supply chain
- To explain interrelationship of supply chain and ERP in internet market

Course Outcomes (CO): Student will be able to
- Understand concept of supply chain management , supply chain planning
- Obtain knowledge role of analytics in supply chain
- Get theoretical knowledge on supply chain strategies , its development and demand forecasting
- Know core components of supply chain analytics and types of supply chain analytics
- Identify metrics and indicators for smooth functioning of supply chain
- Aware of interrelationship of supply chain and ERP in internet market

UNIT - I		Lecture Hrs:12

Introduction to Supply Chain Management, Evolution of Supply Chain Management, Analytics in Supply Chain Management, Supply Chain Planning, Different views of Supply Chain.

UNIT - II		Lecture Hrs:12

Supply Chain Strategy, Supply Chain Drivers, Developing Supply Chain Strategy, Strategic Fit in Supply Chain, Demand Forecasting in Supply Chain.

UNIT - III		Lecture Hrs:10

Defining Supply Chain Analytics - A simple definition, The Three Core Components of Supply Chain Analytics, How Supply Chain Analytics Works, What Makes for Good Analytics, Types of Analytics.

UNIT - IV		Lecture Hrs:10

The Importance of Supply Chain Analytics - Big Data in the Supply Chain, Looking at the Benefits of Analytics. Understanding the Basics of Metrics and KPIs - Strategic Goals, Two Strategic Considerations.

UNIT - V		Lecture Hrs:12

Relation to ERP: E-procurement – E-Logistics – Internet Auctions – E-markets – Electronic Business Process – Optimization Business Object in SCM

Textbooks:
1. Peter W. Robertson, "Supply Chain Analytics: Using Data to Optimise Supply chain processes", Taylor & Francis publisher

Reference Books:

Online Learning Resources:

https://www.tutorialspoint.com/supply_chain_management/supply_chain_management_tutorial.pdf

https://www.youtube.com/watch?v=PmR2SKeY9Ms&list=PLGit8yny_3ANzZMsJJjeuxMg-S0f0hGcn&ab_channel=SupplyChainAnalytics

https://www.ddegjust.ac.in/2017/Uploads/11/POM-326.pdf

https://onlinecourses.nptel.ac.in/noc22_mg14/preview

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

Course Code	Project Work	L	T	P	C
21E04403		**0**	**0**	**20**	**10**
Semester		**IV**			

Students are required to take up a project work, in which the student can choose any specific problem of Industry or Industry based project work. Alternatively it can be secondary source based or Field based project work. Before the commencement of the project work each student is required to submit a synopsis indicating the objectives, Methodology, Framework for analysis, Action plan with milestones in order to have clarity for the subsequent work. The project should have an internal faculty as guide. The student shall initiate project work immediately after II semester and evaluation shall take place in IV semester

References:

Business Essentials: *Research Project*, Viva.
- Paul Oliver:Writing Your Thesis, Sage.
- M.K.Rampal&S.L.Gupta: Project Report Writing, Paragon International.
- Michael Jay Polonsky: David S Waller: Designing and Managing a Research Project, Sage.
- Surendra Kumar: An Aid to Project Work, Paragon International.