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	Data Management Systems/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.	21E04202	Quantitative Methods for Managers	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.	21E01202	R- Programming & Applications	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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SEMESTER - III

S.No.	Course codes	Course Name	Category	L	T	P	Credits
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	21E00307a 21E00307b 21E00307c	**General Elective – II** (MOOCS) Entrepreneurship Development Project Management Business Ethics & Corporate Governance	GE	2	0	0	2
8	21E00308	Business Simulation Lab	LC	0	0	2	1
9	21E00309	Experiential Learning Project	PR	0	0	2	1
		TOTAL		**24**	**0**	**4**	**28**

SEMESTER - IV

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

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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https://onlinecourses.nptel.ac.in/noc20_mg51/preview
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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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https://onlinecourses.swayam2.ac.in/cec21_mg02/preview

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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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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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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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MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

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

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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

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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, Raspery, 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

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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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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

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

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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 publishing

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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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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.
5. Marakas, Modern Data Warehousing, Mining and Visualization Core Concepts Pearson

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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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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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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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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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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

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Things by Prof.SudipMisra, IIT Kharagpur.
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

MASTER OF BUSINESS ADMINISTRATION (BUSINESS DATA ANALYTICS)

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

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)

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