

B. Voc. Business Process and Data Analytics

Syllabus

UNIVERSITY DEPARTMENT

Program Code: ECGC

2021 – 2022 onwards



BHARATHIAR UNIVERSITY

(A State University, Accredited with “A” Grade by NAAC,
Ranked 13th among Indian Universities by MHRD-NIRF,
World Ranking : Times - 801-1000, Shanghai - 901-1000, URAP – 1047)

Coimbatore - 641 046, Tamil Nadu, India

PROGRAM EDUCATIONAL OBJECTIVES (PEO)

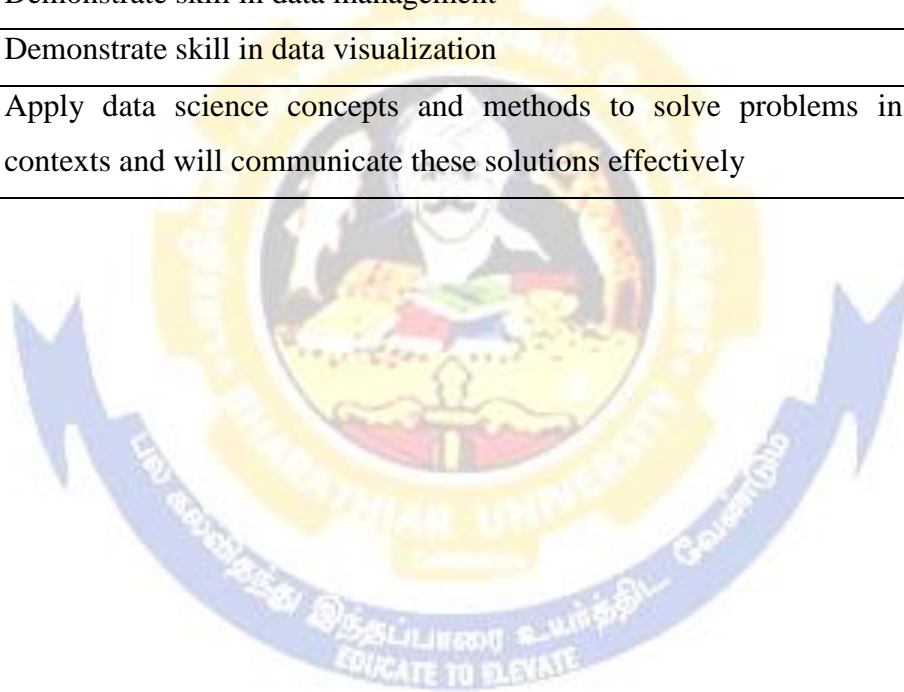
The graduate will

PEO1:	Attain leadership and problem-solving skills in business environment
PEO2:	Provide advancement of conceptual and practical knowledge in the field of business process management
PEO3:	Attain broad knowledge and understanding of the theories, principles, methods, and techniques for data storage, integration, handling, and processing
PEO4:	Have substantive knowledge of the entrepreneurial potential
PEO5:	Have ability to communicate effectively and function efficiently on multidisciplinary teams
PEO6:	Attain knowledge and skills in statistical modelling for data-intensive problem solving
PEO7:	Attain machine learning skills to design and implement efficient, data-driven solutions to real world problems
PEO8:	Have innovation skills and drive the businesses through multifaceted skills
PEO9:	Attain conceptual and practical knowledge in the field of business management to contribute to nation building while upholding ethical practices
PEO10:	Have ability to communicate effectively and function efficiently on multidisciplinary teams

PROGRAM OUTCOMES (PO)

At the end of the B.Voc. Programme, graduates will be able to

PO1:	Demonstrate a working knowledge on business process
PO2:	Develop relevant skills in excel
PO3:	Develop relevant programming abilities in R for Data Analytics
PO4:	Develop relevant programming abilities in Python for Data Analytics
PO5:	Demonstrate proficiency with statistical analysis of data
PO6:	Develop the ability to build and assess data-based models
PO7:	Execute statistical analyses with professional statistical software
PO8:	Demonstrate skill in data management
PO9:	Demonstrate skill in data visualization
PO10:	Apply data science concepts and methods to solve problems in real-world contexts and will communicate these solutions effectively



PROGRAM SPECIFIC OUTCOMES (PSO)

PSO1:	Understand and apply the concepts and methods of business process services
PSO2:	Interpret results/solutions and identify appropriate courses of action for a given managerial situation
PSO3:	Encourage an aptitude for business improvement, innovation, and entrepreneurial action in the field of data analytics
PSO4:	Develop new or improved innovative business processes from gap analysis through process design in support of an organization's strategic objectives in a socially responsible manner
PSO5:	Evaluate the opportunities for business process and supply chain improvement based on current best practices across industries
PSO6:	Analyze the key business processes that drive the value chain of an organization
PSO7:	Evaluate current global business issues and their impact on various enterprises
PSO8:	Interact effectively and professionally, using influencing, communication and consultative skills across all levels and functions of businesses, in a customer-centric and ethical manner
PSO9:	Integrate appropriate information and other technologies, both existing and emerging, in developing business processes and business models
PSO10:	Work effectively on team projects and research assignments respecting the diversity to all team members

B.Voc. BUSINESS PROCESS AND DATA ANALYTICS
(For the students admitted from the academic year 2021-22 onwards)

SCHEME OF EXAMINATIONS

S. No.	SUBJECT	Hours		Duration of Exam Hours	Marks for		Total Marks	Credits
		Lecture	Practical		CIA	CEE		
Year I – Semester I								
1	Part I: Language Paper I-Tamil/Malayalam/French ##	3	-	3	50	50	100	3*
2	Part II: English I ##	3	-	3	50	50	100	3*
3	Core 1: Principles of Management and Business Organization	5	-	3	50	50	100	5^
4	Core 2: Fundamentals of Business Analytics	6	-	3	50	50	100	6^
5	Core 3: Finance and Accounting for Business Process	5	-	3	50	50	100	5^
6	Allied 1: Mathematics for Data Analytics I	4	-	3	50	50	100	4*
7	# Value Added 1: Environmental Science	2	-	2	-	50	50	2*
8	@ Internship	-	2	-	50	-	50	2^
Total Credits		28	2					30
Year I – Semester II								
9	Part I: Language Paper II-Tamil/Malayalam/French ##	3	-	3	50	50	100	3*
10	Part II: English II ##	3	-	3	50	50	100	3*
11	Core 4: Managing Business Processes	5	-	3	50	50	100	5^
12	Core 5: Customer Relationship Management	6	-	3	50	50	100	6^
13	Core 6: Computational Finance	-	5	3	50	50	100	5^
14	Allied 2: Mathematics for Data Analytics II	4	-	3	50	50	100	4*
15	# Value Added 2: Human Rights	2	-	2	-	50	50	2*
16	@ Internship	-	2	-	50	-	50	2^
Total Credits		23	7					30
Year II – Semester III								
17	Core 7: Relational Database Management System	5	-	3	50	50	100	5^
18	Core 8: Research Methods	6	-	3	50	50	100	6^
19	Core 9: Campus to Corporate	-	5	3	50	50	100	5*
20	Allied 3: Business Communication	5	-	3	50	50	100	5*
21	AOS1: Data Analysis using SPSS	-	5	3	50	50	100	5^
22	# Elective 1: Yoga for Human Excellence	2	-	2	-	50	50	2*
23	@ Internship	-	2	-	50	-	50	2^
Total Credits		18	12					30
Year II – Semester IV								
24	Core 10: Marketing Management	5	-	3	50	50	100	5*
25	Core 11: Managerial Economics	5	-	3	50	50	100	5*
26	Core 12: Data Visualization for Business Intelligence	5	-	3	50	50	100	5^
27	Core 13: R Programming	-	5	3	50	50	100	5^
28	Allied 4: Insurance for Business Process Services	4	-	3	50	50	100	4^
29	AOS 2: Supply Chain Management	4	-	3	50	50	50	4^
30	# Elective 2: General Awareness	2	-	2	-	50	50	2*
Total Credits		25	5					30
Year III – Semester V								
31	Core 14: Human Resource Management	5	-	3	50	50	100	5*
32	Core 15: Organizational Behaviour	6	-	3	50	50	100	6^
33	Core 16: Machine Learning for Data Analytics	6	-	3	50	50	100	6^

34	Core 17: Python for Data Analytics	-	6	3	50	50	100	6 [^]
35	AOS 3: Tally for Accounts	-	4	3	50	50	100	4 [*]
36	**Mini Project and Viva Voce	-	3	-	50	50	100	3 [*]
Total Credits		17	13					30
Year III – Semester VI								
37	Core 18: Data Mining and Data Warehousing	6	-	3	50	50	100	6 [^]
38	Core 19: Digital Marketing	6	-	3	50	50	100	6 [^]
39	Core 20: Business Ethics and Corporate Social Responsibility	6	-	3	50	50	100	6 [*]
40	Core 21: Entrepreneurship Development	6	-	3	50	50	100	6 [*]
41	**Project and Viva Voce	-	6	-	50	50	100	6 [^]
42	\$ SWAYAM Online Course	-	-	-	-	-	-	2 ^{\$}
Total Credits		24	6					32
Grand Total Credits for Three Years							3700	182
1	~ NSQF Assessment: Collection Executive (SSC/Q2214)							
2	~ NSQF Assessment: Associate CRM (SSC/Q2202)							
3	~ NSQF Assessment: Business Intelligence Analyst - (SSC/Q8102)							
4	~ NSQF Assessment: Associate Analytics (SSC/Q2101)							

CIA Continuous Internal Assessment

CEE Comprehensive External Examinations

AOS Application Oriented Subject

* **General Component:** 12 Credits

^ **Skill Component:** 18 Credits

Value Added / Elective: No Continuous Internal Assessment. Only University Examination.

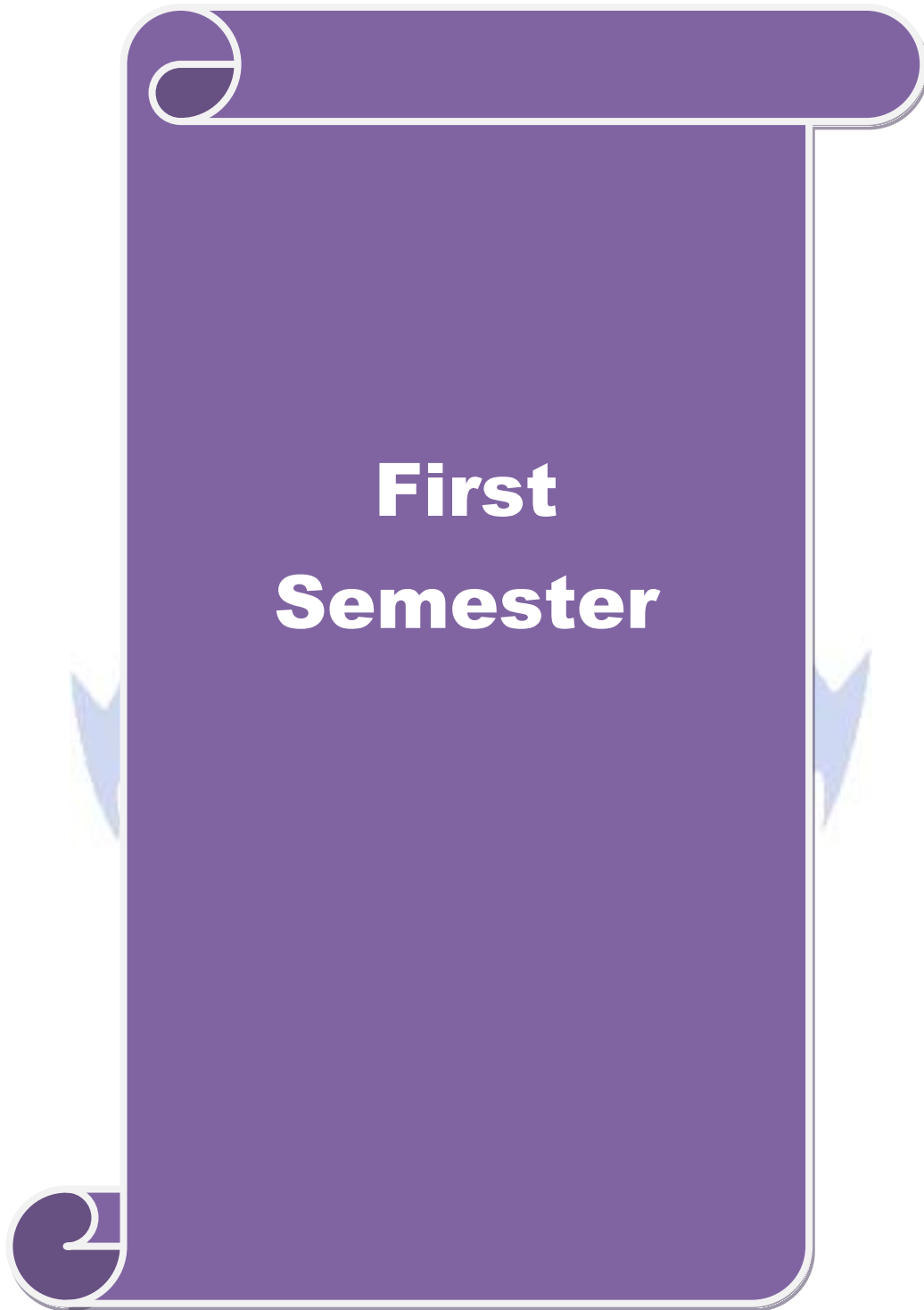
@ **Internship:** No University Examination. Only Continuous Internal Assessment

\$ **Online Course:** This can be availed by the students at any time during the course of study and it must be completed before 5th semester. The credits will be given along with the sixth semester marks. Four weeks of online course is considered as one credit course. Students are expected to produce certificates from Swayam, NPTEL, Spoken Tutorial of IIT Mumbai, Coursera and equivalent.

~ **NSQF Assessment**

** **Project / Mini Project: Internal marks 50:** Observation report & Review, **External marks 50:** Presentation, Viva & Final record

Part I: Language Paper **Part II:** English for Semester I & II will be followed by the Syllabus of BU Affiliated colleges approved by the Bharathiar University



Course code	13A	Principles of Management and Business Organization		L	T	P	C
Core	Core 1		5	-	-	5	
Pre-requisite	Knowledge about Organisation		Syllabus Version		2021-22		
Course Objectives:							
The main objectives of this course are to:							
<ol style="list-style-type: none"> 1. Explore the basic concepts and processes of management. 2. Make student understand the Managerial role. 3. Ensure students know the organizational environment. 							
Expected Course Outcomes:							
On the successful completion of the course, student will be able to:							
1	Understand the evaluation of managerial concepts					K2	
2	Know the planning concepts in management and will able to plan their projects					K2, K3, K5	
3	Realize the need and process of staffing in management					K2	
4	Grasp the role of leader in an organization					K2, K4	
5	Aware of various business natures					K2, K3, K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create							
Unit:1	Overview of Management					12 Hours	
Meaning – Definition – Evaluation of Management thought: FW Taylor, Hendry Fayol, Elton Mayo, and Peter Drucker - Management as an art - science - profession – Principles and Functions of Management Levels of Management.							
Unit:2	Planning					12 Hours	
Definition – Nature and Characteristics of Planning – Importance – Types of Plans – Planning process – Limitations. Organizing: Meaning – Principles and Types of Organization – Delegation of Authority – Decentralization – Organization Charts.							
Unit:3	Staffing					12 Hours	
Meaning-nature-need- importance - functions of staffing-recruitment—meaning and sources of recruitment-selection-meaning and importance - selection process – training - principles and process of interview.							
Unit:4	Directing					12 Hours	
Nature and purpose of directing – principles – motivation – introduction to theories of motivation – Leadership: Styles - Controlling: Definition – Characteristics of control – Steps in controlling – Effective control – Control Techniques. Co-ordination: Definition – Features and Benefits of co-ordination – Techniques of effective co-ordination.							

Unit:5	Business Basics					12 Hours
Nature and purpose of business – Characteristics – Comparison among Business – Professional and employment – various types of industry with commerce – forms of business organization – sole – partnership, joint Hindu family firm – joint stock companies – cooperative organizations – public utilities and public enterprises.						
Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
					Total Lecture Hours	62 Hours
Textbook(s)						
1	R. N. Gupta, 2005, Principles of Management, S. Chand and Company Limited.					
2	Ghuman, K and Aswathapa, K, (2017). Management concepts and cases (10th ed.), Tata McGraw Hills, New Delhi					
Reference Books						
1	Ramaswamy, I. (2011). Principles of Business Management, (8th ed.), Himalaya Publishing House, New Delhi.					
2	Koontz, H, and Weihrich, H (2016). Essentials of Management: An International Perspective (8thed.), Tata McGraw Hills, New Delhi.					
3	Stephen P. Robbins and David A. Decenzo , 2012. Fundamentals of Management, Pearson Education, 8th Edition,					
4	J.S.Chandan, 2010 Management Concepts and Strategies, Vikas Publishing House,.					
5	Tim Hannagan, 2009 Management Concepts and Practices, Macmillan India Ltd., 5th Edition,					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Principles of Management - NPTEL					
Course Designed By: Dr. A. Vimala and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	M	S	M	M	M	
CO2	S	S	S	M	M	
CO3	S	S	M	M	M	
CO4	S	S	M	M	M	
CO5	S	S	M	M	M	
*S-Strong; M-Medium; L-Low						

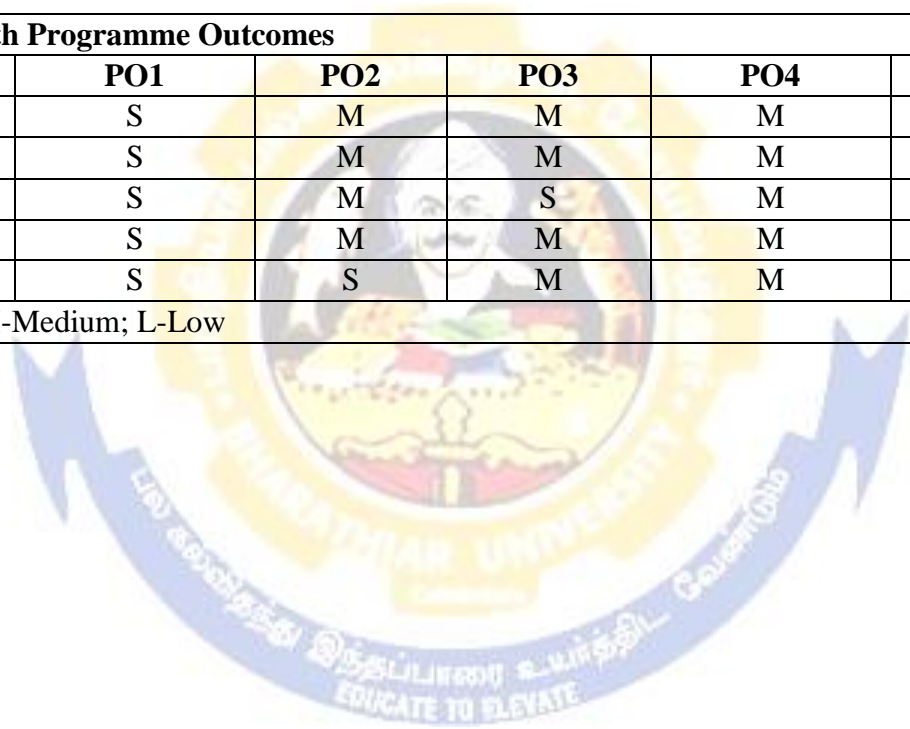
Course code	13B	Fundamentals of Business Analytics	L	T	P	C
Core		Core 2	6	-	-	6
Pre-requisite	Basic Excel Skills		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
<ol style="list-style-type: none"> 1. Understand the emerging role of business analytics in organizations. 2. Help learners to make better business decisions. 3. Effectively use and interpret analytic models. 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand and critically apply the concepts and methods of business analytics				K2, K3	
2	Identify, model and solve decision problems in different settings				K4	
3	Interpret results/solutions and identify appropriate courses of action for a given managerial situation whether a problem or an opportunity				K4, K5	
4	Create viable solutions to decision making problems				K6	
5	Have a strategic understanding of business analytics				K4	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Introduction				10 Hours	
Business Analytics - Scope and Evolutions. Data for Business Analytics - Data Sets, Big Data - Metrics - Classification, Reliability and Validity, Models in Business Analytics, types. Problem Solving – Definition – Structuring – Analyzing – Interpretation – Implementation.						
Unit:2	Analytics on Spreadsheets				12 Hours	
Basic Excel - Formulas – Functions – Basic, Specific Applications, Insert, Logical, Lookup – Add-Ins.						
Unit:3	Descriptive Analytics				13 Hours	
Data Visualization – Dashboards – tools, charts, and its types. Database queries: tables, sorting – Pareto analysis and filtering data. Statistical methods for summarizing data: Frequency distribution for categorical data – Frequency distribution for numerical data – Cumulative relative frequency distribution – percentiles and quartiles – cross-tabulations – pivot tables and charts.						
Unit:4	Statistical Analysis				13 Hours	
Mean, Median, Mode, range variance and Standard deviation for business decision. Measures of association – Co-variance, Correlation and it's excel correlation tools and outliers.						

Unit:5	Spreadsheet Modelling and Analytics					12 Hours
Macro excel and its application. Spread sheet design – quality – applications in business analytics – Users friendly applications – what-If analysis and Data tables.						
Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
Total Lecture Hours					62 Hours	
Textbook(s)						
1	Evans, J. R., (2013), Business Analytics: Methods, Models, and Decisions.					
2	RN Prasad, 2015 Seema, Fundamentals of Business Analytics, Wiley Revised Edition,					
Reference Books						
1	Liebowitz, J. (2013). Business analytics: An introduction. CRC Press.					
2	Haydn Thomas - 2014 Demonoid Business Analysis Fundamentals Pearson First Edition,					
3	Nitin R. Patel, Peter C. Bruce, 2010 Data Mining for Business Intelligence: Concepts, Techniques, and Applications in Microsoft Office Excel with XLMiner, GalitShmueli , Wiley Publication					
4	Turban E, Armson, JE, Liang, TP andSharda, 2007 Decision support and Business Intelligence Systems, 8 th Edition, John Wiley and Sons,					
5	Efraim Turban, Ramesh Sharda, Jay Aronson, David King, 2009. Decision Support and Business Intelligence Systems, 9th Edition, Pearson Education					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Business Analytics for Management Decision - By Prof. Rudra P Pradhan IIT Kharagpur - SWAYAM					
Course Designed By: Dr. A. Vimala and Dr. S. Sadhasivam and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	S	M	M	M	M	
CO2	S	M	M	M	M	
CO3	S	M	S	M	M	
CO4	S	M	M	M	M	
CO5	S	S	M	M	S	
*S-Strong; M-Medium; L-Low						

Course code	13C	Finance and Accounting for Business Process	L	T	P	C
Core		Core 3	5	-	-	5
Pre-requisite	Fundamental Accounting Knowledge		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
<ol style="list-style-type: none"> 1. Aid students in acquiring skills of competence and competition. 2. Develop top class, highly talented business executives. 3. Give an insight into FandA standards, compliance, and general ledger activities 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand Accounting Principles and to be Skilled in Accounting.				K2, K4	
2	Gain knowledge about the Inventory Process in the business process services				K2	
3	Facilitate the acquisition of knowledge of Accounts receivable process and Chart of Accounts.				K2	
4	Give an insight into Accounting standards, compliance and general ledger activities and to be an Accounts Executive and ERP Finance Functional Consultant.				K2, K3	
5	Acquire knowledge of Accounting Standards and IFRS in Business.				K2, K3	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Fundamentals of Accounting and Business Process Services				12 Hours	
An Overview of Accounting – Objectives – Basic Accounting principles and guidelines – Accounting Assumptions – Accounting Concepts – Accounting Conventions – Accounting Statements – Systems of Book keeping – Classification of accounts – Basic Accounting rules – Accounting cycle – Voucher – Organization – Outsourcing – Business Process Outsourcing – Reasons for BPS E-Logistics – Facility Management – Classification of BPS – BPS industry in India – Destination smaller towns for BPS – Challenges						
Unit:2	Inventory Management Process				12 Hours	
Inventory management – Transportation – Material Requirements Planning(MRP) – Inputs to MRP – Purchase requisition – Purchase order – Meaning of Accounts payable – Vendor Master creation and Maintenance – Invoice processing – Department functions – T and E Processing/ Employee reimbursements – International Commercial Terms(Inco Terms) – Credit note processing – Debit note or Debit memo – Evaluated Receipt Settlement(ERS) – Payment process/vendor payments – Debit balances – Invoice audit and recovery – Vendor Reconciliation – Vendor support – Optical character Reading / Recognition (OCR).						

Unit:3	Accounts receivable Process and Chart of Accounts	12 Hours
Accounts receivables - introduction – Customer set up – Credit management – booking sales order revenue recognition – pre-billing closing reconciliations – collections – cash application - reconcile outstanding customer balances – Introduction to General Ledger Accounting – Chart of accounts – Intercompany accounting and Reconciliation – various reports (Statutory reports, Schedules, variance) – Statutory reports – Statutory accounts–UK.		
Unit:4	Finance and Accounting Technology in Modern Business	12 Hours
Emerging trend in FandA technology – Traditional accounting method – advantages – limitations – modern accounting – advantages and limitations – ERP – integrated systems or Enterprise Resource Planning system – Meaning and Definition of ERP – Need for ERP – ERPs with complete function – challenges in implementation of ERP – Industries covered under ERP system– ERP software companies – Oracle Application – SAP – Systems Applications and Products – Other tools – XBRL definition – Accounting Standards and IFRS – Introduction – Scope of accounting standards – Procedure for issuing an Accounting standard – Compliance with the accounting standards – Indian accounting standards – International accounting standards – IFRS – international financial reporting standards – Introduction – advantages - - International accounting standards board – XBRL – Structure of IFRS – IFRS.		
Unit:5	Internal Control Framework of Business Process Services	12 Hours
Internal controls over Financial reporting – Introduction to operational risk – Introduction to provisions of Sarbanes Oxley Act, 2002 – Internal Control Framework – Sarbanes Oxley Act compliance in an Off shoring environment – Information security – Business Continuity and Disaster Recovery Planning- Operating model of Business Process Services – Cost effectiveness and process efficiency – Service areas in BPS – Transaction Flows in a Business Process Service – Roles and Responsibilities in BPS – Tower wise End to End operation – BPS terms and Definitions - Service Level Agreement - Role of Quality in BPS – Introduction to Lean – Introduction to Six Sigma – Future BPS.		
Unit:6	Contemporary Issues	2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars		
Total Lecture Hours		62 Hours
Textbook(s)		
1	TCS Material	
2	Jain S P and Narang K L, 2014, Advanced Accountancy ,Kalyani Publishers, 20th Edition	
Reference Books		
1	Reddy T.S and Murthy Financial Accounting Margham Publications 2016, 6th Edition.	
2	Nagarajan K.L., Vinayagam. N and P. L. Mani , 2010, Financial Accounting, Sultan Chand and Sons	
3	M Y Khan and P H Jain, 2009, “Management Accounting”, McGraw hill, 5th edition	

4	Palepu Healy and Bernard, 1996, Business analysis and valuation, South western college publication, 2nd edition				
5	Porter, G.A., and Norton, C.L. (2013). Financial Accounting - 6e, Cengage Learning.				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	Fundamentals of Financial Accounting - Swayam				
2	Financial accounting – IIT Mandi from <i>NPTEL</i>				
3	Introduction to Computers – Spoken Tutorial				
4	LibreOffice Writer				
Course Designed By: TCS, Dr. A. Vimala and Dr. Dhanabakiyam					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	S	M	M	M	M
CO2	S	M	M	M	M
CO3	S	M	S	M	M
CO4	S	M	M	M	M
CO5	S	S	M	M	S
*S-Strong; M-Medium; L-Low					



Course code	1AA	Mathematics for Data Analytics I	L	T	P	C
Allied		Allied 1	4	-	-	4
Pre-requisite		Knowledge in Probability and Matrix	Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
1. Provide knowledge of a wide range of mathematical techniques and application of mathematical methods/tools in data analytics.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand concepts of matrices and determinants					K2
2	Understand and apply differential calculus					K2, K3
3	Learn about Integral calculus					K2
4	Learn and employ the basics of statistics for data analysis					K2 and K3
5	Learn about the role of probability distributions in data analysis					K2 and K3
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Matrices and Determinants					8 Hours
Definition and Properties of Determinants-Definition and Types of Matrix, Transpose of a Matrix, Symmetric, Skew Symmetric Matrices, Orthogonal matrices, Hermitian and Skew Hermitian, Minors and Cofactors, Adjoint and Inverse of a Matrix, Cramer's Rule, Solution of Simultaneous Linear Equations by Inverse Matrix Method.						
Unit:2	Differentiation Calculus I					8 Hours
Introduction -Differential Equations of Order and Degree- Classification of Differential Equations- Differential of x^n , $\sin x$, $\cos x$, $\tan x$, $\operatorname{cosec} x$, $\sec x$, $\cot x$, $\log x$, e^x , $u v$ and u/v methods (results only)- Simple problems using the above results.						
Unit:3	Integral Calculus					8 Hours
General Introduction of Integral Calculus, Integration of Sum and difference of Functions, Integration by Simplification, Integration by Substitution, Integration by Parts, Integration of Rational and Irrational Functions, Integration of Trigonometric Functions, Definite Integral and its Properties.						
Unit:4	Statistics I					8 Hours
Meaning and Definitions of Statistics - Scope and Limitations. Statistical enquiries - Scope of the problem - Methods to be employed types of enquiries - Presentation of data by Diagrammatic and Graphical Method - Formation of Frequency Distribution.						

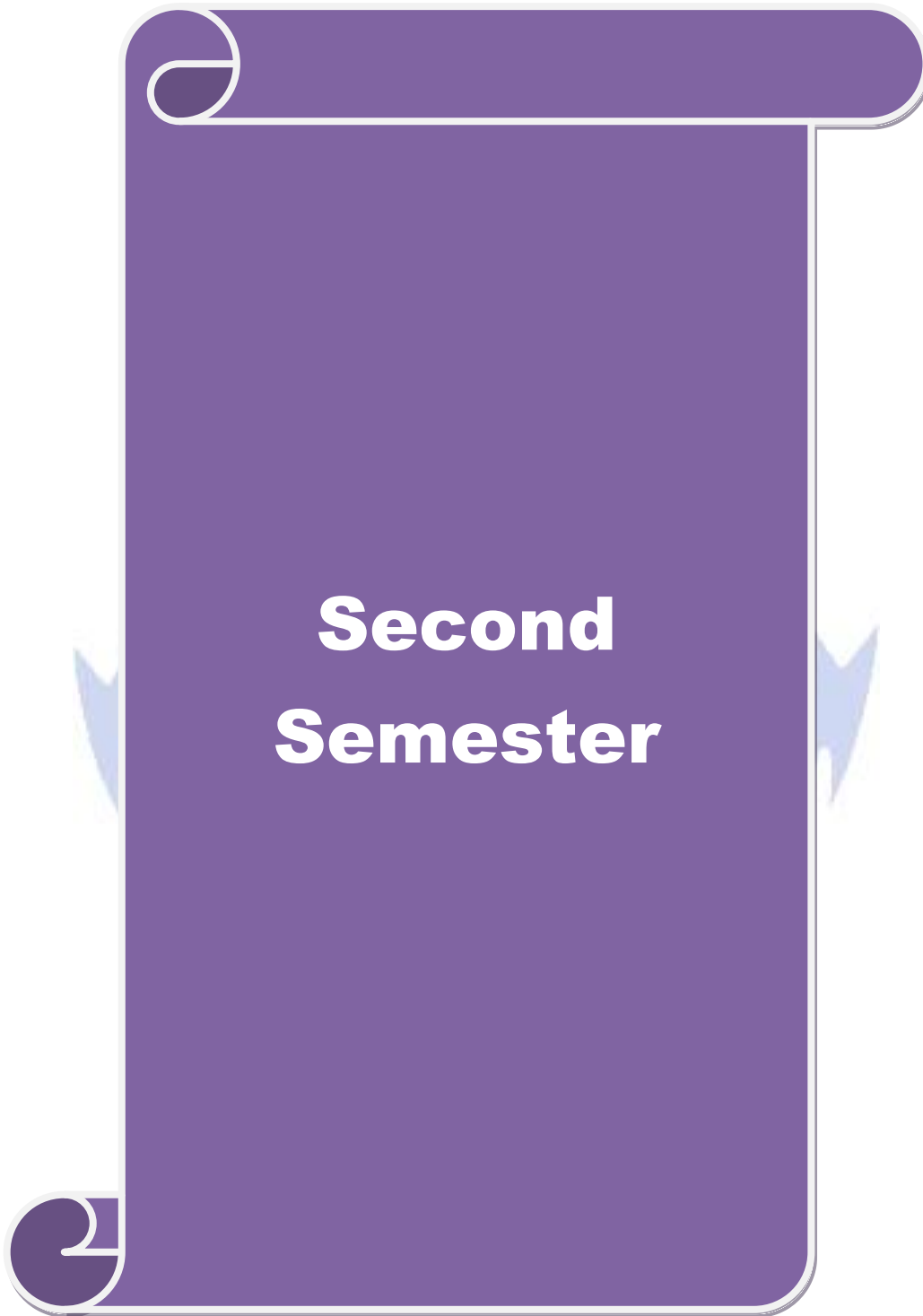
Unit:5	Probability Distributions					8 Hours
Introduction and Definitions of probability - Scope and Limitations -Random Variable - Types of Random Variable - Continuous Distributions (simple problems only).						
Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
					Total Lecture Hours	42 Hours
Textbook(s)						
1	Business Mathematics and Statistics by Dr. P. R. Vittal					
2	Differential and Integral Calculas by N. Piskunov					
3	An Introduction of Probability Theory and its Applications by William Feller					
Reference Books						
1	Differential Calculus by Chandrika Prasad					
2	Integral Calculus by Chandrika Prasad					
3	Numerical Methods by P.Kandasamy, K. Thilagavathy, K. Gunavathi					
4	Fundamental of Mathematical Statistics by S.C. Gupta					
5	Vector Algebra by Narayan Shanti and P.K. Mittal					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Discrete Mathematics - By Prof. Sudarshan Iyengar, Prof. Neeldhara IIT Ropar, IIT Gandhinagar - SWAYAM					
Course Designed By: Dr. A. Vimala and Dr. Muthamilselvan						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	M	M	M	M	M	
CO2	S	M	M	S	S	
CO3	M	S	S	M	S	
CO4	S	M	M	M	M	
CO5	S	S	M	S	S	
*S-Strong; M-Medium; L-Low						

Course code	1FA	Environmental Science	L	T	P	C
Value Added		Value Added 1	2	-	-	2
Pre-requisite		Understanding in Environment	Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. Evolve into ecologically informed and socially responsible citizens who are empowered to protect the natural resources while ensuring sustainable lifestyle and developmental mode						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Gaining in-depth knowledge on natural processes that sustain life				K1, K2	
2	Predicting the consequences of human actions on the web of life, global economy, and quality of human life.				K1, K2	
3	Develop critical thinking for environmental protection and conservation				K1, K2	
4	Acquiring values and attitudes towards understanding environmental-economic-social challenges.				K1, K2	
5	Adopting sustainability as a practice in life, society, and industry.				K1, K2	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Multidisciplinary nature of environmental studies				3 Hours	
Unit:2	Natural Resources				4 Hours	
Unit:3	Ecosystems				3 Hours	
Unit:4	Biodiversity and its conservation				3 Hours	
Unit:5	Environmental Pollution				3 Hours	
Unit:6	Contemporary Issues				2 Hours	
Case Study, Expert Lectures, Online Seminars –Webinars						
Total Lecture Hours					18 Hours	
Textbook(s)						
1	Erach Barucha, Textbook for Environmental Studies, UGC					
2	Dr. Radha (2019), Environmental Studies, Revised Edition Prasanna Publishers					
Reference Books						
1	Dharmendra S. Sengar, (2007) 'Environmental law', Prentice hall of India					

2	G. Tyler Miller and Scott E. Spoolman, (2014) “Environmental Science”, Cengage Learning India
3	Rajagopalan, R, (2005) ‘Environmental Studies-From Crisis to Cure’, Oxford University Press,
4	Benny Joseph, (2006) ‘Environmental Science and Engineering’, Tata McGraw-Hill, New Delhi,
5	Gilbert M. Masters, (2004) ‘Introduction to Environmental Engineering and Science’, 2nd edition, Pearson Education,
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]	
1	Environmental Studies - By Dr. Tushar Banerjee Devi Ahilya Viswavidyalaya, Indore - SWAYAM
Course Designed By: Bharathiar University	



Course code	16A	Internship				L	T	P	C
Field Work	Field Work				-	2	-	2	
Pre-requisite	Awareness in Collection and Payments	Syllabus Version			2021-22				
Course Objectives:									
The main objectives of this course are to:									
1. The students will get hands on experience in a company to exhibit their skills learnt.									
2. The students will gain interaction with company employee in the real work environment.									
3. The students will gain understanding of general rules, regulation, duties and responsibilities.									
Expected Course Outcomes:									
On the successful completion of the course, student will be able to:									
1	The students will get hands on experience in a company to exhibit their skills learnt.							K6	
2	The students will gain interaction with company employee in the real work environment.							K4	
3	The students will gain understanding of general rules, regulation, duties and responsibilities							K2	
4	They may get good rapport with the organisation for future reference.							K3	
5	Students may get campus to corporate exposure							K3	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create									
Marks awarding Mode for 50 marks									
25 marks will be awarded by the concerned instructor of the department based on the students review progress assigned by the faculty and presentation during the course of internship. Remaining 25 marks will be awarded by conducting public viva in the department with the tutor and the expert (Industry Expert is preferable) assigned by the department head based on the students final report, presentation and viva voce for the creation of portfolio. The students must get certificate with 75% attendance for the 30 Hours. The minimum pass mark is fixed as 30 and failing the above will be instructed to redo the work.									
Course Designed By: Dr. A. Vimala, Dr. S. Sadhasivam and Dr. C. Dhayanand									
Mapping with Programme Outcomes									
COs	PO1	PO2	PO3	PO4	PO5				
CO1	S	M	M	S	M				
CO2	S	M	M	S	M				
CO3	S	M	S	S	M				
CO4	S	M	M	S	M				
CO5	S	S	M	S	S				
*S-Strong; M-Medium; L-Low									



Course code	23A	Managing Business Processes		L	T	P	C
Core		Core 4		5	-	-	5
Pre-requisite	Understanding of Business Organisation		Syllabus Version	2021-22			
Course Objectives:							
The main objectives of this course are to:							
<ol style="list-style-type: none"> 1. Understand business process to use it as competitive advantage 2. Develop and define planning and control mechanism 3. Understand the interactions between human behaviour and process design 							
Expected Course Outcomes:							
On the successful completion of the course, student will be able to:							
1	Be aware of the effective business processes					K2	
2	Learn the effectual business functions of BPM					K2, K3, K6	
3	Recognize the ways of controlling the process in the business					K2, K3, K6	
4	Understand the various techniques of quality control in business process					K2, K4, K6	
5	Know the ways to manage the business					K2, K3, K5	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create							
Unit:1	Process Management					12 Hours	
Process management – Definition-Identification of Business Process-Core Vs Support Processes-Components of Process Management-Understanding Internal/External Customer and End User Requirements - 7QC Tools-Why Why Analysis - Failure Mode and Effects Analysis (FMEA).							
Unit:2	Process Management in BPM					14 Hours	
Process Management in BPM – Role of BPM in Process Management –Typical Business Processes Outsourced –Operating Models – BPM-Lifecycle. Meaning of Six Sigma – History – Applications of Six Sigma –Variation Measures –Level of Performance –Characteristics of Normal Distribution – CTQ –Six Sigma Approaches – DMAIC/DFSSS.							
Unit:3	Process Mapping Techniques					12 Hours	
Process Mapping Techniques – SIPOC-Swim Lane Diagram-Process Mapping Tools - Six Sigma Organization- Six Sigma Project Methodology– Define – Measure – Analyze – Improve- Control.							
Unit:4	Quality Management and Lean					12 Hours	
Quality Management – Introduction-Transaction Monitoring -Quality Assurance Methods - Process Improvements- Introduction to Lean - Lean Principles-Types of Waste-Kaizen- LEAN tools.							

Unit:5	Delivery and Risk Management					12 Hours
Delivery Management-Customer Management - Knowledge Management- People Management- Transition Management - Finance Management - Risk Management- Introduction - Risk Factors- Types of Risks- Fraud Management- Business Continuity Plan - Identity Management.						
Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
					Total Lecture Hours	64 Hours
Textbook(s)						
1	Fundamentals of Business Process – TCS Material					
2	Ravi Anupindi , Sunil Chopra , Sudhakar D. Deshmukh -, 2012 Managing Business Process Flows , Pearson Education					
Reference Books						
1	Jeston, John, Nelis, Johan, (2014), Business Process Management. Routledge. ISBN 9781136172984.					
2	https://solutionsreview.com/business-process-management/understanding-difference-lean-six-sigma-business-process-management/					
3	Mathias Weske 2019 Business Process Management: Concepts, Languages, Architectures. 3rd ed.					
4	Marlon Dumas, Marcello La Rosa, Jan Mendling, Hajo A. Reijers, (2013) Fundamentals of Business Process Management, Springer					
5	Peter Franz and Mathias Kirchmer- 2012 Value-Driven Business Process Management: The Value-Switch for Lasting Competitive Advantage, Mc-Graw Hill,					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Business Planning and Project Management - By Dr. Ravi Ahuja Savitribai Phule Pune University, Pune - SWAYAM					
2	LibreOffice Calc – Spoken Tutorial					
3	LibreOffice Base – Spoken Tutorial					
Course Designed By: TCS, Dr. A. Vimala and Dr. S Sadhasivam						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	S	S	M	M	M	
CO2	S	S	M	M	S	
CO3	S	S	M	M	S	
CO4	S	S	M	M	S	
CO5	S	S	M	M	S	
*S-Strong; M-Medium; L-Low						

Course code	23B	Customer Relationship Management	L	T	P	C
Core		Core 5	6	-	-	6
Pre-requisite	Capability to build relationship		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. Examines CRM and its application in marketing, sales, and service						
2. Help companies align business process with customer centric strategies using people, technology, and knowledge						
3. Help the students understand the organizational context of CRM						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Know the need of relationship marketing in the business				K2, K3, K6	
2	Understand the concepts and principles of CRM				K2, K3, K6	
3	Get to know the various stages and functions of CRM				K2, K3, K6	
4	Be aware of Call Centre and customer satisfaction measurement				K2, K3, K6	
5	Realize the role of marketing in CRM				K2, K3, K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6- Create						
Unit:1	Relationship Marketing				12 Hours	
Overview, Meaning- Basis of Building Relationships- Customer Lifetime Value- Conflict Management and Customer Retention.						
Unit:2	Customer Relationship Management				12 Hours	
CRM- Evolution, Meaning, Definition, Objectives, and Benefits- Relationship between CRM and Technology- Creating a CRM culture- Building blocks of CRM- CRM Strategies- Types of CRM.						
Unit:3	Functions of CRM				12 Hours	
Planning CRM Project- General Business Goals and Objectives- Framework of Successful CRM- CRM: Implementation Steps- Role of CRM and Employees, the HCRM Model, Way Forward.						
Unit:4	Call Centre				12 Hours	
Objectives, Classification, Functionality, Developments- CRM and Data Warehousing- Steps, collecting payments over the telephone, Converting Customer Enquiries into sales, make outbound tele sales calls, Information Processing- Data Mining Technology and Process.						
Unit:5	CRM Marketing				12 Hours	
Initiatives- What is ECRM? - Levels, ECRM Tools- Difference between CRM and ECRM- CRM: Opportunities, Challenges and Ways to avoid Pitfalls.						

Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars –Webinars						
Total Lecture Hours						62 Hours
Textbook(s)						
1	Dr. K. Govinda Bhat, Customer Relationship Management, Himalaya Publishing House, 2010 edition.					
2	Dr. Jaspreet Kaur 2012 , Customer Relationship Management, Kogent Solution					
Reference Books						
1	Shraddha M. Bhome, Dr. Amarpreet Singh Ghura, (2014), Customer Relationship Management a theory and Practice to manage and retain customers, International book house, First Edition.					
2	S. Shajahan, (1997), Relationship Marketing, McGraw Hill.					
3	Paul Green Breg, (2002), Customer Relationship Management, Tata McGraw hill.					
4	Alok Kumar, Chhabisinba, Rakesh Sharama, (2007), Customer Relationship Management concepts and application, Biztantra Publication.					
5	S. Shanmugansundaram, (2010) Customer relationship management: modern trends and perspectives, PHI					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Customer Relationship Management – IIMB					
2	Customer Relationship Management – NPTEL					
Course Designed By: Dr. A. Vimala and Dr C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	S	S	M	M	M	
CO2	S	S	M	M	M	
CO3	S	S	M	M	M	
CO4	S	S	M	M	M	
CO5	S	S	M	M	M	
*S-Strong; M-Medium; L-Low						

Course code	23P	Computational Finance	L	T	P	C
Core		Core 6	-	-	5	5
Pre-requisite	Knowledge in Finance and Accounting		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
<ol style="list-style-type: none"> To inculcate the knowledge of MS Excel To understand the basic statistics tools and methods To enable the students to construct spread sheet for basic financial applications using financial functions available in MS Excel. 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand basic functions in Spread sheet and Concepts of Income Statement and financial tools in Spread Sheet.				K4	
2	Gain knowledge of Trend Analysis and Beta Calculation in Spread Sheet				K6	
3	Acquire knowledge the Pay-back period and BEP graph in Spread Sheet				K6	
4	Attain skill about Earning Per share and Economic Order Quantity in Spread Sheet				K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Ex:1	Preparation of Income Statement and Time Value of Money				12 Hours	
Input: Receipts and Payments, Functions to be used: Data validation, Audit Toolbar, 'fx' – functions, Conditional Formatting, Combo Boxes, Controls, Scenarios, Goal Seek, Auto Correct. Expected Output: Income Statement Input: Cash Flows, Functions to be used: FV, NPER, PMT, PV, TYPE Expected Output: NPV, IRR, ROI						
Ex:2	Estimating the Share Price and Calculation of Risk Adjusted Rate				12 Hours	
Input: Share Prices Functions to be used: Graph, Trend Setting Expected Output: Trend Input: Share Prices, Functions to be used: CAPM Functions Expected Output: Beta value and Trend line						
Ex:3	Capital Rationing and Leverage				12 Hours	

<p>Input: Cash Flows Functions to be used: Solver Parameters Expected Output: Ranking based on Pay-back period</p> <p>Input: Various Cost Functions to be used: Goal Seek Expected Output: DOL, DFL and DCL; BEP graph</p>		
Ex:4	Designing Capital Structure Inventory Management	12 Hours
<p>Input: Summarized Income Statement Functions to be used: Goal Seek Expected Output: EPS, EPS growth rate.</p> <p>Input: Inventory data Functions to be used: Scenarios Expected Output: EOQ, Max level, Min level, Graph.</p>		
Ex:5	Credit Policy and Cash flow Estimation	12 Hours
<p>Input: Opening and Closing Receivables. Functions to be used: Min, Max Expected Output: Aging Schedule</p> <p>Input: Cash flows Functions to be used: Auto correct Expected Output: Cash Budget</p>		
Total Lecture Hours		60 Hours
Textbook(s)		
1	Bodhanwala. R. J., (2010), Financial Management using Excel Spreadsheet, Taxmann Publication, New Delhi. 3rd Edition.	
2	Mayes Timothy R, 2013 Financial Analysis with Microsoft Excel, Cengage,.	
Reference Books		
1	S.N. Maheshwari., (2014), Elements of Financial Management, Sultan Chand and Sons.	
2	Prasanna Chandra.,(2007), Fundamentals of Financial Management, Tata McGraw Hills Publishing Company Limited.	
3	M.Y. Khan and P.K.Jain , 2008. Financial management, Text, Problems and cases Tata McGraw Hill, 5 th edition	
4	Brigham, Ehrhardt, 2010 Financial Management Theory and Practice, 13 th edition, Cengage Learning	
5	Aswat Damodaran, 2013 Corporate Finance Theory and practice, John Wiley and Sons, 3rd edition,	

Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	https://www.excel-easy.com/ WEBSITE				
Course Designed By: TCS, Dr. A. Vimala and Dr. Sumathi					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	S
CO2	S	S	S	S	S
CO3	S	S	S	S	S
CO4	S	S	S	S	S
CO5	S	S	S	S	M
*S-Strong; M-Medium; L-Low					



Course code	2AA	Mathematics for Data Analytics II	L	T	P	C
Allied		Allied 2	4	-	-	4
Pre-requisite		Mathematics for Data Analytics I	Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
1. Provide knowledge of a wide range of mathematical techniques and application of mathematical methods/tools in data analytics.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand concepts of Vector Algebra					K2
2	Understand and apply differential calculus					K2 and K3
3	Learn about Integral calculus					K2
4	Learn and employ the basics of statistics for data analysis					K2 and K3
5	Learn about the role of probability distributions in data analysis					K2 and K3
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Vector Algebra					8 Hours
Definition, Addition and Subtraction of Vectors, Scalar and Vector Product of two Vectors, Scalar Triple Product and Vector Triple Product, Applications of Vectors (simple problems only).						
Unit:2	Numerical Integration					8 Hours
Trapezoidal Rule, Simpson's 1/3 Rule, Simpson's 3/8 Rule, Newton - Raphson Rule.						
Unit:3	Differentiation Calculus II					8 Hours
Differentiation of function functions (chain rule), Inverse Trigonometric functions and Implicit functions. Successive differentiation up to second order (parametric form not included). Definition of differential equation, order and degree, formation of differential equation. Definition – Partial differentiation of two variables up to second order only. (Simple Problems.)						
Unit:4	Statistics II					8 Hours
Measures of Dispersion – Range, Quartile Deviation, Mean Deviation, Standard Deviation and Co-efficient of Variation. Skewness – Meaning – Measures of Skewness - Pearson's and Bowley's co-efficient of Skewness. Correlation – Meaning and Definition – Scatter diagram, Karl Pearson's co-efficient of Correlation.						
Unit:5	Probability and Random Variables					8 Hours
Probability - The axioms of probability -conditional probability – Bayes' theorem-discrete and continuous random variables-joint distributions-marginal and conditional distributions-covariance						

and linear regression.		
Unit:6	Contemporary Issues	2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars		
		Total Lecture Hours
		42 Hours
Textbook(s)		
1	Business Mathematics and Statistics by Dr. P.R. Vittal	
2	Differential and Integral Calculus by N. Piskunov	
3	An Introduction of Probability Theory and its Applications by William Feller	
Reference Books		
1	Differential Calculus by Chandrika Prasad	
2	Integral Calculus by Chandrika Prasad	
3	Numerical Methods by P.Kandasamy, K. Thilagavathy, K. Gunavathi	
4	Fundamental of Mathematical Statistics by S.C. Gupta	
5	Vector Algebra by Narayan Shanti and P.K. Mittal	
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]		
1	Discrete Mathematics - By Prof. Sudarshan Iyengar, Prof. Neeldhara IIT Ropar, IIT Gandhinagar - SWAYAM	
Course Designed By: Dr. A. Vimala and Dr. Muthamilselvan		

Course code	2FB	Human Rights	L	T	P	C
Value Added		Value Added 2	2	-	-	2
Pre-requisite		Awareness on Ethics and Values	Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. Create awareness, conviction and commitment to values for improving the quality of life through education, and for advancing social and human wellbeing						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand human values and value education					K1
2	Learn their role in national development					K1
3	Understand global development with ethics and values					K1
4	Learn various therapeutic methods					K1
5	Learn and understand human rights					K1
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Concept of Human Values, Value Education Towards Personal Development					3 Hours
Aim of education and value education; Evolution of value-oriented education; Concept of Human values; types of values; Components of value education. Personal Development: Self-analysis and introspection; sensitization towards gender equality, physically challenged, intellectually challenged. Respect to - age, experience, maturity, family members, neighbours, co-workers. Character Formation Towards Positive Personality: Truthfulness, Constructivity, Sacrifice, Sincerity, Self-Control, Altruism, Tolerance, Scientific Vision.						
Unit:2	Value Education Towards National and Global Development					4 Hours
National and International Values: Constitutional or national values - Democracy, socialism, secularism, equality, justice, liberty, freedom, and fraternity. Social Values - Pity and probity, self-control, universal brotherhood. Professional Values - Knowledge thirst, sincerity in profession, regularity, punctuality, and faith. Religious Values - Tolerance, wisdom, character. Aesthetic values - Love and appreciation of literature and fine arts and respect for the same. National Integration and international understanding.						
Unit:3	Impact of Global Development on Ethics and Values					3 Hours
Conflict of cross-cultural influences, mass media, cross-border education, materialistic values, professional challenges, and compromise. Modern Challenges of Adolescent Emotions and behaviour; Sex and spirituality: Comparison and competition; positive and negative thoughts.						

Unit:4	Therapeutic Measures	3 Hours
Control of the mind through a. Simplified physical exercise b. Meditation – Objectives, types, effect on body, mind and soul c. Yoga – Objectives, Types, Asanas d. Activities: (i)Moralisation of Desires (ii)Neutralisation of Anger (iii)Eradication of Worries (iv)Benefits of Blessings		
Unit:5	Human Rights	3 Hours
Concept of Human Rights – Indian and International Perspectives a. Evolution of Human Rights b. Definitions under Indian and International documents 2. Broad classification of Human Rights and Relevant Constitutional Provisions. a. Right to Life, Liberty and Dignity b. Right to Equality c. Right against Exploitation d. Cultural and Educational Rights e. Economic Rights f. Political Rights g. Social Rights 3.Human Rights of Women and Children a. Social Practice and Constitutional Safeguards (i)Female Foeticide and Infanticide (ii)Physical assault and harassment (iii)Domestic violence (iv)Conditions of Working Women 4.Institutions for Implementation a. Human Rights Commission b. Judiciary 5.Violations and Redressal a. Violation by State b. Violation by Individuals c. Nuclear Weapons and terrorism d. Safeguards.		
Unit:6	Contemporary Issues	2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars		
Total Lecture Hours		18 Hours
Textbook(s)		
1	Value Education – Human Rights, Bharathiar University	
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]		
1	Human Rights in India - By Prof. (Dr.) Y.S.R. Murthy O.P. Jindal Global University - SWAYAM	
Course Designed By: Bharathiar University		

Course code	26A	Internship				L	T	P	C
Field Work	Field Work				-	2	-	2	
Pre-requisite	Understanding the Customer Care	Syllabus Version			2021-22				
Course Objectives:									
The main objectives of this course are to:									
1. The students will get hands on experience in a company to exhibit their skills learnt.									
2. The students will gain interaction with company employee in the real work environment.									
3. The students will gain understanding of general rules, regulation, duties and responsibilities.									
Expected Course Outcomes:									
On the successful completion of the course, student will be able to:									
1	The students will get hands on experience in a company to exhibit their skills learnt.							K6	
2	The students will gain interaction with company employee in the real work environment.							K4	
3	The students will gain understanding of general rules, regulation, duties and responsibilities							K2	
4	They may get good rapport with the organisation for future reference.							K3	
5	Students may get campus to corporate exposure							K3	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create									
Marks awarding Mode for 50 marks									
25 marks will be awarded by the concerned instructor of the department based on the students review progress assigned by the faculty and presentation during the course of internship. Remaining 25 marks will be awarded by conducting public viva in the department with the tutor and the expert (Industry Expert is preferable) assigned by the department head based on the students final report, presentation and viva voce for the creation of portfolio. The students must get certificate with 75% attendance for the 30 Hours. The minimum pass mark is fixed as 30 and failing the above will be instructed to redo the work.									
Course Designed By: Dr. A. Vimala, Dr. S. Sadhasivam and Dr. C. Dhayanand									
Mapping with Programme Outcomes									
COs	PO1	PO2	PO3	PO4	PO5				
CO1	S	M	M	S	M				
CO2	S	M	M	S	M				
CO3	S	M	S	S	M				
CO4	S	M	M	S	M				
CO5	S	S	M	S	S				
*S-Strong; M-Medium; L-Low									



Course code	33A	Relational Database Management System	L	T	P	C
Core		Core 7	5	-	-	5
Pre-requisite		Knowledge in Data and Information System	Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
1. Present an introduction to database management systems, with an emphasis on how to organize, maintain and retrieve - efficiently, and effectively - information from a DBMS.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Describe the fundamental elements of relational database management systems					K2, K3
2	Explain the basic concepts of relational data model, entity-relationship model, relational database design, relational algebra and SQL.					K3, K4
3	Design ER-models to represent simple database application scenarios					K3, K4
4	Improve the database design by normalization.					K3, K4
5	Familiar with basic database storage structures and access techniques: file and page organizations, indexing methods including B tree, and hashing.					K3, K4
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Database Systems					12 Hours
Introduction to Database – Role and Advantages of DBMS – Types of Database – Evolution of File System Data Processing – Dependence - Data Redundancy – Data Anomalies - DBMS System Environment and Functions.						
Unit:2	Data Models					12 Hours
Data Modelling – Importance – Basic Building Blocks – Business Rules – Evolution of Data Model – Degrees of Data Abstraction.						
Unit:3	Relational Database Model and Normalization					14 Hours
Logical view of data – Keys – Integrity Rules – Relational Algebra – Entity Relationship Modelling - ER Diagram – Need for Normalization – Normalization Process – Normal Forms - 1NF – 2NF – 3NF – BCNF – 4NF.						
Unit:4	Structured Query Language					14 Hours
Introduction to SQL – Data Definition Commands – Data Manipulation Commands – SELECT Queries – Joining Database Tables - Join Operators – Sub queries and Correlated Queries – SQL Functions – Relational Set Operators.						

Unit:5 Database Design		10 Hours			
Information System - System Development Life Cycle – Database Life Cycle – Conceptual Design – Logical Design – Physical Design – Database Design Strategies.					
Unit:6 Contemporary Issues		2 Hours			
Case Study, Expert Lectures, Online Seminars - Webinars					
Total Lecture Hours					64 Hours
Textbook(s)					
1	Coronel, Carlos, and Steven Morris, (2016), Database Systems: Design, Implementation, and Management. Cengage Learning.				
2	A Silberschatz, H Korth, S Sudarshan (2005), “Database System and Concepts”, fifth Edition McGraw-Hill				
Reference Books					
1	Gupta, G. K. (2011). Database management system. Tata McGraw-Hill Education.				
2	Rob, Coronel, (2006) “Database Systems”, Seventh Edition, Cengage Learning.				
3	R. Elmasri and S.B. Navathe, “Fundamentals of Database Systems”, Addison Wesley, 2000				
4	Gary W. Hanson and James V. Hanson, “Database Management and Design”, Prentice Hall of India Pvt Ltd, 1999.				
5	Database Management System: R. Ramakrishnan and J. Gehrke, McGraw Hill.				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	NOC: Introduction to Database Systems - NPTEL				
2	RDBMS – Spoken Tutorial				
Course Designed By: Dr. A. Vimala and Dr. Chandra					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	S
CO2	S	S	S	S	S
CO3	S	S	S	S	S
CO4	S	S	S	S	S
CO5	S	S	S	S	M
*S-Strong; M-Medium; L-Low					

Course code	33B	Research Methods	L	T	P	C
Core		Core 8	6	-	-	6
Pre-requisite	Knowledge in data and interest to explore		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. To familiarize students with basic of research and the research process.						
2. To enable the students in conducting research work and formulating research synopsis and report.						
3. To impart knowledge for enabling students to develop data analytics skills and meaningful interpretation to the data sets so as to solve the business/Research problem.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Develop understanding on various kinds of research, objectives of doing research, research process, research designs and sampling.				K2, K3	
2	Have basic knowledge on qualitative research techniques				K2, K3	
3	Have adequate knowledge on measurement and scaling techniques as well as the quantitative data analysis				K3, K4	
4	Have basic awareness of data analysis-and hypothesis testing procedures				K3, K4	
5	Write a research report and thesis				K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Introduction					12 Hours
Meaning – Objectives – Types – Significance - Research Methods versus Methodology – Research Process - Criteria of Good Research – Research Problem – Selecting the problem – Defining the problem						
Unit:2	Research Design					12 Hours
Meaning of Research Design – Need – Features – Importance – Sampling Design – Probability – Non probability – Steps – Criteria – Characteristics - Types						
Unit:3	Scaling Techniques and Data Collection Methods					12 Hours
Measurement in research – Measurement scales – Scaling – Scaling Techniques – Methods of Data Collection – Collection of data through questionnaire, schedules						
Unit:4	Testing of Hypotheses					12 Hours
Hypothesis – Procedure for Hypothesis Testing – Test of Hypotheses – Parametric – Nonparametric						

Unit:5	Interpretation and Report Writing					10 Hours
Meaning of Interpretation – Techniques – Significance of Report Writing – Steps in Writing Report – Layout of Research Report – Types of Reports						
Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
Total Lecture Hours					60 Hours	
Textbook(s)						
1	Kothari, S. R. Research Methodology: Methods and Techniques. 2013.					
2	Cooper, D.R. and P.S. Schindler (2006)- Business Research Methods, (New Delhi: Tata McGraw-Hill)					
Reference Books						
1	Malhotra, N. K. (2015). Marketing research. Pearson Higher Ed.					
2	Bryman, A. (2015). Social research methods. Oxford University Press.					
3	Panneerselvam, R., 2004. Research Methodology, Prentice hall of India, New Delhi,					
4	Anderson.J.Berry H.D. and Poole M, 2008 Thesis and Assignment writing - Wiley Eastern Ltd., New Delhi					
5	Uma Sekaran (2002) Research Methods for Business: A Skill Building Approach, Wiley					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Research Methodology - SWAYAM					
Course Designed By: Dr. A. Vimala, Dr S. Sadhasivam and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	M	S	M	S	S	
CO2	S	S	S	S	S	
CO3	S	S	S	S	S	
CO4	S	S	S	S	S	
CO5	S	S	S	S	M	
*S-Strong; M-Medium; L-Low						

Course code	33P	Campus to Corporate		L	T	P	C
Core		Core 9		-	-	5	5
Pre-requisite		Understanding Business Etiquettes		Syllabus Version		2021-22	
Course Objectives:							
The main objectives of this course are to:							
<ol style="list-style-type: none"> 1. Equip the students for campus readiness 2. Learn various etiquettes required to work in the organization 3. Familiarize the office automation and computer skills 							
Expected Course Outcomes:							
On the successful completion of the course, student will be able to:							
1	It enables the student to understand the history of corporate origin and existence of BPO in the world					K2	
2	Demonstrate the various pre-requisite of etiquettes and its real time applications					K3	
3	Explore the PC and data skills using Word, Excel and PowerPoint					K4, K5	
4	Understand the application of aptitude and implement the knowledge for entry level job and in their career					K3, K4	
5	Expose the knowledge of understanding world of work and SWOT analysis					K5	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create							
Unit:1	Overview of Corporate and BPO Industry					12 Hours	
Overview of corporate - History of corporate - campus and corporate – distinction – overview of BPO industry in India and world.							
Unit:2	Corporate Etiquettes					12 Hours	
Corporate culture - Corporate etiquette – importance of corporate etiquette in India, UK and US - Dressing and grooming skills - Workplace etiquette - Business etiquette – Email etiquette - Telephone and meeting etiquette - Presentation skills - Professional competencies: analytical thinking - listening skills - time management - team skills - stress management.							
Unit:3	PC and Data Skills					12 Hours	
PC and data skills – MS word – introduction – functions - formatting – graphics – spell check– printing. Data skills – MS excel – introduction – formatting data – formulas in excel Introduction to power point – editing and formatting – presentation – animation.							
Unit:4	Analytical and Logical Reasoning					12 Hours	
Aptitude Appetizer - Analytical and logical reasoning - Quantitative vs. verbal aptitude — practice – shortcut routes –workouts from previous year / batch tests – familiarize the various							

types of problems from quantitative and non-verbal reasoning areas in competitive exams for employment and/or higher studies.					
Unit:5	Understanding of World of Work				12 Hours
Career planning – goal setting – values – understanding the world of work – sectors of employment - talent management – talent acquisition – SWOT analysis – resume preparation – Facing group discussion and interview.					
Unit:6	Contemporary Issues				2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars					
Total Lecture Hours					62 Hours
Textbook(s)					
1	Vimala, A., (2016), Career Preparation and Talent Management Oviya Publication, Coimbatore.				
2	McGrath, E. H (2008). Basic Managerial Skills for All, 8th ed. Prentice-Hall of India, New Delhi,				
Reference Books					
1	Rajendra pal and J.S. Korlahalli, (2011) —Essentials of Business Communication S.Chandand sons.				
2	Ramesh, MS, and C. C Pattanshetti (2003), —Business Communication R. Chand and Co, New Delhi.				
3	Study Guides Basic Business Communication: Skills for Empowering the Internet Generation by Lesikar and Flatley				
4	Soft Skills Enhancing Employability: Connecting Campus With Corporate by M.S. Rao. I.K. International				
5	Business Communication: The Real World and Your Career Senguin				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	NOC: Business English Communication - NPTEL				
Course Designed By: TCS and Dr. A. Vimala					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	S	M	M	S	M
CO2	S	M	M	S	M
CO3	S	M	S	S	M
CO4	S	M	M	S	M
CO5	S	S	M	S	S
*S-Strong; M-Medium; L-Low					

Course code	3AA	Business Communication	L	T	P	C
Allied		Allied 3	5	-	-	5
Pre-requisite	Knowledge in English Communication		Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
1. Provide effective organizational communication.						
2. Enable the students to learn the good communication.						
3. Compose effective business correspondence.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Learn the importance and methods of communication.				K2, K3, K6	
2	Expertise in letter writing.				K2, K3, K6	
3	Write various business correspondences.				K2, K3, K6	
4	Frame different types of reports.				K2, K3, K6	
5	Become skilled at different internal communication methods.				K2, K3, K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Communication				12 Hours	
Essential and Importance of Business Communication. Methods of Communication – Types – Barriers.						
Unit:2	Communication through Letters				12 Hours	
Layout of letters – business enquiries – Offers and Quotations – Orders – Execution of Orders – Cancellation of Orders – Claims – Adjustments and settlement of accounts – Letters of complaints – Collection letters – Status enquiries.						
Unit:3	Writing Business Components				12 Hours	
Bank correspondence – Letter to the editor. Correspondence of company secretary with shareholders and directors – Agenda – Minutes – Preparation.						
Unit:4	Communication through Reports				12 Hours	
Essentials – Importance – Contents - Reports by individuals – Committees – Annual report – Application for appointment – reference and appointment orders.						
Unit:5	Internal Communication				12 Hours	
Short speeches – Memo – Circulars – Notices – Explanations to superiors – Communication media – Merits of various devices – Intercom, Telex and Telephone – Fax – Internet.						

Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
					Total Lecture Hours	62 Hours
Textbook(s)						
1	Rajendra pal and J.S. Korlahalli, (2011) “Essentials of Business Communication” Sultan Chand and sons.					
2	Vikram Bisen (2009) “Business Communication” New Age International Publishers					
Reference Books						
1	Ramesh, MS, and C. C Pattanshetti, (2003), “Business Communication” R. ChandandCo, New Delhi.					
2	Rodriquez M V (2003), “Effective Business Communication Concept” Vikas Publishing Company.					
3	Urmila Rai, Sm Rai (2016) “Business Communication” Himalaya Publishing House.					
4	Madhukar, R K, (2010), Business Communication, Vikas Publishing House New Delhi.					
5	Hudson, R.H.,(2006) Business Communication, 5th Edition, Jaico Publishing House, Delhi.					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	NOC: Business English Communication - NPTEL					
Course Designed By: Dr. A. Vimala and Dr. S. Sadhasivam and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	M	M	L	L	L	
CO2	M	M	L	L	L	
CO3	M	M	L	L	L	
CO4	M	M	L	L	L	
CO5	M	M	L	L	L	
*S-Strong; M-Medium; L-Low						

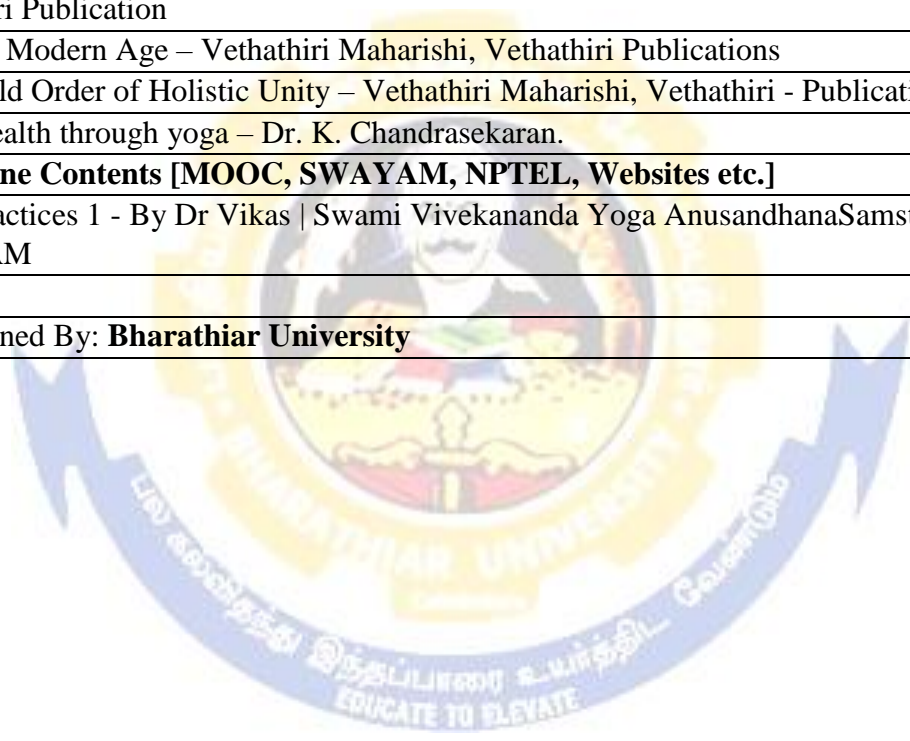
Course code	33Q	Data Analysis Using SPSS	L	T	P	C
AOS		AOS 1	-	-	5	5
Pre-requisite	Understanding of Research Methods		Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
1. To understand the uses of SPSS, as a tool to summarize and aid in the interpretation of research findings.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand how to work with SPSS				K2, K3	
2	Understand how to acquire information (samples)				K3, K4	
3	Understand how to enter and reorganize information within SPSS				K4, K5	
4	Carry out inferential statistical analysis using SPSS				K5, K6	
5	Understand how to effectively summarize research finds using SPSS				K5, K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Lab Exercises						
1. Enter Data into SPSS and create Frequency Table and interpret the results						
2. Enter Data into SPSS and create Multiple Response Sets and interpret the results						
3. Enter Data into SPSS and put Cross Tabulation and Chi Square and interpret the results						
4. Enter Data into SPSS and calculate Measures of Dispersion and interpret the results						
5. Enter Data into SPSS and calculate Measures of Distribution and interpret the results						
6. Enter Data into SPSS and perform Independent Samples T-Test and interpret the results						
7. Enter Data into SPSS and perform One Way ANOVA and interpret the results						
8. Enter Data into SPSS and perform Mann-Whitney U Test and interpret the results						
9. Enter Data into SPSS and perform Kruskal-Wallis Test and interpret the results						
10. Enter Data into SPSS and perform Bivariate Correlation and interpret the results						
11. Enter Data into SPSS and perform Simple Regression and interpret the results						
12. Enter Data into SPSS and perform Multiple Regression and interpret the results						
					Total Lecture Hours	50 Hours
Textbook(s)						
1	Jeremy J. Foster (2001). Data analysis using SPSS for windows. Sage publications. London.					
2	Verma, J.P , (2013). Data Analysis in Management with SPSS Software, Springer					
Reference Books						
1	Clifford E.Lunneborg, (2000). Data analysis by resampling: concepts and applications. Dusbury Thomson learning. Australia.					
2	Michael S. Louis – Beck (1995). Data analysis an introduction, Series: quantitative					

	applications in the social sciences. Sage. Publications. London.				
3	Wagner, William E., III, (2019) Using IBM® SPSS® Statistics for Research Methods and Social Science Statistics, Sage Publications				
4	Rajendra Nargundkar, (2019) “Marketing Research -Text and Cases”, Tata McGraw Hill 4 th Edition.				
5	Arora PN and bothers(2011),”Complete Statistical Methods”, S. Chand, 3rd Edition				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	Data Analysis for Social Science Teachers - SWAYAM				
Course Designed By: Dr. A. Vimala and Dr. C. Dhayanand					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	S
CO2	S	S	S	S	S
CO3	S	S	S	S	S
CO4	S	S	S	S	S
CO5	S	S	S	S	M
*S-Strong; M-Medium; L-Low					

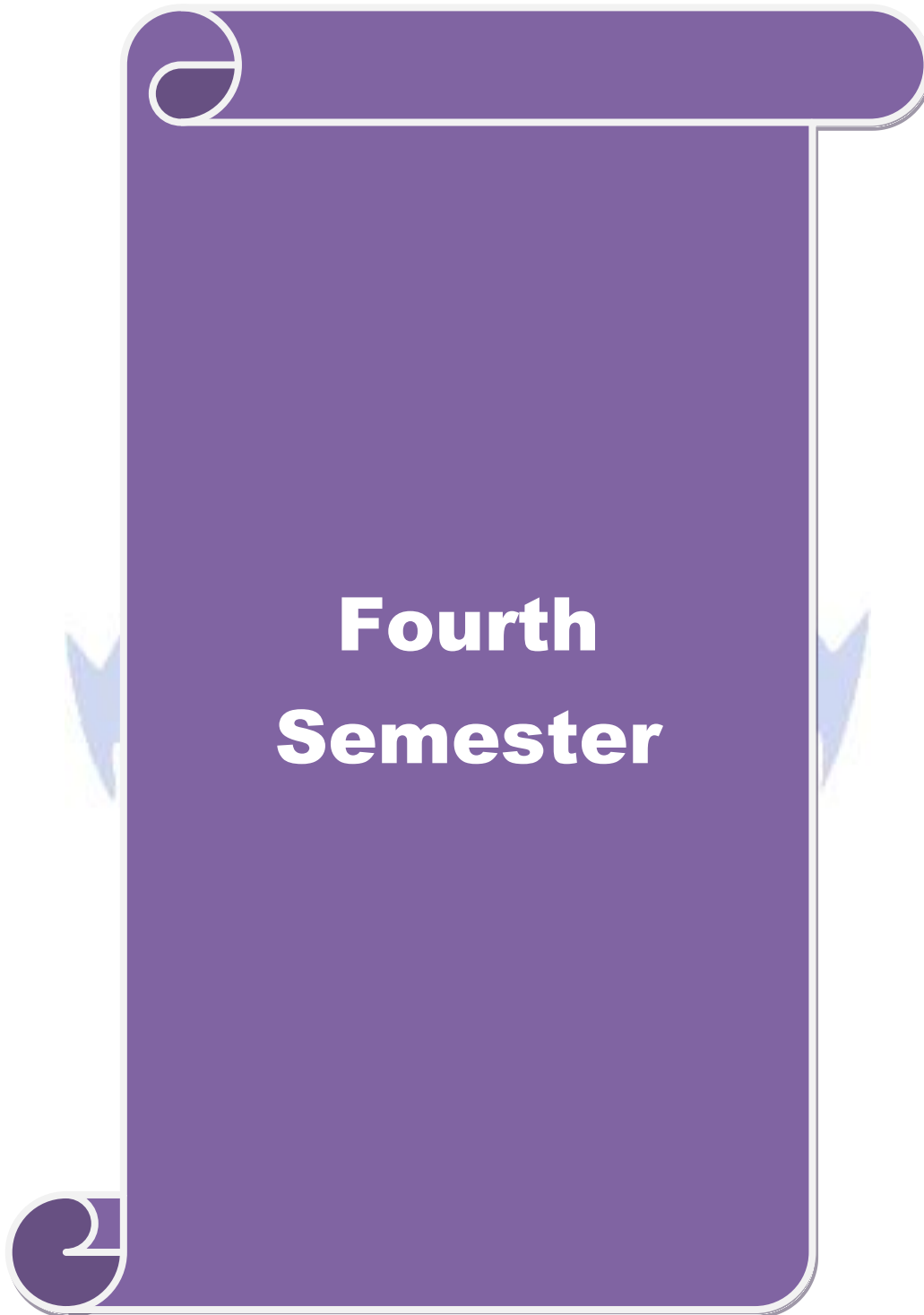


Course code	3FC	Yoga for Human Excellence	L	T	P	C
Elective		Elective 1	2	-	-	2
Pre-requisite		Understanding of oneself	Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
1. Inculcate Yoga in students for physiological and psychological development and maintenance						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Enable the student to have good health					K2
2	Practice mental hygiene					K4
3	Possess emotional stability					K4
4	Integrate moral values					K1
5	Attain higher level of consciousness					K2
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
1. Yoga and Physical Health						
1.1 Physical Structure - Three bodies - Five limitations						
1.2 Simplified physical Exercises - Hand Exercises -Leg Exercises – Breathing Exercises - Eye Exercises – Kapalapathi						
1.3 Matrarasanas -Massages - Acupuncture - Relaxational						
1.4 Yogasanas - Padmasana- Vajrasanas – Chakrasanas (Side) - Viruchasanas - Yoga muthra - Patchimothasanas - Ustrasanas -Vakkarasanas – Salabasanas						
2. Art of Nurturing the life force and Mind						
2.1 Maintaining the youthfulness - Postponing the ageing process						
2.2 Sex and Spirituality - Significance of sexual vital fluid - Married life -Chastity						
2.3 Ten stages of Mind						
2.4 Mental frequency - Methods for concentration						
3. Sublimation						
3.1 Purpose and Philosophy of life						
3.2 Introspection - Analysis of Thought						
3.3 Moralization of Desires						
3.4 Neutralization of Anger						
4. Human Resources development						
4.1 Eradication of worries						
4.2 Benefits of Blessings						

4.3. Greatness of Friendship	
4.4 Individual Peace and World Peace	
5. Law of Nature	
5.1 Unified force - Cause and Effect system	
5.2 Purity of Thought and Deed and Genetic centre	
5.3 Love and Compassion	
5.4 Cultural Education - Fivefold Culture	
Total Lecture Hours	
18 Hours	
Textbook(s)	
1	Manavalakalai Yoga, Vedathiri Publications
2	Simplified Physical Exercises – Vethathiri Maharishi, Vethathiri Publication. Yogasanas – Vethathiri Publication
3	Yoga for Modern Age – Vethathiri Maharishi, Vethathiri Publications
4	The World Order of Holistic Unity – Vethathiri Maharishi, Vethathiri - Publications
5	Sound health through yoga – Dr. K. Chandrasekaran.
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]	
1	Yoga Practices 1 - By Dr Vikas Swami Vivekananda Yoga AnusandhanaSamsthan - SWAYAM
Course Designed By: Bharathiar University	



Course code	36A	Internship				L	T	P	C
Field Work	Field Work				-	2	-	2	
Pre-requisite	Knowledge in Statistical Tools	Syllabus Version			2021-22				
Course Objectives:									
The main objectives of this course are to:									
4. The students will get hands on experience in a company to exhibit their skills learnt.									
5. The students will gain interaction with company employee in the real work environment.									
6. The students will gain understanding of general rules, regulation, duties and responsibilities.									
Expected Course Outcomes:									
On the successful completion of the course, student will be able to:									
1	The students will get hands on experience in a company to exhibit their skills learnt.							K6	
2	The students will gain interaction with company employee in the real work environment.							K4	
3	The students will gain understanding of general rules, regulation, duties and responsibilities							K2	
4	They may get good rapport with the organisation for future reference.							K3	
5	Students may get campus to corporate exposure							K3	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create									
Marks awarding Mode for 50 marks									
25 marks will be awarded by the concerned instructor of the department based on the students review progress assigned by the faculty and presentation during the course of internship. Remaining 25 marks will be awarded by conducting public viva in the department with the tutor and the expert (Industry Expert is preferable) assigned by the department head based on the students final report, presentation and viva voce for the creation of portfolio. The students must get certificate with 75% attendance for the 30 Hours. The minimum pass mark is fixed as 30 and failing the above will be instructed to redo the work.									
Course Designed By: Dr. A. Vimala, Dr. S. Sadhasivam and Dr. C. Dhayanand									
Mapping with Programme Outcomes									
COs	PO1	PO2	PO3	PO4	PO5				
CO1	S	M	M	S	M				
CO2	S	M	M	S	M				
CO3	S	M	S	S	M				
CO4	S	M	M	S	M				
CO5	S	S	M	S	S				
*S-Strong; M-Medium; L-Low									



Course code	43A	Marketing Management	L	T	P	C
Core		Core 10	5	-	-	5
Pre-requisite	Understanding Customer and Organisation		Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
1. Develop a better understanding of the role of marketing in a business organization						
2. Provide opportunities to analyze marketing activities within the firm						
3. Examines the role and importance of marketing in a firm						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand the concepts of Marketing					K1, K2
2	Aware of the marketing strategies					K2, K3, K4
3	Realise the need and importance of branding, packaging and labelling					K1, K2
4	Recognize the need of knowing buyer behaviour					K2, K4
5	Be aware of the global market trend					K2, K3
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Introduction					12 Hours
Marketing – Definitions – Concepts of Marketing - Concept of Marketing philosophy – Marketing Vs Distribution – Marketing Vs Selling – Marketing Vs Retailing - Nature of Marketing – Scope of Marketing – Objectives of Marketing - Marketing and other managerial functional areas – Marketing environment – Micro Environment – Macro Environment – Trends in Marketing.						
Unit:2	Marketing Strategies					13 Hours
Definition – Nature – Decision Process – Types – Marketing Mix – 4 Ps’ – 7 Ps’ – Objectives of Product Management – Product Planning – Product life cycle – New Product Development – Features of Product – Pricing Strategy – Market Segmentation – Competitor Analysis – Steps.						
Unit:3	Branding, Packaging and Labelling					13 Hours
Brand – Meaning – Brand Name Vs Trademark – Functions of Branding – Developing Brand Names – Brand Strategy – Brand repositioning – Brand Stretching – Brand Equity – Packaging – Functions – Cost effectiveness – Social Aspects – Labelling.						
Unit:4	Buyer Behaviour					12 Hours
Definition and salient features – Buyer Behaviour model under system approach – Economic Model. Psychological model – Motivation – Perception – Learning – Attitude. Social and Cultural						

influence on Buyer behaviour – Buying Process.					
Unit:5 Global Marketing					12 Hours
Meaning – Domestic and International Marketing – Nature of Global Marketing – Elements of Global Marketing Mix – Advantages and Disadvantages of global marketing – Entry in Global Market.					
Unit:6 Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars					
Total Lecture Hours					64 Hours
Textbook(s)					
1	Kotler Philip, Keller, Koshy and Jha, Marketing Management, (2008), 13th Edition, Pearson Education / Prentice Hall of India.				
2	Philip Kotler, Gary Armstrong, Principles of Marketing, Pearson Education India, 15th Edition, 2015.				
Reference Books					
1	Ramaswamy V. S., Namakumari S, (2006), Marketing Management - The Indian Context, Macmillan India Ltd.				
2	http://www.ddegjust.ac.in/studymaterial/bba/bba-203.pdf				
3	https://drive.google.com/file/d/1yfGZRRj8eS9661ldm4ON5OaMuJvyx3B1/view				
4	Rajan Saxena, Marketing Management, McGraw Hill Education, Fifth edition, 2015.				
5	Philip Kotler, Herman Kartajaya, Marketing 4.0: Moving from Traditional to Digital, wiley publication, 2017.				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	Marketing Management - I – NPTEL				
Course Designed By: Dr. A. Vimala, Dr. S. Sadhasivam and Dr. C. Dhayanand					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	M	M
CO2	S	S	M	M	M
CO3	S	S	M	M	M
CO4	S	S	S	S	S
CO5	S	S	M	M	S
*S-Strong; M-Medium; L-Low					

Course code	43B	Managerial Economics	L	T	P	C
Core		Core 11	5	-	-	5
Pre-requisite		Information on Market and Demand	Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
<ol style="list-style-type: none"> 1. Explain the optimal allocation of resources within the firm 2. Analyse real-world business problems with a systematic theoretical framework 3. Understand the internal and external decisions to be made by managers 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Recognize the basic concepts of managerial economics.					K2, K3
2	Be aware of the determinants of elasticity.					K2
3	Understanding and calculating break-even point.					K2, K3
4	Know the different market types.					K2, K6
5	Realize the applications of price discrimination.					K1, K2
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Introduction					12 Hours
Definitions – Nature of Managerial Economics – Basic Characteristics – Decision Making Process – Scope of Managerial Economics – Role of Managerial Economist						
Unit:2	Demand					12 Hours
Concept of Demand – Types of Demand – Law of Demand – Elasticity of Demand – Factors – Price Elasticity – Arc Elasticity – Income Elasticity – Cross Elasticity – Concept of Supply - Elasticity of Supply						
Unit:3	Cost					12 Hours
Need and Significance of Cost - Cost Concepts – Kinds of Cost – Introduction to Production – Production Process – Production Function – Profit – Profit Maximization and Planning Break-Even-Point (BEP) Analysis						
Unit:4	Market					12 Hours
Market – Classification – Various Forms of Market Structure – Perfect Competition – Imperfect Competition – Monopolistic Competition – Pure Oligopoly – Differentiated Oligopoly - Monopoly						
Unit:5	Pricing					12 Hours
Introduction – Multiproduct Pricing – Price Discrimination – Price Discrimination in Real World – Pricing Methods						

Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
					Total Lecture Hours	62 Hours
Textbook(s)						
1	Atmanand R., Managerial Economics, Excel Books, 2002					
2	D N Dwivedi, Managerial Economics, Vikas publications, eighth edition, 2015.					
Reference Books						
1	Paul G. Keat, Philip K. Y. Young and Sreejata Banerjee, Pearson Education, (2013), Managerial Economics - Economic Tool for Today's Decision Makers, 6th Ed.					
2	Craig H. Petersen, W. Chris Lewis, and Sudhir K. Jain, (2008), Managerial Economics, Pearson Education, 5th Ed.					
3	Suma Damodaran, Managerial economics, oxford publication, second edition, 2010.					
4	http://www.opentextbooks.org.hk/system/files/export/15/15497/pdf/Principles_of_Management_Economics_15497.pdf					
5	http://www.pondiuni.edu.in/sites/default/files/Managerial%20Economics.pdf					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Introduction to Managerial Economics - SWAYAM					
Course Designed By: Dr. A. Vimala, Dr. S. Sadhasivam and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	S	S	M	M	M	
CO2	S	S	M	M	M	
CO3	S	S	M	M	M	
CO4	S	S	M	M	M	
CO5	S	S	M	M	M	
*S-Strong; M-Medium; L-Low						

Course code	43C	Data Visualization for Business Intelligence	L	T	P	C
Core		Core 12	5	-	-	5
Pre-requisite	Understanding in Business Analytics		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. Introduce students to data visualization including both the principles and techniques. Students will learn the value of visualization, specific techniques in information visualization and scientific visualization, and how understand how to best leverage visualization methods.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Know the basics of data visualization				K2, K3	
2	Understand the importance of data visualization and the design and use of many visual components				K4, K5	
3	Learn to wisely use various visualization structures such as tables, spatial data, time-varying data, tree and network, etc.				K4, K5	
4	Learn the basics of colours, views, and other popular and important visualization-based issues.				K4, K5	
5	Learn basic algorithms in data visualization				K4, K5	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Introduction				12 Hours	
Data Visualization Introduction – figures – Mapping Data – Types of Data – Scales Map – Coordinate Systems and axes - Colour to Distinguish – Represent data values – Colour to Highlight						
Unit:2	Visualization of Amounts and Distributions				12 Hours	
Visualizing Amounts: Bar Plots, Grouped and Stacked Bars - Dot Plots – Heat Maps – Visualizing Distributions: Histograms, Density Plots – Single Distribution – Multiple Distribution – Q-Q Plots – Vertical and Horizontal axis						
Unit:3	Visualization of Proportions and Associations				12 Hours	
Visualizing Proportions: Pie Chart, Side-by-Side Bars – Stacked Bars and Densities – Nested Proportions – Tree Maps – Nested Pies – Visualizing Associations: Scatterplots, Correlograms						
Unit:4	Visualization of Time Series and Trends				12 Hours	
Visualizing Time Series: Individual Time Series, Multiple Time Series, Time series for two or						

more responses – Visualizing Trends: Smoothing, Showing Trends – Visualizing Geospatial Data – Projections – Layers					
Unit:5 Visual Story Telling					12 Hours
Figure Titles and Captions – Axis and Legend Titles – Tables – Balancing Data and Context – Image File Formats – - Choosing right Visualization Software - Story Telling from Visualization					
Unit:6 Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars					
Total Lecture Hours					62 Hours
Textbook(s)					
1	Wilke, Claus O., (2019), Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures. O'Reilly Media.				
2	Dan Vlamis and Tim Vlamis, Data Visualization for Oracle Business Intelligence 11g, Oracle press, 11th edition 2015				
Reference Books					
1	Iliinsky, N., and Steele, J. (2011). Designing data visualizations: Representing informational relationships. O'Reilly Media.				
2	Cole Nussbaumer Knaflic ,Storytelling with Data: A Data Visualization Guide for Business Professionals, Wiley publication, 2015				
3	Kieran Healy ,Data Visualization – A Practical Introduction, Princeton University 2019				
4	Alex Campbell, Data Visualization: Clear Introduction to Data Visualization with Python. Proper Guide for Data Scientist, 2020 – Kindle edition				
5	Praveen Kumar, Data Visualization with TABLEAU, Gurucool publication, Latest edition				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	Business analytics and data mining Modelling using R - By Prof. Gaurav Dixit IIT Roorkee - SWAYAM				
Course Designed By: Dr. A. Vimala and Dr. Chandra					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	M	M
CO2	S	S	M	M	M
CO3	S	S	M	M	M
CO4	S	S	M	M	M
CO5	S	S	M	M	M
*S-Strong; M-Medium; L-Low					

Course code	43P	R Programming		L	T	P	C
Core		Core 13		-	-	5	5
Pre-requisite		Knowledge on Data and Statistics		Syllabus Version		2021-22	
Course Objectives:							
The main objectives of this course are to:							
<ol style="list-style-type: none"> 1. Provide an overview of a new language R used for data science 2. Introduce students to the R programming environment and related eco-system and thus provide them with an in-demand skill set, in both the research and business environments 3. Introduce the extended R ecosystem of libraries and packages 							
Expected Course Outcomes:							
On the successful completion of the course, student will be able to:							
1	Use R for simple programming tasks.					K2	
2	Extract data from files and other sources and perform various data manipulation tasks on them.					K1, K2	
3	Code statistical functions in R.					K2, K3, K6	
4	Use R Graphics and Tables to visualize results of various statistical operations on data.					K2, K3, K6	
5	Apply the knowledge of R gained to data Analytics for real life applications.					K2, K3, K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create							
Lab Exercises							
<ol style="list-style-type: none"> 1. Introduction: Downloading and Installing R – R Environment – Command Line Interface – R Studio – R Packages – Installing and Loading Package 2. Basics of R: Basic Math – Variables – Data Types – Vectors – Calling Functions – Missing Data 3. Advanced Data Structures in R: Data Frames – Lists – Matrices – Arrays – Reading CSVs – Reading Excel Data – R Binary Files 4. Statistical Graphics in R: Base Graphics – Bar Chart - Histogram – Scatterplot -Boxplots 5. Basic Statistics in R: Summary Statistics – Correlations – Covariance – T-Tests – ANOVA – Simple Linear Regression – Multiple Linear Regression 							
						Total Lecture Hours	50 Hours
Textbook(s)							
1	Lander, Jared P, (2017), R for Everyone: Advanced Analytics and Graphics. Addison-Wesley Professional.						
2	Sandip Rakshit ,R Programming for Beginners, McGrawHill Publication, 2017						
Reference Books							
1	Wickham, H., and Grolemund, G. (2016). R for data science: Import, tidy, transform,						

	visualize, and model data. O'Reilly Media.				
2	Andrie de Vries and Joris Meys ,R Programming For Dummies, wiley publication, 2ed, 2016				
3	Jeeva Jose Beginners Guide for Data Analysis using R Programming, Khanna publishing, 2018.				
4	Robert L. Kabacoff , R in Action, Dreamtech press, 2ed, 2015				
5	K.G. Srinivasa, G.M. Siddesh, et al, Statistical Programming in R, Oxford Publication, 2017.				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	Introduction to R Software - By Prof. Shalabh IIT Kanpur - SWAYAM				
2	R Programming – Spoken Tutorial				
Course Designed By: Brain Labs, Dr. A. Vimala and Dr. Chandra					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	M	M
CO2	S	S	M	M	M
CO3	S	S	M	M	M
CO4	S	S	M	M	M
CO5	S	S	M	M	M
*S-Strong; M-Medium; L-Low					

Course code	4EA	Insurance for Business Process Services	L	T	P	C
Allied		Allied 4	4	-	-	4
Pre-requisite	Understanding of Risk		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. Develop an understanding of what risk is, how it can be measured and transferred						
2. Understand the various Life and Non-Life insurance Concepts						
3. Know about Retirement services provided by the Insurance Companies						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	To acquire the basic knowledge of Risk and Insurance					K2
2	To gain knowledge about the various Insurance Policies					K2
3	To understand about the Non-life Insurance and Underwriting process					K3
4	To understand the challenges of Healthcare Industry and its concepts					K2
5	To acquire the basic knowledge of Retirement plans in USA, UK and in India					K2
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Concept of Risk					11 Hours
Risk Management - Basic concepts (Hazards, Perils, Assets, etc.) - Fundamentals of Insurance - Characteristics of a valid contract - Insurance contract - Principles and Practices of Insurance Contract - Important terminologies and parties in insurance contract - Types of Insurance (Personal, Commercial, Health, Life, etc. - History of Insurance - Types of Insurance companies - Business units in an Insurance company - Overview of Insurance Life Cycle (Underwriting, Policy Servicing, Claims, etc.) - Reinsurance concept.						
Unit:2	Life Insurance Policy					11 Hours
Important terminologies in a Life Insurance policy - Parties in a Life Insurance policy - Individual Life Insurance plans - Supplementary Benefits - Policy Provisions - Ownership rights - Life Insurance policy life cycle (New business and Underwriting, Policy servicing, Claims, etc.) - Concept of Annuity - Types of Annuity - Annuity contract provisions - Annuity: USA – Fixed Annuity, Fixed Index Annuity, Variable Annuity - Qualified and Non-Qualified Annuity - Principles of Group Insurance - Group Life Insurance - Group Retirement Plans						
Unit:3	Non – Life Insurance concepts					11 Hours
Hazards, Perils, Catastrophe, Property Damage and Business Interruption, Policy exclusions, Indemnity, Deductibles, Retention, Premiums, Limits, Salvage, Subrogation, etc. - Insurance Providers – Co-Insurance, Reinsurance, Captive Insurance - Underwriting process - Policy Servicing process - Claims process – Reinsurance.						

Unit:4	Healthcare Insurance	11 Hours
How Healthcare Insurance works – Key Challenges of Healthcare Industry – Healthcare Eco System – Healthcare regulations and Standards; HIPAA – Medicare – Medicaid – Medclaim – Individual Health Insurance policies – Group Health Insurance policies – Managed Care – Eye Care – Micro Insurance Schemes		
Unit:5	Concept of Retirement Services	11 Hours
Retirement Planning – Asset Allocation and Asset Classes– Life stages of an Investor – Defined Benefit and Defined Contribution – Individual Retirement Arrangement in USA – Third Party Administrator for Retirement Services in USA – Life cycle of Participants in a plan (enrolment, contribution, etc.) – Categories of Pension in UK – DWP and TPR – Annuity and Income Drawdown Plan.		
Unit:6	Contemporary Issues	2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars		
Total Lecture Hours		57 Hours
Textbook(s)		
1	TCS Material	
2	M N Mishra and S B Mishra ,Insurance, Sultan Chand publication, 22nd edition,2016 Reference book.	
Reference Books		
1	Sharma R.S., Insurance: Principles and Practices (1960 Vora, Bombay).	
2	Dr. S.R.Myneni ,Law of Insurance, Asia Law House, 2nd edition, 2018	
3	C.L. Tyagi and Madhu Tyagi, Insurance Law and Practice, Atlantic publication, second edition, 2016	
4	R. N. Chaudhary , General Principles of Law of Insurance, central law publication, 2nd edition, 2018.	
5	K.S.N. Murthy and K.V.S. Sarma, Modern Law Of Insurance In India: 5, LexisNexis publication, fifth edition 2013	
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]		
1	Fundamentals of Insurance - SWAYAM	
2	Fundamentals of Banking and Insurance - SWAYAM	
Course Designed By: TCS and Dr. A. Vimala		

Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	M	M
CO2	M	M	M	M	M
CO3	M	M	M	M	M
CO4	M	M	M	M	M
CO5	M	M	M	M	M

*S-Strong; M-Medium; L-Low



Course code	4EA	Supply Chain Management	L	T	P	C
AOS	AOS 2		4	-	-	4
Pre-requisite	Comprehend the Supply Network concept	Syllabus Version	2021-22			
Course Objectives:						
The main objectives of this course are to:						
<ol style="list-style-type: none"> 1. Understand the primary differences between logistics and supply chain management 2. Relate the individual processes of supply chain management within individual companies and across the supply chain 3. Helps to understand the management components of supply chain management 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand the role and need of supply chain management					K2
2	Recognise the efficient operations of supply chain management					K1, K2
3	Know the effective ways to manage the procurement of material					K2, K3, K6
4	Be aware of logistic concepts and its basic activities					K2, K3, K6
5	Realise the influence of IT in supply chain management					K2, K3, K6
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Introduction on Supply Chain Management (SCM)					11 Hours
Meaning and Definition - Objectives – Importance of SCM - Scope of SCM - Types of SCM - Major drivers of SCM - Supply chain as a profession - Need for SCM in market today - Supply chain strategy.						
Unit:2	Operations management in SCM					11 Hours
Demand Management - Basic concepts - supplier Management - Basic concepts - Operation Management in SCM - Basic principles - Lean Manufacturing and SCM – Concepts - Benefits of Lean Manufacturing - Elements. Mass Customization – Characteristics – Drivers – Levels – characteristics – Methods - SCM and Mass customization – Outsourcing - Core competencies - working models.						
Unit:3	Procurement Management in SCM					11 Hours
Introduction - Purchasing cycle - types – Inventory models - EOQ model - Inventory terminology - Inventory Management - Inventory counting system. JIT – Elements – Benefits -Vendor Management.						
Unit:4	Logistics Management					11 Hours
History and Evolution - Elements-Distribution of Management - Distribution strategies - Transportation Management - Participants in transportation - modes of Transportation - decision						

factors and transport documentation - Fleet management – process – factors - Inter model transportation – containerization – Warehousing – Types - Warehouse Management System (WMS) – Packaging - 3PL - 4PL - Reverse Logistics.					
Unit:5 Information Technology for SCM					11 Hours
Concepts - IT applications in SCM - Benefits of Integrated SCM tools - Role of Internet in SCM - Green Logistics - Data Mining and Data Warehouse.					
Unit:6 Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars					
Total Lecture Hours					57 Hours
Textbook(s)					
1	G. Raghuram, N. Rangaraj, Logistics and supply chain management, Macmillan India Ltd,2010.				
2	Donald Bowersox, David Closs, M. Bixby Cooper, Supply Chain Logistics Management, Mc Graw Hill, 2012.				
Reference Books					
1	D.K. Agarwal, (2003), Logistics and supply chain management, Macmillan India Ltd.				
2	David Simchi Levi, Philip Kaminsky and Edith Simchi Levi, (2004), Managing the supply chain, The Definite guide, Tata McGraw Hill.				
3	Burt, Dobler and Starling, (2003), World Class Supply Management, The Key to SCM, Tata McGraw Hill, 11th edition.				
4	Chopra/Kalra , Supply Chain Management , Pearson publication, 6/e, 2016				
5	Richard B. Chase, Ravi Shankar, et al Operations and Supply Chain Management(SIE), McGrawhill publication,15th edition,2018.				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	Supply Chain Management – CEC				
Course Designed By: Dr. A. Vimala and Dr. S. Sadhasivam					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	L	M
CO2	S	S	M	M	M
CO3	S	S	M	M	M
CO4	S	S	M	M	M
CO5	S	S	M	M	M
*S-Strong; M-Medium; L-Low					

Course code	4FE	General Awareness	L	T	P	C
Elective		Elective 2	2	-	-	2
Pre-requisite		Knowledge in Current Affairs	Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. Imparting knowledge on “General Awareness” prescribed for the examination to be taken by the Undergraduate students						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Learn various aptitude tests					K2
2	Learn reasoning tests					K2
3	Learn and understand about science and technology, Computers, etc					K2
4	Learn about sports and culture					K2
5	Learn and study current affairs					K2
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Following are the areas which cover the various test items prescribed in the syllabus:						
1. Verbal Aptitude						
2. Numerical Aptitude						
3. Abstract Reasoning						
4. Tamil and Other Literature						
5. General Science and Technology and Education						
6. Computer						
7. Economics and Commerce						
8. Social Studies						
9. Sports						
10. Current Affairs						
Total Lecture Hours						18 Hours
Textbook(s)						
1	General Awareness, Bharathiar University					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	https://www.careerpower.in/gk-general-knowledge.html					
Course Designed By: Bharathiar University						



**Fifth
Semester**

Course code	53A	Human Resource Management	L	T	P	C
Core		Core 14	5	-	-	5
Pre-requisite	Awareness on Organisation and its Environment		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. Understand the concept of human resource management.						
2. Learn the skills Human Resource Manager						
3. Analyse the strategic issues and strategies required to select and develop manpower resources.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand the concepts and role of HRM				K2	
2	Develop selection and interviewing program				K2, K3, K6	
3	Structure and propose an OD intervention				K2, K6	
4	Expertise in career and succession planning				K2, K3, K6	
5	Be aware of various labour welfare measures				K2, K3	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Introduction				12 Hours	
Meaning and Definition of HRM – Objectives and Nature of HRM – Functions and Importance of HRM – Role of HRM. Job Analysis: Process of Job Analysis – Job Description –Job Specification- Motivation.						
Unit:2	Recruitment				12 Hours	
Definition and Objectives of Recruitment – Recruitment Policy –Sources of Recruitment and Methods of Recruitment. Selection: Definition and Purpose of Selection – Selection Procedure. Training and development of Employees – Training Objectives – Need for Training – Training Methods – Advantages of Training – Performance Appraisal System: Components and Methods of Performance Appraisal.						
Unit:3	Individual and Organizational Development				12 Hours	
Definition, Objectives and Characteristics of OD and HRD Intervention. Job Satisfaction: Definition and Factors of Job Satisfaction.						
Unit:4	Career Planning and Succession Planning.				12 Hours	
Objectives, Process and Career Counselling – Advantages and Limitations – Career Development stages. Promotion, Transfer and Demotion.						

Unit:5	Labour Welfare					12 Hours
Definition of Labour Welfare- Objectives and Scope of Labour Welfare – Principles of Labour Welfare Programmes- Ethics in HRM- Recent Techniques in HRM.						
Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
					Total Lecture Hours	62 Hours
Textbook(s)						
1	Subba Rao. P., (2004), Personnel and Human Resource Management (Text and cases), Himalaya Publishing House.					
2	Gary Dessler, Biju Varkkey, Human Resource Management, Pearson education, 15th edition, 2019.					
Reference Books						
1	George W Bohlander and Scott A Snell (2013), “Principles of Human Resource Management”. Fifteenth Edition”; Thomson Publications.					
2	K Aswathappa, “Human Resource and Personal Management” (2017) Tata McGraw Hill, 8thEdition					
3	L. M. Prasad, Human Resource Management , Sultan Chand and Son's, Latest edition,2018					
4	Gary Dessler, Human Resource Management, Pearson education,4e, 2017					
5	V.S.P Rao, Human Resource Management, Taxmanns publication, 2nd edition, 2020					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	NOC: Principles of Human Resource Management - NPTEL					
Course Designed By: Dr. A. Vimala and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	S	S	M	M	M	
CO2	S	S	M	M	M	
CO3	S	S	M	M	M	
CO4	S	S	M	M	M	
CO5	S	S	M	M	M	
*S-Strong; M-Medium; L-Low						

Course code	53B	Organizational Behaviour	L	T	P	C
Core		Core 15	6	-	-	6
Pre-requisite	Knowledge in Organisation structure and Values		Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
<ol style="list-style-type: none"> 1. Enable students to describe how people behave under different conditions 2. Demonstrate knowledge and understanding of organizational behaviour 3. Analyze the complexities in the management of the group behaviour in the organization 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Be aware of the basis of the behaviour of employees in an organisation					K2
2	Recognize the emotions, attitude and job satisfaction that prevails in organisation					K2, K5
3	Understand motivation theories and relate that to organisation behaviour					K2, K4
4	Learn the importance of team and the ways to frame team in an organisation					K2, K3
5	Realise the concepts of leadership and the decision making involved					K2, K3
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Introduction					12 Hours
Foundation of Organizational Behaviour – Work Settings – Organizational Behaviour and Management – Values – Personality – Individual Differences						
Unit:2	Emotion, Attitudes and Job Satisfaction					12 Hours
Foundation of Emotion and Moods – Emotions and Moods in Action – Attitudes – Job Satisfaction – Perception Process – Managing Perceptions – Importance of Attributions – Individual Learning						
Unit:3	Motivation Theories and Groups					12 Hours
Definition – Motivation Theories - Types – Job Design Approaches – Job Characteristics Model – Groups in Organization – Formal Group – Informal Group						
Unit:4	Team Works					12 Hours
Types of Team – Nature of Teamwork – Team Performance - Team Building						
Unit:5	Leadership and Decision Making					12 Hours
Leadership Foundation – Leadership Perspectives - Moral Leadership – Decision Making – Steps in Decision Making – Types of Decision – Managing the Decision-Making Process						

Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
					Total Lecture Hours	62 Hours
Textbook(s)						
1	John R. Schermerhorn, Jr., et al, (2011), Organizational Behaviour. John Wiley and Sons.					
2	Robbins, S. P., and Judge, T. (2013). Organizational behaviour (15th ed.). Boston: Pearson.					
Reference Books						
1	Pareek. U. (2010). Understanding Organizational Behaviour (2nd ed.). Oxford University Press					
2	Stephen P. Robbins , Timothy A. Judge, et al ,Organizational Behaviour, Pearson publication, Eighteen Edition, 2018					
3	L. M. Prasad, organisational Behaviour, sultan chand publication, 2014					
4	K. Ashwathappa, organisational Behaviour, Himalaya Publishing House, 2018					
5	Fred Luthans, organisational Behaviour, McGraw Hill Education, 12th edition, 2017					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Organizational Behaviour - NPTEL					
Course Designed By: Dr. A. Vimala, Dr. S. Sadhasivam and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	S	S	M	M	M	
CO2	S	S	M	M	M	
CO3	S	S	M	M	M	
CO4	S	S	M	M	M	
CO5	S	S	M	M	M	
*S-Strong; M-Medium; L-Low						

Course code	53C	Machine Learning for Data Analytics	L	T	P	C
Core	Core 16		6	-	-	6
Pre-requisite	Relational Database Management System	Syllabus Version	2021-22			
Course Objectives:						
The main objectives of this course are to:						
<ol style="list-style-type: none"> 1. Give introduction to various topics in machine learning. 2. Design and implement machine learning solutions to real time problems 3. Evaluate and interpret the results of the algorithms 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand the use of machine learning in predictive data analytics				K3 and K4	
2	Gain knowledge on information-based learning in data analysis				K4 and K5	
3	Gain knowledge on similarity-based learning in data analysis				K4 and K5	
4	Gain knowledge on error-based learning in data analysis				K4 and K5	
5	Learn various tools used in predictive data analysis using machine learning				K4, K5 and K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Introduction				12 Hours	
Predictive Data Analytics – Machine Learning – Types – Applications – Data Exploration - Data Quality Report – Data Distributions – Identifying and Handling Data Quality Issues – Data Preparation.						
Unit:2	Information Based Learning				12 Hours	
Decision Trees – Shannon’s Entropy Model – Information Gain – ID3 Algorithm – Feature Selection – Handling Descriptive features – Predicting Continuous Targets - Tree Pruning – Model Ensembles.						
Unit:3	Similarity Based Learning				12 Hours	
Feature Space – Measuring Similarity using Distance Metrics – Nearest Neighbour Algorithm – Handling Noisy Data – Efficient Memory Search – Data Normalization.						
Unit:4	Error Based Learning				12 Hours	
Simple Linear Regression – Measuring Error - Multivariable Linear Regression - Gradient Descent – Learning Rates – Initial Weights – Multinomial Logistic Regression.						
Unit:5	Evaluation				12 Hours	
Misclassification Rate – Designing Evaluation Experiments – Performance Measures: Categorical						

Targets, Prediction Scores, Multinomial Targets, Continuous Targets.					
Unit:6 Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars					
Total Lecture Hours					62 Hours
Textbook(s)					
1	Kelleher, John D., et al. (2015), Fundamentals of Machine Learning for Predictive Data Analytics: Algorithms, Worked Examples, and Case Studies. MIT P.				
2	John Paul Mueller, Luca Massaron, Machine Learning (in Python and R) For Dummies, wiley publication, 2016				
Reference Books					
1	Raschka, S. (2015). Python machine learning. Packt Publishing.				
2	Gutierrez, D. D. (2015). Machine learning and data science: An introduction to statistical learning methods with R. Technics Publications.				
3	Tom M. Mitchell, Machine Learning, McGrawHill publication, Indian edition, 2017				
4	Shan Suthaharan, Machine Learning Models and Algorithms for Big Data Classification, Springer publication, 2015				
5	Oliver Theobald, Machine Learning For Absolute Beginners, 2018				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	NOC: Introduction to Machine Learning (Course sponsored by Aricent) – NPTEL				
Course Designed By: Dr. A. Vimala and Dr. R. Chandra					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	S
CO2	S	S	S	S	S
CO3	S	S	S	S	S
CO4	S	S	S	S	S
CO5	S	S	S	S	M
*S-Strong; M-Medium; L-Low					

Course code	53P	Python for Data Analytics	L	T	P	C
Core		Core 17	-	-	6	6
Pre-requisite	Knowledge in R Programming		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. Provide comprehensive knowledge of python programming paradigms required for Data Science.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand Python basic data types			K4, K5, K6		
2	Demonstrate the usage of built-in objects in Python			K4, K5, K6		
3	Analyse the significance of python program development environment by working on real world examples			K4, K5, K6		
4	Implement numerical programming, data handling and visualization through NumPy			K4, K5, K6		
5	Visualise data through python			K4, K5, K6		
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Lab Exercises						
1. Introduction: Installation and Setup – Python Libraries – Python Packages – IPython – Importing and Exporting Files						
2. Basics Python: Basic Data Types – NumPy Package – List – Tuples – Functions - Arrays						
3. Advanced Python: Panda Package – Data Frames – Filtering – Outliers – Summarization						
4. Data Manipulations in Python: Data Cleaning – Handling Missing Data – Data Transformation – String Manipulation – Data Wrangling						
5. Data Visualizations in Python: Line Plots – Bar Plots – Histogram – Density Plots – Scatter Plots – Categorical Data						
					Total Lecture Hours	50 Hours
Textbook(s)						
1	McKinney, Wes. Python for Data Analysis: Data Wrangling with Pandas, NumPy, and IPython. O'Reilly Media, 2017.					
2	Jeeva Jose and P. Sojan Lal, Introduction to Computing and Problem Solving with Python, Khanna Book Publishing, 2019					
Reference Books						
1	Nelli, F. (2018). Python data analytics: With pandas, NumPy, and Matplotlib. Apress.					
2	VanderPlas, J. (2016). Python data science handbook: Essential tools for working with data. O'Reilly Media.					

3	Reema Thareja , Python Programming: Using Problem Solving Approach, Oxford publication,2017.				
4	Bharti Motwani, Data Analytics using Python, Wiley Publication, 2020				
5	U Dinesh Kumar Manaranjan Pradhan, Machine Learning using Python, Wiley publication, 2019.				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	NOC:Business Analytics and Text Mining Modelling Using Python - NPTEL				
2	NOC:Data Analytics with Python - NPTEL				
3	Python – Spoken Tutorial				
Course Designed By: Dr. A. Vimala, Dr. R. Chandra and Dr. C. Dhayanand					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	S
CO2	S	S	S	S	S
CO3	S	S	S	S	S
CO4	S	S	S	S	S
CO5	S	S	S	S	M
*S-Strong; M-Medium; L-Low					

Course code	5EB	Tally for Accounts	L	T	P	C
AOS		AOS 3	-	-	4	4
Pre-requisite	Familiarity in Finance and Accounting		Syllabus Version		2021-22	
Course Objectives:						
The main objectives of this course are to:						
1. Impart knowledge regarding concepts of Financial Accounting Tally is an accounting package which is used for learning to maintain accounts.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand account terms in Tally			K3, K4 and K6		
2	Handle account transaction using tally.			K3, K4 and K6		
3	Manage accounting of any Business or individuals			K3, K4 and K6		
4	Creating Computerized Books of accounts with finalizing reports			K3, K4 and K6		
5	Perform FIFO and FILO analysis			K3, K4 and K6		
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Lab Exercises						
<ol style="list-style-type: none"> 1. Creation of a company and ledger. 2. Preparation of Trial Balance 3. Creation of voucher entries 4. Preparation of cash book 5. Preparation of Bank reconciliation statement 6. Preparation of Trading, Profit and Loss Account and Trial Balance without adjustments. 7. Preparation of Trading, Profit and Loss Account and Trial Balance with adjustments. 8. Ratio Analysis 9. Preparation of budget 10. Fund Flow Analysis 11. Cash Flow Analysis 12. FIFO, LIFO 13. Stock valuation 						
					Total Lecture Hours	50 Hours
Textbook(s)						
1	Inc., K. S. (2008). Tally 9 in simple steps. John Wiley and Sons.					

2	Tally ERP 9 (Power of Simplicity) by Shraddha Singh				
Reference Books					
1	GST Accounting with Tally.ERP 9				
2	Comdex Business Accounting with MS Excel and Tally ERP 9 Course kit				
3	Implementing Tally-ERP 9.0				
4	Learn Tally.ERP 9 with GST and E-Way Bill				
5	Learn Tally. ERP 9 A Self-Study Approach Book				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	Financial Accounting - By Prof. CA. Varadraj Bapat IIT Bombay - SWAYAM				
2	Front Accounting – Spoken Tutorial				
Course Designed By: Dr. A. Vimala and Dr. Sumathi					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	S	M
CO2	S	S	S	M	M
CO3	M	S	M	S	M
CO4	S	M	M	S	M
CO5	S	S	M	S	M
*S-Strong; M-Medium; L-Low					

Course code	56A	Mini Project and Viva Voce			L	T	P	C
Mini Project		Mini Project		-	3	-	3	
Pre-requisite	Knowledge in Research Methods and Analytical Tools			Syllabus Version		2021-22		
Course Objectives:								
The main objectives of this course are to:								
<ol style="list-style-type: none"> 1. The students will get hands on experience in a company to exhibit their skills learnt. 2. The students will gain interaction with company employee in the real work environment. 3. The students will gain understanding of general rules, regulation, duties and responsibilities. 								
Expected Course Outcomes:								
On the successful completion of the course, student will be able to:								
1	The students will get hands on experience in a company to exhibit their skills learnt.					K6		
2	The students will gain interaction with company employee in the real work environment.					K4		
3	The students will gain understanding of general rules, regulation, duties and responsibilities					K2		
4	They may get good rapport with the organisation for future reference.					K3		
5	Students may get campus to corporate exposure					K3		
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create								
Awarding Marks								
Internal 50: Observation report and Review								
External 50: Submitting final report, Presentation and Viva Voce								
Course Designed By: Dr. A. Vimala, Dr. S. Sadhasivam and Dr. C. Dhayanand								
Mapping with Programme Outcomes								
COs	PO1	PO2	PO3	PO4	PO5			
CO1	S	M	M	S	M			
CO2	S	M	M	S	M			
CO3	S	M	S	S	M			
CO4	S	M	M	S	M			
CO5	S	S	M	S	S			
*S-Strong; M-Medium; L-Low								



**Sixth
Semester**

Course code	63A	Data Mining and Data Warehousing		L	T	P	C
Core	Core 18		6	-	-	6	
Pre-requisite	Relational Database Management System	Syllabus Version	2021-22				
Course Objectives:							
The main objectives of this course are to:							
<ol style="list-style-type: none"> 1. Introduce the concepts of data mining and data warehouse 2. Explore various data mining process 3. Mine frequent patterns from the datasets 							
Expected Course Outcomes:							
On the successful completion of the course, student will be able to:							
1	Understand the functionality of the various data mining and data warehousing component					K1, K2	
2	Appreciate the strengths and limitations of various data mining and data warehousing models					K3, K6	
3	Explain the analyzing techniques of various data					K4	
4	Describe different methodologies used in data mining and data warehousing.					K4	
5	Compare different approaches of data warehousing and data mining with various technologies.					K5	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create							
Unit:1	Data Mining					12 Hours	
Introduction to Data Mining – Kinds of Data – Kinds of Pattern – Technologies Used – Applications and Issues of Data Mining.							
Unit:2	Data					12 Hours	
Data Objects and Attribute Types - Basic Statistical Descriptions of Data - Data Visualization - Measuring Data Similarity and Dissimilarity.							
Unit:3	Data Pre-Processing					12 Hours	
Overview of Data Pre-Processing – Data Cleaning – Data Integration – Data Reduction - Data Transformation and Data Discretisation.							
Unit:4	Data Warehousing					12 Hours	
Basic Concepts – Data Warehouse Modelling – Data Cube – Online Analytical Processing – Data Warehouse Design and Usage – Data Warehouse Implementation.							

Unit:5	Association Rule Mining					12 Hours
Mining Frequent Patterns, Associations and Correlations – Market Basket Analysis - Frequent Item set Mining Methods - Pattern Evaluation Methods.						
Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
Total Lecture Hours					62 Hours	
Textbook(s)						
1	Han, Jiawei., Micheline Kamber, and Jian Pei. (2012), Data Mining: Concepts and Techniques, Third Edition. 3rd ed. Waltham, Mass.: Morgan Kaufmann Publishers.					
2	Introduction to Data Mining, Tan, Steinbach and Kumar, 2e (2005)					
Reference Books						
1	Pujari, A. K. (2001). Data mining techniques. Universities Press.					
2	Suh, S. C. (2012). Practical applications of data mining. Jones and Bartlett Publishers.					
3	Data Mining, Charu C. Aggarwal, Springer 2015					
4	Data Mining Practical Machine Learning Tools and Techniques, Ian Witten, Eibe Frank, 2004					
5	Data Mining and Machine Learning: Fundamental Concepts and Algorithms, Mohammed J. Zaki and Wagner Meira 2019					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Data Mining - By Mr. L. Abraham David St.John's College, Palayamkottai - SWAYAM					
Course Designed By: Dr. A. Vimala, Dr. R. Chandra (Subject Expert) and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	M	S	M	S	S	
CO2	S	S	S	S	S	
CO3	S	S	S	S	S	
CO4	S	S	S	S	S	
CO5	S	S	S	S	M	
*S-Strong; M-Medium; L-Low						

Course code	63B	Digital Marketing	L	T	P	C
Core		Core 19	6	-	-	6
Pre-requisite	Awareness on Marketing and Social Media		Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
1. Examine and explore the role and importance of digital marketing in today's rapidly changing business environment.						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand the role of Digital Marketing in integrated marketing communications				K2, K3	
2	Create engaging and high-impact marketing content				K6	
3	Learn about Search Engine Optimization and Pay-Per Click Advertising				K3, K4	
4	Create engaging blogging content				K6	
5	Develop customer relationship using digital marketing				K5, K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Customer Journey					12 Hours
Creating a Customer Avatar - Getting Clear on the Value You Provide - Stages of the Customer Journey- Preparing Your Customer Journey Road Map - Establishing Marketing Objectives - Defining a Digital Marketing Campaign - Understanding the Types of Campaigns.						
Unit:2	Crafting Winning Offers					12 Hours
Offering Value in Advance - Designing an Ungated Offer - Designing a Gated Offer - Designing Deep-Discount Offers - Maximizing Profit.						
Unit:3	Pursuing Content Marketing Perfection					12 Hours
Knowing the Dynamics of Content Marketing - Finding Your Path to Perfect Content Marketing - Executing Perfect Content Marketing - Distributing Content to Attract an Audience.						
Unit:4	Blogging for Business					12 Hours
Establishing a Blog Publishing Process - Applying Blog Headline Formulas - Auditing a Blog Post - Building High-Converting Landing Pages - Capturing Traffic with Search Marketing - Following Up with Email Marketing.						

Unit:5	Tools for Digital Marketing Success					12 Hours
Building a Website - Hosting a Website - Choosing Email Marketing Software - Considering Customer Relationship Management (CRM) - Adding a Payment Solution - Using Landing Page Software - Sourcing and Editing Images - Managing Social Media - Measuring Your Performance: Data and Analytics - Optimizing Your Marketing.						
Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
Total Lecture Hours					62 Hours	
Textbook(s)						
1	Deiss, Ryan, and Russ Henneberry, (2020), Digital Marketing for Dummies. John Wiley and Sons.					
2	Puneet Bhatia ,Fundamentals of Digital Marketing, Pearson education, Second Edition,2019					
Reference Books						
1	Deiss, R., andHenneberry, R. (2020). Digital marketing for dummies. John Wiley and Sons.					
2	Ian Dodson, The Art of Digital Marketing,Wiley publication, 2016					
3	Seema Gupta, Digital Marketing, McGrawhill publication, 2017					
4	Puneet Singh Bhatia, Social Media and mobile marketing, wiley publication, 2019.					
5	Philip Kotler, Marketing 4.0, wiley publication, 2017					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Basics of Digital Marketing - SWAYAM					
Course Designed By: Infosys BPM, Dr. A. Vimala and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	S	S	M	M	M	
CO2	S	S	M	M	M	
CO3	S	S	M	M	M	
CO4	S	S	S	S	S	
CO5	S	S	M	M	S	
*S-Strong; M-Medium; L-Low						

Course code	63C	Business Ethics and Corporate Social Responsibility		L	T	P	C
Core	Core 20		6	-	-	6	
Pre-requisite	Understanding in Values and Ethics		Syllabus Version		2021-22		
Course Objectives:							
The main objectives of this course are to:							
<ol style="list-style-type: none"> 1. Provide students with the basic skills concerning business ethics and corporate social responsibility 2. Make students understand the role of ethics, corporate responsibility and sustainability in business activities 3. Evaluate ethical business practices 							
Expected Course Outcomes:							
On the successful completion of the course, student will be able to:							
1	Have clear input on ethics and its need in organisation					K2, K5, K6	
2	Understand the importance of ethics in marketing					K2, K3, K5, K6	
3	Gain knowledge on ethical HRM					K2, K3, K5	
4	Realize the importance of Ethics in business					K2, K3, K4, K6	
5	Aware of international ethical business and CSR					K2, K3, K4, K6	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create							
Unit:1	Introduction on Ethics					12 Hours	
Ethics – Meaning, Definition, Objectives, Sources, Types – Ethics and business – Need, Importance, Nature, Scope and Objectives – Myths about business ethics – Ethics and the organization – Running an ethical business.							
Unit:2	Ethics in marketing					12 Hours	
Ethics in areas of advertising, new product pricing, product packaging and labelling, personal selling, international marketing, supply chain management – criticism of ethics in marketing – Ethics in retail business.							
Unit:3	Ethics in HRM					2 Hours	
Privacy issues – psychological expectation model – Restricting and layoffs – wages empowerment of the weakest and unique – Advancement of women in the workforce– Human quality development – Sexual harassment – Discrimination – Whistle Blowing Vs Organizational loyalty – Employer rights and responsibilities							

Unit:4	Ethics in other Managerial functions	12 Hours			
Ethics in production and operations management – Ethics in finance – Specific laws that affect retailers.					
Unit:5	Ethics, CSR in global and Indian context	12 Hours			
Ethics in global business – Ethical international decision – Making methods – Corporate responsibility and the environment.					
Unit:6	Contemporary Issues	2 Hours			
Case Study, Expert Lectures, Online Seminars - Webinars					
Total Lecture Hours		62 Hours			
Textbook(s)					
1	K. Aswthappa (2014) Essentials of Business Environment-Himalaya Publishing House				
2	S K Mandal ,Ethics in Business and Corporate Governance, McGrawHill Publication,second edition, 2017				
Reference Books					
1	Hartman, L., Desjardins, J., MacDonald, C., (2013), Business Ethics: Decision Making for Personal Integrity and Social Responsibility, Third edition, Mcgraw-Hill.				
2	Madhumita Chaterj, (2011), corporate social responsibility, oxford university press.				
3	Harish Kumar, (2011) corporate social responsibility: A Waffle or Way of Life, AITBS Publishers, India				
4	Mohapatra / Sreejesh ,Case Studies in Business Ethics and Corporate Governance, Pearson publication,1e,2012				
5	G. Naga Raju K. Viyyanna Rao , Business Ethics and Corporate Governance, Wiley publication,2020				
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]					
1	Business Ethics – CEC				
2	https://www.canvas.net/browse/santaclarau/courses/business-ethics-for-real-world				
Course Designed By: Dr. A. Vimala and Dr. S. Sadhasivam					
Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	S	S	M	M	M
CO2	S	S	M	M	M
CO3	S	S	M	M	M
CO4	S	S	M	M	M
CO5	S	S	M	M	M
*S-Strong; M-Medium; L-Low					

Course code	63D	Entrepreneurship Development	L	T	P	C
Core		Core 21	6	-	-	6
Pre-requisite		Fundamentals of Business setup and Risk	Syllabus Version			2021-22
Course Objectives:						
The main objectives of this course are to:						
<ol style="list-style-type: none"> 1. Make students familiar about the entrepreneurship development and small business management 2. Train in Entrepreneurship 3. Learn the Entrepreneurship Development, Project management and Institutional support to start new ventures 						
Expected Course Outcomes:						
On the successful completion of the course, student will be able to:						
1	Understand entrepreneurship and its impact in development					K2
2	Identify the opportunities available in developing entrepreneurial qualities					K2, K3
3	Manage projects effectively by understanding its roles and responsibilities					K2, K4
4	Know the parameters to assess opportunities and limitations for new business ideas					K2, K3, K4, K5
5	Prepare feasible business plan					K2, K3, K4, K6
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6 - Create						
Unit:1	Fundamentals of Entrepreneurship					12 Hours
Meaning of Entrepreneurship - characteristics, functions, and types of entrepreneurship - Entrepreneur - Role of entrepreneurship in economic development.						
Unit:2	Entrepreneurship Development					12 Hours
Factors affecting entrepreneur growth - economic – non-economic. Entrepreneurship development programmes - need - objectives – course contents - phases - evaluation. Institutional support to entrepreneurs.						
Unit:3	Project Management					12 Hours
Meaning of project - concepts - categories - project life cycle phases - characteristics of a project – project manager - role and responsibilities of project manager.						
Unit:4	Project Identification					12 Hours
Selection - project formulation – contents of a project report - planning commission guidelines for formulating a project - specimen of a project report.						

Unit:5	Finance Feasibility and Project Evaluation					12 Hours
Source of finance for a project - Institutional finance supporting projects - project evaluation - objectives - types - methods.						
Unit:6	Contemporary Issues					2 Hours
Case Study, Expert Lectures, Online Seminars - Webinars						
					Total Lecture Hours	62 Hours
Textbook(s)						
1	S. Choudhury, (2017), Project Management, McGraw Hill Education					
2	Priyanka Singh and Supriya Singh, (2018), Entrepreneurship and Project Management, Thakur Publication Pvt. Ltd., Chennai.					
Reference Books						
1	Gupta, C.B. and Srinivasan N.P (2014) Entrepreneurial Development, Sultan Chand and Sons					
2	Khanka S.S., (2006), Entrepreneurial Development, S Chand publishing.					
3	S. Anil Kumar, (2003) Entrepreneurship Development K.K Gupta for New Age International PVT limited Chennai.					
4	Robert D. Hisrich, Michael P. Peters, et al, Entrepreneurship, McGrawhill publication, 11th Edition, 2020.					
5	Vasant Desai, Entrepreneurship: Development and Management, Himalaya Publishing House, 2015					
Related Online Contents [MOOC, SWAYAM, NPTEL, Websites etc.]						
1	Entrepreneurship Development – CEC					
2	Entrepreneurship: Do your venture – IIMB					
Course Designed By: Dr. A. Vimala and Dr. C. Dhayanand						
Mapping with Programme Outcomes						
COs	PO1	PO2	PO3	PO4	PO5	
CO1	S	S	M	M	M	
CO2	S	S	M	M	M	
CO3	S	S	M	M	M	
CO4	S	S	M	M	M	
CO5	S	S	M	M	M	
*S-Strong; M-Medium; L-Low						

Course code	67V	Project and Viva Voce		L	T	P	C
Major Project		Major Project		-	6	-	6
Pre-requisite		Knowledge in Core, Research Methods and Analytical Tools	Syllabus Version			2021-22	
Course Objectives:							
The main objectives of this course are to:							
1. The students will get on-the-job training and experience.							
2. The students will gain knowledge on problem identification and solutions.							
3. The students will gain a complete knowledge on the program and the course outcome.							
Expected Course Outcomes:							
On the successful completion of the course, student will be able to:							
1	Initially the students will know how to collect literature.					K2	
2	On the basis of problem identification students will frame tool for collecting data					K3	
3	The student will get practical exposure on the framed objective.					K3 and K4	
4	The students will gain knowledge on compiling the collected data by using analysis					K4	
5	Through report writing, the student will get complete knowledge of the course.					K5	
K1 - Remember; K2 - Understand; K3 - Apply; K4 - Analyse; K5 - Evaluate; K6- Create							
Textbook(s)							
1	C.R. Kothari, "Research Methodology Methods and Techniques", Second Edition, New Delhi: New Age International publisher, 2004						
Reference Books							
1	Ranjit Kumar, Research Methodology: A Step-by-Step Guide for Beginners, SAGE Publications, 2014						
2	Robert B Burns, Introduction to Research Methods, SAGE Publications						
Awarding Marks							
Internal 50: Observation report and Review							
External 50: Submitting final report, Presentation and Viva Voce							
Course Designed By: Dr. A. Vimala, Dr. S. Sadhasivam and Dr. C. Dhayanand							

Mapping with Programme Outcomes					
COs	PO1	PO2	PO3	PO4	PO5
CO1	M	S	M	S	S
CO2	S	S	S	S	S
CO3	S	S	S	S	S
CO4	S	S	S	S	S
CO5	S	S	S	S	M

*S-Strong; M-Medium; L-Low





Annexure

BHARATHIAR UNIVERSITY: COIMBATORE-641046
DEPARTMENT OF EXTENSION AND CAREER GUIDANCE

B.VOC. BUSINESS PROCESS AND DATA ANALYTICS

The B.Voc. Business Process and Data Analytics is a three years undergraduate programme sanctioned by the UGC and the degree is awarded by Bharathiar University. The B.Voc. Degree is recognized as regular UG degree by State and Central Government.

B.Voc. Business Process and Data Analytics students can find ample job opportunities in IT, BPM, and other industries. Within these sectors, professionals can find job profiles like Customer Care Executive, Data Analyst, Database Administrator, Statistician, Business Analyst, and any other job related to basic administration.

VISSION

- *To nurture creative and innovative professionals who can contribute towards the development in the field of business process services and data analytics.*

MISSION

- *To develop problem solving and analytical competence of the students to enable them to take up eminent and gainful position in the BPM and IT industry.*
- *To impart professional education and training in the field of business process services, knowledge process service, information technology and data analytics.*
- *To produce graduates who are socially responsible and capable of engaging in Lifelong learning.*