PSGR
Krishnammal College for Women

College of Excellence, nirf 2023-4th Rank
Autonomous and Affiliated to Bharathiar University
Reaccredited with A++ grade by NAAC, An ISO 9001:2015 Certified Institution
Peelamedu, Coimbatore-641004

DEPARTMENT OF B.COM (BUSINESS ANALYTICS)

CHOICE BASED CREDIT SYSTEM (CBCS) & LEARNING OUTCOMES-BASED CURRICULAR FRAMEWORK (LOCF)

(SEMESTER – I, II, III & IV)

BACHELOR OF COMMERCE WITH BUSINESS ANALYTICS

2022 – 2025 BATCH

PROGRAMME LEARNING OUTCOMES (PLO's)

After completion of the Programme, the student will be able to

PLO1: Exhibit conceptual and procedural foundations of business analytical methods and techniques integrated with disciplines such as commerce, mathematics, statistics, management, economics and computer science.

PLO2: Understand data science and its role of descriptive, predictive and prescriptive analytics using data mining techniques in problem solving and decision making that is imperative forbusiness organizations.

PLO3: Inculcate programming knowledge and ability to explore Big Data technologies, and algorithms for data visualization and data inference of different industries.

PLO4: Apply appropriate analytic tools and techniques to resolve complex business analytical problems in various industry sectors and domains with hands on experience in relevant software.

PLO5: Identify and resolve practically relevant business analytic tools to handle data based on diversified commerce conjecture to build and sustain a competitive advantage by expanding analytics capabilities for successful career.

PROGRAMME SPECIFIC OUTCOME (PSO's)

The students at the time of graduation will

PSO1: To Provide Hands-on learning of leading analytical tools.

PSO2: To acquire theoretical knowledge of data science tools, but will also gain exposure to business perspectives.

PSO3: To provide perfect blend of analytical skills and business knowledge to excel as business analyst.

PSGR
Krishnammal College for Women

DEPARTMENT OF B COM (BUSINESS ANALYTICS)
CHOICE BASED CREDIT SYSTEM (CBCS) & LEARNING OUTCOMES BASED CURRICULAR FRAMEWORK
(LOCF)BACHELOR OF COMMERCE WITH BUSINESS ANALYTICS – 2022-2025 BATCH

Programme & Branch: B Com (Business Analytics)

Scheme of Examination
(Applicable to students admitted during the academic year *2022- 2023* onwards)

Semester	Part	Subject Code	Title of the Paper	Instruction hrs/ week	Course Type	Contact hours	Tutorial	Duration of Exam	Examination marks			
									CA	ESE	Total	Credits
I	I	TAM2201/ HIN2201/ FRE2201	Paper I-Language – Tamil / Hindi / French – Paper I	6	Language	86	4	3	50	50	100	3
	II	ENG2101	Part II-English -Paper I	6	English	86	4	3	50	50	100	3
	III		**Group A – Core**									
		BP22C01	Paper I– Principles of Accounting	4	CC	56	4	3	50	50	100	4
		DA22C02	Fundamentals of Business Analytics	4	CC	56	4	3	50	50	100	4
		TH22A15	Allied-Statistics I	6	GE	86	4	3	50	50	100	5
		DA21CP1	Computer Application Practical I-Analysis with Excel	2	CC	27	3	3	50	50	50*	1
	IV		**Non-Tamil Students**									
		NME22B1/	Basic Tamil I	2	AECC	28	2	2	50	50	100	2
		NME22A1/	Advanced Tamil I	2		28	2	2	50	50	100	
			Students with Tamil as Language									
		NME21ES	Introduction to Entrepreneurship	2		26	4		100		100	
II	I	TAM2202/ HIN2202/ FRE2202	Language – Tamil / Hindi / French – Paper II	6	Language	86	4	3	50	50	100	3
	I	ENG2102	English -Paper II	5	English	71	4	3	50	50	100	3
	III		**Group B – Core**									
		DA22C03	R Programming	6	CC	86	4	3	50	50	100	5
		TH22A16	Allied-Statistics II	6	GE	86	4	3	50	50	100	5

		DA22CP2	Computer Application Practical II – Analysis with SPSS & R	4	CC	57	4	3	50	50	50*	2
	IV		Open Course - Self Study Online Courses	-	-	-	-	-	-	-	-	2
	IV	NME22B2 NME22A2	Basic Tamil II** Advanced Tamil II **	-	AECC	-	-	-	-	-	-	GR
	VI		Personality Development Programme	-	-	-	-	-	-	-	-	-
	IIIB	NM12GAW	General Awareness – Online Exam	-	Self study (Online)	-	-	-	100	-	100	GR
	V	21PECM1	Professional English for Commerce and Management	3	AECC	40	5	2	50	50	100	2
III	**I**	TAM2203A/ HIN2203A/ FRE2203A	Tamil paper III/ Hindi paper III/ French paper III	4	Language	58	2	3	50	50	100	3
	II	ENG2203A	English paper III	4	English	58	2	3	50	50	100	3
		BP22C04	Business Management and Ethics	5	CC	73	2	3	50	50	100	4
		DA22C05	Database Programming	4	CC	58	2	3	50	50	100	3
		BP22A01A/ F22A02/ DA22A03/	Allied Group 1. Principles of Marketing 2. Business Economics 3.Corporate Governance	5	GE	73	2	3	50	50	100	4
		DA22CP3	Computer Application Practical III - Database programming	3	CC	42	3	3	50	50	50*	1
		DA22SBP1/ DA22SBCE	Skill Based Subject I - JAVAFundamentals Practical/ Coursera - Data Science and Statistics	3	SEC	41	4	-	100	-	100	3
		NM22EVS	Foundation Course II - Environmental Studies*	-	AECC	Self-Study			100	-	100	Gr
		NM22UHR	Foundation Course III - Universal Human Values andHuman Rights*	2	AECC	30	-	-	100	-	100	2
			Job Oriented Course	-	-	60	-	-	-	-	-	Gr
	I	TAM2204A/ HIN2204A/ FRE2204A	Language – Tamil / Hindi / French – Paper III	4	Language	58	2	3	50	50	100	3

VI	**II**	ENG2204A	English -Paper III	4	English	58	2	3	50	50	100	3
	III A	BP22CO6/ CM22C09	Business Finance	4	CC	58	2	3	50	50	100	3
		DA22C07	Python	4	CC	58	2	3	50	50	100	3
		BP22A03/ DA22A04/ DA22A05	Business Law/ Business Intelligence/ Business Data Mining	5	GE	73	2	3	50	50	100	4
		DA22CP4	Computer Application Practical IV - Python	4	CC	60	-	3	50	50	50*	2
		DA22SBP1/ DA22SBCE	**Skill Based Subject I** - JAVA Fundamentals Practical/ **Coursera** - Data Science and Statistics	3	SEC	41/ 45	4/ -	-	100	-	100	3
		NM22DTG	**Foundation Course-IV** - Design Thinking	2	Finishing School Part A	30	-	-	100	-	100	2
	V	COCOACT	**Extension Activities** NSS / NCC/YRC/ Sports & Games /Eco Watch/YiNET/ Rotaract		-	-	-	-	100	-	100	1
			Community Oriented Service		-	-	-	-	-	-	-	Gr

** Outside regular class hours

*100 marks converted to 50

CC – Core Courses

GE – Generic Elective

AECC – Ability Enhancing Compulsory Course

CA – Continuous Assessment

ESE - End Semester Examination

Bloom's Taxonomy based Assessment Pattern

CIA I & II Question Paper Pattern: 2 x 25 = 50 Marks

One question from each unit with each question comprising of

- Two questions with a weightage of 2 marks (no choice)
- Two questions with a weightage of 6 marks (no choice)
- One question with weightage of 9 marks (Internal Choice at the same CLO level)

UG ESE Question Paper Pattern: 5 x 20 = 100 Marks

One question from each unit with each question comprising of

- One question with a weightage of 2 marks (no choice)
- One question with a weightage of 6 marks (Internal Choice at the same CLO level)
- One question with weightage of 12 marks (Internal Choice at the same CLO level)

UG ESE Question Paper Pattern (Accounts Subjects): 5 x 20 = 100 Marks

One question from each unit with each question comprising of

- One question with a weightage of 2 marks (no choice)
- One question with a weightage of 6 marks (no choice)
- One question with weightage of 12 marks (Internal Choice at the same CLO level

WEIGHTAGE ASSIGNED TO VARIOUS COMPONENTS OFCONTINUOUS INTERNAL ASSESSMENT

Theory

	CIA1	CIAII	Model Exam	Assignment / Class Notes	Seminar	Quiz	Class Participation	Application Oriented/Inn./ Creativity Assignment	Attendance	Max. Marks
Core /Allied	7	7	10	4	5	4	5	5	3	**50**

Practical

	Model Exam	Lab Performance (Practical+Interaction)	Regularity in Record Submission	Attendance	Maximum Marks
Core	15	24(12+12)	8	3	**50**

Internal Pattern – Introduction to Entrepreneurship

Foundation Course	CIA I	CIA II	Quiz	Assignment	Schemes for Entrepreneurs	Idea Pitch	Project (Business Plan Presentation)	Total Marks
	***50**	***50**	**5**	**5**	**5**	**5**	**20**	**100**

***CIA I and II –50 Marks(2 hrs)Each - 100 marks - Converted into 60 Marks**

Question paper pattern for CIA

Section	Marks		Marks	Total
A –4 out of 6x5 marks	**20**	**Paragraph answers**	**20**	**50**
B-2 out of 3x15 marks	**30**	**Essay type**	**30**	

RUBRIC ASSESSMENT TOOL ASSIGNMENT

Maximum - 20 Marks (converted to 4 marks) – Scale 4 to 1

Criteria	**4 Marks**	**3 Marks**	**2 Marks**	**1 Mark**
Focus Purpose	Clear	Shows awareness	Showslittle Awareness	No awareness
Main idea	Clearly presents a main idea.	Main idea supported Throughout	Vague sense	No main idea
Organization: Overall	Well planned	Good overall organization	There is a sense of organization	No sense of organization
Content	Exceptionally well presented	Well presented	Content is sound	Not good
Style: Details and Examples	Large amounts of specific examples and detailed Description	Some use of examples and detailed descriptions	Little use of specific examples and details	No use of examples

SEMINAR

Maximum - 20 Marks (converted to 5 marks) –Scale 4 to 1

Criteria	**4 Marks**	**3 Marks**	**2 Marks**	**1 Mark**
Focus Purpose	Clear	Shows Awareness	Shows little Awareness	No awareness
Main idea	Clearly presents a main idea.	Main idea supported throughout	Vague sense	No main idea
Organization: Overall	Well planned	Good overall organization	There is a sense of organization	No sense of organization
Content	Exceptionally well presented	Well presented	Content is sound	Not good
Style Details and Examples	Large amounts of specific examples and detailed description	Some use of examples and detailed descriptions	Little use of specific examples and details	No use of examples

CLASS PARTICIPATION

Maximum - 20 Marks (converted to 5 marks) – Scaled from 5 to 1

Criteria	5 Marks	4 Marks	3 Marks	2 Marks	1 Mark
Level of Engagement in Class	Student proactively contribute sto class by offering ideas and asks questions more than once per class.	Student proactively contributes to class by offering ideas and asks questions once per class	Student contributes to class and asks questions occasionally	Student rarely contributes to class by offering ideas and asking no questions	Student never contributes to class by offering ideas
Listening Skills	Student listens when others talk, both in groups and inclass. Student incorporates or builds off of the ideas ofothers.	Student listens when others talk, both in groups and in class.	Student listens when others talk in groups and in class occasionally	Student does not listen when others talk, both in groups and in class.	Student does not listen when others talk, both in groups and in class. Student often interrupts when others speak.
Behavior	Student almost never displays disruptive behavior during class	Student rarely displays disruptive behavior during class	Student occasionally displays disruptive behavior during class	Student often displays disruptive behavior during class	Student almost always displays disruptive behavior during class
Preparation	Student is almost always prepared for class with required class materials	Student is usually prepared for class with required class materials	Student is occasionally prepared for class with required class materials	Student is rarely prepared for class with required class materials	Student is almost never prepared for class.

QUIZ

Maximum - 20 Marks (converted to 4 marks)

APPLICATION ORIENTED/INNOVATION/CREATIVITY ASSIGNMENT

Criteria	Originality	Presentation	References or Library resources	Total Marks
Marks	2	2	1	5

ON 2023-2024 ONWARDS:

CA Question Paper Pattern and distribution of marks

Core and Allied - (First 3 Units) Question from each unit comprising of

One question with a weightage of 2 Marks: 2 x 3 = 6

One question with a weightage of 6 Marks (Internal Choice at the same CLO level): 6 x 3 = 15

One question with a weightage of 12 Marks (Internal Choice at the same CLO level): 12 x 3= 36

Total :60 Marks

Core and Allied courses:

ESE Question Paper Pattern: 5 x 20 = 100 Marks

Question from each unit comprising of

One question with a weightage of 2 Marks: 2 x 5 = 10

One question with a weightage of 6 Marks (Internal Choice at the same CLO level): 6 x 5 = 30

One question with a weightage of 12 Marks (Internal Choice at the same CLO level) :12 x 5 = 60

Total : 100 Marks

ESE Question Paper Pattern:(for Accounts Paper) 5 x 20 = 100 Marks

Question from each unit comprising of

One question with a weightage of 2 Marks: 2 x 5 =10

One question with a weightage of 6 Marks: 6 x 5 =30

One question with a weightage of 12 Marks (Internal Choice at the same CLO level): 12x5=60

Total : 100 Marks

CA pattern Theory

CIA Test: 10 marks **(Conducted for 60 marks after 50 days)**
Model Exam: 20 marks **(Conducted for after 85 days 100 marks (Each Unit 20 Marks))**

Seminar/Assignment/Quiz: 10 marks
Class Participation: 7 marks
Attendance: 3 marks
Total: 50 Marks

Skill Based Subject: 100 Marks

Test 1 (Theory / Practical): 50 marks

Test 2 (Theory / Practical / Project): 50 marks

Total: 100 Marks

Part IV

Value education / Environmental Studies / Design Thinking
Quiz: 50 marks

Assignment: 25marks

Project / Case study: 25 marks

Total: 100 Marks

MAPPING OF PLOs WITH CLOs

COURSE	PROGRAMME LEARNING OUTCOMES				
	PLO1	PLO2	PLO3	PLO4	PLO5
COURSE – BP22C01					
CLO1	S	S	S	S	M
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M
COURSE – DA22C02					
CLO1	S	S	M	S	M
CLO2	S	S	L	S	S
CLO3	M	M	S	S	M
CLO4	S	L	M	S	S
COURSE – DA21CP1					
CLO1	S	M	L	L	M
CLO2	S	S	S	S	S
CLO3	S	S	M	M	S
CLO4	S	M	M	L	S
COURSE – DA22CO3					
CLO1	S	S	M	S	S
CLO2	S	M	S	S	M

CLO3	M	S	S	M	M
CLO4	S	M	S	S	M
COURSE – DA22CP2					
CLO1	S	S	L	M	M
CLO2	S	M	M	S	M
CLO3	S	M	L	M	S
CLO4	S	L	L	S	M
COURSE- BP22C04					
CLO1	S	S	S	S	S
CLO2	S	S	S	M	S
CLO3	S	S	M	S	S
CLO4	S	S	M	M	M
COURSE - AF22A02					
CLO1	S	S	S	S	M
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M
COURSE - DA22A03					
CLO1	S	S	S	M	S
CLO2	S	S	S	S	M
CLO3	S	S	S	S	S
CLO4	S	M	S	S	S
COURSE - BP22A01					
CLO1	S	S	S	S	M
CLO2	S	M	S	S	M
CLO3	S	S	M	S	M
CLO4	S	S	S	L	M
COURSE - DA22C05					
CLO1	S	S	S	S	M
CLO2	S	S	S	S	S
CLO3	M	S	S	S	M
CLO4	M	M	S	S	M
COURSE - DA22CP3					
CLO1	S	S	S	S	L

CLO2	S	S	M	S	L
CLO3	S	S	S	S	S
CLO4	S	M	M	M	S
COURSE - DA22SBP1					
CLO1	S	S	L	M	M
CLO2	S	M	M	S	M
CLO3	S	M	L	M	S
CLO4	S	M	M	M	S

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
BP22C01	PRINCIPLES OF ACCOUNTING	THEORY	56	4	-	4

Preamble

- To enable the students to apply the conceptual principles and to develop an expertise in handling the accounts of specialized institutions and the consolidation of accounts through appropriate accounting techniques and policies.

Prerequisite

- Basic Knowledge in Financial Statements

Course Learning Outcomes

- On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Define the concepts and conventions in accounting	K1
CLO2	Interpret accounting statement using basic concepts	K2
CLO3	Apply the procedures of recording transactions and preparation of Reports	K3
CLO4	Analyze and prepare financial accounting reports to interpret the performance of a firm	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	M
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M

S- Strong; M-Medium;L-Low

Syllabus

Unit I **(11 Hrs)**

Basic Accounting Concepts (AS-1) - Rectification of errors - Final Accounts - BankReconciliation Statement.

Unit II **(11 Hrs)**

Bills of exchange (trade bills only) -Joint Venture (AS-27)

Unit III **(11 Hrs)**

Branch Accounts (Dependent Branches - Debtors and Stock & Debtors System– Independent Branches only**)**

Unit IV **(12 Hrs)**

Hire purchase Accounts – Royalties (AS-19) (excluding sublease)

Unit V **(11 Hrs)**

Depreciation (excluding change in method of depreciation) - Departmental Accounts- Basis for allocation of expenses

Distribution of Marks: Theory 20% and Problems 80%.

Text Book

S. No	Authors	Title	Publishers	Year of Publication
1.	Reddy T S & A Murthy	Financial Accounting	Margham Publications	Reprint 2015
2.	Jain S.P &Narang K.L	Principles of Accountancy	Kalyani Publishers	2018

Reference Books

S. No	Authors	Title	Publishers	Year of Publication
1.	RL Gupta &Radhasamy	Advanced Accountancy (Vol I)	Sultan Chand & Sons.	2018, 13th ed.
2.	MC Shukla, T.S. Grewal& S.C. Gupta	Advanced Accountancy	S. Chand & sons	2013 ed

Skill Components

- Assignment on concepts and conventions of Financial Accounting within the framework of Ind AS and IFRS.
- Preparation of Journal, Ledger and trial balance as per Ind AS 8 and 10.
- Analysing financial statements of a company and present a summary

Pedagogy

Lecture, PPT, e-content , Seminar, Assignment, Quiz & Group discussion

Course Designers:

- Dr.R.Jayasathya
- Dr.NithyaRamadass

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA22C02	FUNDAMENTALS OF BUSINESS ANALYTICS	Theory	56	4	-	4

Preamble

- To achieve and establish vital understanding of big data application in business intelligence.
- To institute the concept of systematic transformation of process-oriented data into information of underlying business process.
- To exhibit knowledge of data analysis techniques and to apply principles of data sciences integrating enterprise reporting.

Prerequisite

- Basic knowledge in computers

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	To define and understand the importance of business analytics and data science in business process and industry	K1
CLO2	To outline data integration, projecting, maintenance, designing and modeling of various data techniques	K2
CLO3	To identify the concepts of Datawarehouse, data profiling, data dimension, mobility and various related systems and their applications in different industries.	K3
CLO4	To Analyze the business views using IT applications, its purpose and analyzing various concepts relating to it and inculcate problem solving and decision-making skills	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	M	S	M
CLO2	S	S	L	S	S
CLO3	M	M	S	S	M
CLO4	S	L	M	S	S

S- Strong; M-Medium; L-Low

Syllabus

Unit I **(11 Hrs)**

Introduction to the BA Role: Business Analysis -Business Analyst - The evolving role of the Business Analyst - The BA roadmap: different levels of business analysis - The basic rules of Business & Business Analysis - Classical Requirements and Tasks performed by Business Analysts. **Project Definition and Scoping:** Aspects - Projects phases - Project approaches (Waterfall, Agile, Iterative, Incremental) - The role of the BA across the project lifecycle.

Unit II **(11 Hrs)**

Business view of Information Technology Applications: Core business process – Baldrige Business Excellence framework - Key purpose of using IT in business - Enterprise Applications - Information users and their requirements**. Data Definition:** Types of Data – Attributes and Measurement – Types of data sets – Data quality – Types of Digital Data.

Unit III **(12 Hrs)**

Introduction to OLTP and OLAP – OLTP – OLAP – Different OLAP Architectures – OLTP and OLAP – Data models for OLTP and OLAP – Role of OLAP Tools in BI Architecture. **Business Intelligence –** Business Intelligence defined – Evolution of BI and Role of DSS, EIS, MIS and Digital Dashboards – Need for BI – BI value chain – Introduction to Business Analytics. **BI Definitions and Concepts –** BI Component Framework **–** Need for BI – BI Users – Business Intelligence applications – BI roles and responsibilities.

Unit IV **(12 Hrs)**

Data Integration – Data Warehouse – Goals – Data sources – Extract – Transform, Load – Data Integration – Technologies – Data Quality maintenance – Data profiling. **Data Modelling –** Basics – Types – Techniques – Fact table – Dimension Table – Typical Dimensional Models – Dimensional modeling life cycle – Designing the Dimensional Model.**BI in Real world –** BI and mobility – BI and cloud computing – BI for ERP systems –Social CRM and BI.

Unit V **(10 Hrs)**

Introduction to Industry 4.0- Need – Reasons for Adopting Industry 4.0 - Definition – Goals and Design Principles - Technologies of Industry 4.0- Skills required for Industry 4.0- Advancements in Industry 4.0- – Impact of Industry 4.0 on Society, Business, Government and People - Introduction to 5.0

Text Books

S. No	Author Name	Title of the Book	Publisher	Year and Edition
1.	RN Prasad, Seema Acharya	Fundamentals of Business Analytics	Wiley	2016 Second Edition
2.	P. Kaliraj, T. Devi	Higher Education for Industry 4.0 and Transformation to Education 5.0	Bharathiar University	2020 Edition

Reference Books

S.No	Author Name	Title of the Book	Publisher	Year and Edition
1.	Haydn Thomas - Demonoid	Business Analysis Fundamentals	Pearson	2015 Revised Edition
2.	Pang-Ning Tan Michael Steinbach, Vipin Kumar	Introduction to Data Mining	Pearson Education	2021 Second Edition

Related Online Contents

- Fundamentals of Business Analytics-RN Prasad. Global edition: Second Edition
- Business Analytics-James R Evans. Second edition-Wiley

Skill Components

- Determine the concepts of business analytics and business process.
- Analyzing the techniques of integration and modeling.
- Analyze the concept of data warehouse, OLTP, OLAP.
- Understand KPI and measures to apply in a business.
- Forecast on business intelligence concepts for enterprise reporting.

Pedagogy

Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Course Designers

1. Dr. M. Rajeswari
2. Dr. S. Krishnaveni

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21CP1	Computer Application Practical I –Analysis With Excel	Practical	-	3	27	1

Preamble

- To inculcate the knowledge of MS Excel
- To understand the basic statistics tools & methods

Prerequisite

- No prerequisite required

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	To understand and find commands in Excel, Get an head start with templates and set up an Excel template,	K1
CLO2	Demonstrate the excel data model and connect to external data and use advance techniques for report visualization.	K2
CLO3	Discuss on statistical operation and tools used in Excel and Documentation and review tools	K3
CLO4	Illustrate on basic analytical tools and Application of financial functions	K4
CLO5	Analyze a program using appropriate analytical tool and Advance use of Pivot table features like Value field Setting, Grouping data and slicers among others	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	M	L	L	M
CLO2	S	S	S	S	S
CLO3	S	S	M	M	S
CLO4	S	M	M	L	S
CLO5	S	S	M	M	S

S- Strong; M-Medium; L-Low

1. Suppose that at the beginning of May 2012 you purchased shares in Apple, Inc. (Nasdaq: AAPL). It is now five years later and you decide to evaluate your holdings to see if you have done well with this investment. The table below shows the market prices of AAPL.

DATE	PRICE
2012	59.77
2013	121.19
2014	188.75
2015	135.81
2016	256.88
2017	337.41

a) Enter the data, as shown, into a worksheet and format the table as shown.

b) Create a formula to calculate rate of return for each year. Format the results as percentages with two decimal places.

c) Calculate the total return for the entire holding period. What is the compound average annual rate of return?

d) Create a Line chart showing the stock price from May 2006 to May2011. Make sure to title the chart and label the axes. Now, create an XY Scatter chart of the same data. What are the differences between these types of charts? Which type of chart is more appropriate for this data?

e) Experiment with the formatting possibilities of the chart. For example, you might try changing it to a 3-D Line chart and fill the plot area with a marble background. Is there any reason to use this type of chart to display this data? Do the "enhancements" help you to understand the data?

2. In your position as research assistant to a portfolio manager, you need to analyse the profitability of the companies in the portfolio. Using the data for Chevron Corporation below:

FISCAL YEAR	2017	2016	2015	2014	2013
TOTAL REVENUE	1,98,198	1,71,636	2,64,958	2,20,904	2,04,892
NET INCOME	19,024	10,483	23,931	18,688	17,138

a) Calculate the net profit margin for each year.

b) Calculate the average annual growth rates for revenue and net income using the **GEOMEAN** function. Is net income growing more slowly or faster than total revenue? Is this a positive for your investment in the company?

c) Calculate the average annual growth rate of total revenue using the **AVERAGE** function. Is this result more or less accurate than your result in the previous question? Why?

d) Create a Column chart of total revenue and net income. Be sure to change the chart so that the x-axis labels contain the year numbers, and format the axis so that 2017 is on the far right side of the axis.

3. Repeat Problem 2 using the data below for Qualcomm Inc. However, this time you should create a copy of your worksheet to use as a template. Replace the data for Chevron with that of Qualcomm.

FISCAL YEAR	**2017**	**2016**	**2015**	**2014**	**2013**
TOTAL REVENUE	**10,991**	**10,416**	**11,142**	**8,871**	**7,526**
NET INCOME	**3,247**	**1,592**	**3,160**	**3,303**	**2,470**

a) Do you think that Qualcomm can maintain the current growth rates of sales and net incomeover the long run? Why or why not?

b) Which company was more profitable in 2010? Which was more profitable if you take alonger view? Would this affect your desire to invest in one company over the other?

4. Using the data for Paychex, Inc. (Nasdaq: PAYX), presented below:

FISCAL YEAR	**2017**	**2016**	**2015**	**2014**	**2013**
SALES	**$ 2000.82**	**$ 2082.76**	**$ 2066.32**	**$ 1886.96**	**$ 1674.60**
EBIT	**729.31**	**812.08**	**854.82**	**743.27**	**674.77**
TOTAL NET INCOME	**477.00**	**533.54**	**576.14**	**515.45**	**464.91**
DIVIDENDS PER SHARE	**1.24**	**1.24**	**1.22**	**1.02**	**0.69**
BASIC EPS FROM TOTAL OPERATIONS	**1.32**	**1.48**	**1.56**	**1.35**	**1.23**
TOTAL ASSETS	**5,226.30**	**5,127.42**	**5,309.79**	**6,246.52**	**5,549.30**
ACCOUNTS PAYABLE	**37.3**	**37.33**	**40.25**	**46.96**	**46.67**
TOTAL LIABILITIES	**3,824.32**	**3,785.94**	**4,113.15**	**4,294.27**	**3,894.46**

RETAINED EARNINGS	**856.29**	**829.50**	**745.35**	**1,595.10**	**1,380.97**
NET CASH FROM OPERATING ACTIVITIES	**610.92**	**688.77**	**724.67**	**631.23**	**569.23**

a) Calculate the ratio of each years' data to the previous year for each of the above items for Paychex,Inc. For example, for the year 2010, the ratio for sales is $2,000.82/$2,082.76 = 0.9607.

b) From your calculations in part a, calculate each year's rate of growth. Using the example in part a, the ratio is 0.9607, so the percentage growth in sales for 2010 is 0.9607 – 1 or –3.93%.

c) Calculate the average growth rate (using the **AVERAGE** function) of each of the above items using the results you calculated in part b. These averages are arithmetic averages.

d) Use the **GEOMEAN** function to estimate the compound annual average growth rate (CAGR) foreach of the above items using the results that you calculated in part a. Be sure to subtract 1 from the result of the **GEOMEAN** function to arrive at a percent change. These averages are geometric averages.

e) Compare the results from part c (arithmetic averages using the **AVERAGE** function) to those for part d (geometric averages using the **GEOMEAN** function) for each item. Is it true that the arithmetic average growth rate is always greater than or equal to the geometric average (CAGR)?

f) Contrast the results for the geometric averages to those for the arithmetic average for thevariables listed below. What do you observe about the differences in the two growth estimates for Sale and Accounts Payable? What do you observe about the differences in the two estimates for Total Assets and Retained Earnings? Hint: Look at the results from part b (the individual yearly growth rates) for each variable to draw some conclusions about the variation between the arithmeticand geometric averages.

1. Sales

2. EBIT

3. Total Assets

4. Accounts Payable

5. Retained Earnings

5. Cash budget using What If Analysis

6. Using Goal Seek to calculate Break Even Points

7. Sensitivity analysis of Capital Budgeting – Scenario Analysis, NPV Profile Charts

8. Use Goal Seek to find out what grade is need on the final assignment to pass the class given that the grades on the first four assignments are **64**,**55**,**78**, and **59.** Use formula or function thatcalculates the final grade.

9. Analyzing Datasets with Tables and Pivot Tables

Pedagogy

- Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Course Designers

1. Dr.M.Rajeswari
2. Mrs.S.Aruna

SEMESTER – I - FOUNDATION COURSE

COURSE NUMBER	COURSENAME	Category	L	T	P	Credit
NME21ES	INTRODUCTION TO ENTREPRENEURSHIP	Theory	26	4	-	2

Unit 1 :(5hrs)

Nature of Entrepreneurship (3 hrs)

Meaning –Need for Entrepreneurship –Qualities of Successful Entrepreneurs -Myths of Entrepreneurship

Activity: Assignment, Discussion **(2 hrs)**

Unit 2: (6 hrs)

Role of Entrepreneurs (4 hrs)

Significance of Entrepreneurship to the nation –Environmental Factors influencing Entrepreneurship – Entrepreneurial Process and Functions- Challenges faced by Entrepreneurs

Activity: Quiz / Role Play **(2 hrs)**

Unit 3: (6 hrs)

Formulation of Business Idea: (4 hrs)

Business Idea Generation - Entrepreneurial Imagination and Creativity – Role ofInnovation – Opportunity Evaluation

Activity: Business Idea Pitch**(2 hrs)**

Unit 4: (6 hrs)

Business Planning: (4 hrs)

Need for Market Study – Securing Finance from various Sources - Significanceof Business plan – Components of Business plan

Activity: Schemes available for Entrepreneurs**(2 hrs)**

Unit 5: (7 hrs)

Project:

Interface with Successful Entrepreneurs – 4hrsBusiness Plan Presentation – 3hrs

Reference Books

1. D.F. Kuratko and T.V. Rao, Entrepreneurship - South Asian Perspective, 2016,Cengage Learning India Pvt. Ltd. Delhi.
2. Arya Kumar, Entrepreneurship: Creating and Leading an EntrepreneurialOrganization, 2012, Pearson Education India

COURSE NUMBER	COURSENAME	CATEGORY	L	T	P	CREDIT
DA22C03	R PROGRAMMING	CORE	86	4	-	5

Preamble

- To introduce R Programming concepts and to develop programming skills in R-Programming.
- To easily extensible through functions and extensions, and its community is noted for itsactive package contribution. R is highly extensible through the use of user-submitted packages for specific functions and specific areas of study.

Prerequisite

No prerequisite required.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLOs	CLO Statement	Knowledge Level
CLO1	Relate R Programming concepts with Datasets and workflow through the conceptual factors.	K1
CLO2	Demonstrate data frames to perform data manipulations and stimulate the basic approaches.	K2
CLO3	Experiment with various analysis techniques and interpret the features of deployment.	K3
CLO4	Interpret and describe the flow to perform Visualization through several graphical features	K3

Mapping with Programme Outcomes

CLOs	PLO2	PLO2	PL03	PL04	PL05
CLO1	S	S	M	S	S
CLO2	S	M	S	S	M

CLO3	M	S	S	M	M
CLO4	S	M	S	S	M

S- Strong; M-Medium; L-Low

Syllabus

UNIT I (17Hrs)

An overview of R: Introduction to R expressions, variables, and functions- - Operator Data Type- Vectors: Grouping values into vectors, then doing arithmetic and graphs with them- Matrices: Creating and graphing two-dimensional data sets- Calculating and plotting some basic statistics: mean, median, and standard deviation- Factors: Creating and plotting categorized data.

UNIT II (17Hrs)

Data Frames: Organizing values into data frames, loading frames from files and merging them- Working with Real-World Data: Testing for correlation between data sets, linear models andinstalling additional packages.

UNIT III (17Hrs)

Data Manipulations: Overview of how to connect database from R-How to run SQL queries from R to fetch data- Data manipulation using SQL to prepare data for analysis.

UNIT IV (18Hrs)

Reading and writing of csv file- Importing and exporting of data set-Merging of file having same or different number of column-Reading a file involving date and converting this date into different format-Plotting two series on one graph-one with a left y axis and another with a right y axis- histogram-Multivariate Statistical Techniques like Discriminant Analysis, Factor Analysis.

UNIT V (17Hrs)

Formula notation and complex statistics: Analysis of Variance (ANOVA) - Manipulating Data and Extracting Components: Creating data for complex analysis – summarizing data Regression – Simple Linear Regression – Multiple Regression – Curvilinear Regression.

Text Book

S.No	Author Name	Title of the Book	Publisher	Year and Edition
1.	Dr. Mark Gardener	Beginning R: The Language (Wrox)	John Wiley &	2016 edition

Books for Reference

S.No	Author Name	Title of the Book	Publisher	Year and Edition
1.	Normal Matloff	The Art Programming	No Starch Press	2011 edition
2.	Michael J Crawle	The R Book	Wiley	2008 edition
3.	M. John	Statistical Analysis with R.	Tata McGraw Hill Publishing Co. Ltd	October Edition 2010,
4.	R Richard Cotton	Learning R	O'Reilly Media	September Edition 2013,

Related Online Contents

1. The Book of R-A First Course in Programming and Statistics-Tillman M.Davies-

Publisher: WilliamPollock-2016

2. R for Beginners-Emmanuel

Skill Components

- Acquire knowledge to relate R Programming concepts with Datasets
- Establish data frames to perform data manipulations
- Analyze data using Descriptive Statistics and measures
- Experiment with various quantitative analysis techniques
- Analysis with Correlation and Regression

Course Designers

1. Dr.. S. Krishnaveni
2. Dr.. M. Rajeswari

COURSE NUMBER	COURSENAME	CATEGORY	L	T	P	CREDIT
DA22CP2	Computer Application Practical II – ANALYSIS WITH SPSS & R	Practical	57	-	4	2

Preamble

- To explore and acquire skills in SPSS and R

Prerequisite

- ProgrammingBasic knowledge of Computers

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Relate the fundamental programming concepts of R	K1
CLO2	Classify SPSS and R Statistical tools to problems	K2
CLO3	Analyze and construct the techniques to data sets	K3
CLO4	Examine the approach to deal with data	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	L	M	M
CLO2	S	M	M	S	M
CLO3	S	M	L	M	S
CLO4	S	L	L	S	M

S- Strong; M-Medium; L-Low

Syllabus

1. Find Factorial of a number using recursion
2. Write program to calculate Multiplication Table using R
3. Check if a Number is Positive, Negative or Zero
4. Creating vector and matrices using R-program.
5. Import and Visualize data using scatterplots
6. Logical statements, cbind/ rbind command in R and Create dataset usingdataframes and factors and plot a graph.

SPSS

7. Create an SPSS Dataset and determine the number of 18–22-year-old

population in2000, 2004 and2005

PARTICULARS	2000	2004	2005
UNIVERSITYSTUDENT	47498	66309	70153
NUMBER OFTEACHERS	17302	19103	18098
NUMBER OFINSTITUTIONS	77	91	90
NUMBER OF STUDENTS IN THE % OF THE 18-22 YEAR-OLD POPULATION	10.4	13.9	15

8. Computation of spearman's rank correlation.
9. Analysis of variance (one way and Multiple classification using ANOVA).
10. Calculation of Mann Whitney U-test**.**

Course Designers

1. Dr..S. Krishnaveni
2. Dr. M.Rajeswari

COURSE NUMBER	COURSENAME	CATEGORY	L	T	P	CREDIT
22PECM1	**PROFESSIONAL ENGLISH FOR COMMERCE AND MANAGEMENT**	**Theory**	**40**	**5**	**-**	**2**

Objectives

- To develop the language skills of students by offering adequate practice in professionalcontexts.
- To enhance the lexical, grammatical and socio-linguistic and communicative competence of first year physical sciences students
- To focus on developing students' knowledge of domain specific registers and the required language skills.
- To develop strategic competence that will help in efficient communication
- To sharpen students' critical thinking skills and make students culturally aware of thetarget situation.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Recognise their own ability to improve their own competence in using the language	K1
CLO2	Use language for speaking with confidence in an intelligible and acceptable manner	K2
CLO3	Read independently unfamiliar texts with comprehension and understand the importance of reading for life	K3
CLO4	Understand the importance of writing in academic life	K3
CLO5	Write simple sentences without committing error of spelling or grammar	K3

(Outcomes based on guidelines in UGC LOCF – Generic Elective)

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6
CLO1	S	M	L	M	S	L
CLO2	S	M	L	M	S	L
CLO3	S	S	L	S	S	M
CLO4	S	S	L	M	S	M
CLO5	S	M	L	M	S	M

S- Strong; M-Medium; L- Low

Syllabus

UNIT 1: COMMUNICATION **8 hours**

Listening: Listening to audio text and answering questionListening to Instructions
Speaking: Pair work and small group work.
Reading: Comprehension passages –Differentiate between facts and opinion
Writing: Developing a story with pictures**.**
Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 2: DESCRIPTION **8 hours**

Listening: Listening to process description. -Drawing a flow chart.
Speaking: Role play (formal context)
Reading: Skimming/Scanning- Reading passages on products, equipment and gadgets.
Writing: Process Description –Compare and Contrast Paragraph-Sentence Definition andExtended definition- Free Writing.
Vocabulary: Register specific -Incorporated into the LSRW tasks.

UNIT 3: NEGOTIATION STRATEGIES **8 hours**

Listening: Listening to interviews of specialists / Inventors in fields (Subjectspecific)
Speaking: Brainstorming. (Mind mapping)Small group discussions (Subject- Specific)
Reading: Longer Reading text.
Writing: Essay Writing (250 words)
Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 4: PRESENTATION SKILLS **8 hours**

Listening: Listening to lectures.
Speaking: Short talks.
Reading: Reading Comprehension passages
Writing: Writing RecommendationsInterpreting Visuals inputs
Vocabulary: Register specific - Incorporated into the LSRW tasks

UNIT 5: CRITICAL THINKING SKILLS **8 hours**

Listening: Listening comprehension- Listening for information.
Speaking: Making presentations (with PPT- practice).
Reading: Comprehension passages –Note making.
Comprehension: Motivational article on Professional Competence, Professional Ethics and LifeSkills)
Writing: Problem and Solution essay– Creative writing –Summary writing
Vocabulary: Register specific - Incorporated into the LSRW tasks

Text book

S.No.	Authors	Title of the Book	Publishers	Year of Publication
1	TamilNadu State Council forHigher Education (TANSCHE)	English for Commerce and ManagementSemester 1	--	--

Reference Books

S.No.	Authors	Title of the Book	Publishers	Year of Publication
1	Sreedharan, Josh	The Four Skills for Communication	Foundation books	2016
2	Pillai, G Radhakrishna, K Rajeevan, P Bhaskaran Nair	Spoken English for you	Emerald	1998
3	Pillai, G radhakrishna, K Rajeevan,P Bhaskaran Nair	Written English for you	Emerald	1998

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
BP22C04	**BUSINESS MANAGEMENT AND ETHICS**	**CORE**	**73**	**2**	**-**	**4**

Preamble

To provide the students with an understanding *of* the basic principles of management in the functional areas ofbusiness to pursue careers in management with ethics

Pre requisite

Basic Knowledge on Business Management

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLOs	CLO Statement	Knowledge Level
CLO1	Recognize the fundamental concepts and principles of management, Planning, Organization, leadership and control including the function andits nature.	**K1**
CLO2	Identify the management process and decision making in management functions	**K2**
CLO3	Apply the theories and identify various case studies for practical applications of management concepts	**K3**
CLO4	Demonstrate the process of management functions and evaluate the social responsibility and ethical issues in business situations	**K4**

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	S
CLO2	S	S	S	M	S
CLO3	S	S	M	S	S
CLO4	S	S	M	M	M

S- Strong; M-Medium; L-Low

Syllabus

UNIT I (14 Hrs)

Management –Definition - Nature and Scope – ***Functions– Managerial Skills– Levels of Management*** – Roles and Skills of a Manager- Contributions by Henry Fayol, FW Taylor, Peter F Drucker, McGregor, Elton Mayo-
Management as a Science, Art, Profession- Management and Administration–Principles of Management

UNIT II (15 Hrs)

Planning: Meaning – Nature- ***Importance- Purpose of Planning***- Planning Process - Advantages and Limitations- Types of Plans – ***Objectives – Policies – Strategies – Procedures – Programmes – Obstacles to Effective Planning*** - Decision Making: Steps in Decision Making – Role of MIS for Decision Making. ***MBO – MBE - Policy and Strategy***.

UNIT III (15 Hrs)

Organization –Meaning - Nature and Importance – ***Process of organization– Organization structure– Organization chart–Organization manuals***–Types of Organization - Departmentation - Span of Management ***Authority – Responsibility - Accountability*** - Power – Delegation – Centralization -Decentralization-Staffing-Case study

UNIT IV (15 Hrs)

Leadership –Meaning and Importance –***Functions of Leadership–Leadership styles–Qualities of good leader*** –Theories & Approaches of Leadership-Directing-Functions-*Coordination-Meaning-Definition-Principles-Advantages&Disadvantages*-Case study

UNIT V (14 Hrs)

Control –Meaning - and Importance –***Process & Techniques of control***-Ethics-Meaning–Importance Nature &***Relevance-Structure of ethics management-Ethics in business***-Factors affecting ethical practice in business-Social Responsibility of Business.

Text Books

S.No.	Authors	Title	Publishers	Year of Publication
1.	RK Sharma & Shasi K Gupta	Principles of Management	Kalyani Publishers	2017 reprint
2.	Dinkar Pagre	Principles of Management	Sultan Chand & sons	2018 reprint

Reference Books

S.No.	Authors	Title	Publishers	Year of Publication
1.	Dr.C.N Sonttakkai	Principles of Management	Kalyani Publishers,	2016 reprint
2.	PC tripathi& PN Reddy	Principles of Management	Tata Mcgraw Hill Publishing Co Ltd	2017 ed.
3.	Robbins, De Cenzo, &Coulter.	Fundamentals of Management	pearson Education Ltd	Ed. 2017

Skill Components

- Preparation of different types of organisation charts
- Construct a standing plan for a new business venture
- Demonstrate different leadership styles through role play
- Study the ethical practices followed in the organization

- Select any one company and prepare SWOT analysis
- Prepare a report of CSR activities followed in an organisation

Pedagogy

- Lecture, PPT presentation, Quiz, Group Discussion, Seminar, Assignment, Activity based learning

Course Designers

1. Dr.A.Meenakshi- Department of B Com(CA)
2. Dr.NithyaRamadass- Department of B Com(CA)

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
AF22A02	BUSINESS ECONOMICS	Allied	73	2	-	4

Preamble

- To introduce microeconomic and macroeconomic concepts
- To familiarize various economic theories
- To interpret and examine the monetary and fiscal police

Prerequisite

- Basic knowledge in economics

Course Outcomes

On the successful completion of the course, Students will demonstrate their knowledge of the fundamentaland technical concepts of economics and also students will be able to make decisions wisely using cost- benefit analysis.

CLO Number	CLO Statement	Knowledge Level
CLO1	Define and understand the various laws of economics	K1
CLO2	Interpret Economic theories and policies	K2
CLO3	Examine the different market structure and pricing policy	K4
CLO4	Identify the various methods of Forecasting, Demand and SupplyFunctions, National Income & budgeting.	K3

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	M
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M

S- Strong; M-Medium; L-Low

Syllabus

Unit I (14 Hrs)

Introduction to Economics – Wealth, Welfare and Scarcity Views on Economics - Positive and NormativeEconomics. Definition – ***Scope and Importance of Business Economics***. Concepts: Production Possibility frontiers – Opportunity Cost – ***Accounting Profit and Economic Profit*** – ***Incremental and Marginal Concepts***– Concept of Efficiency

Unit II (15 Hrs)

Demand and Supply Functions: Meaning of Demand – Determinants and Distinctions of demand – Lawof Demand – ***Elasticity of Demand – Demand Forecasting*** – Supply concept and Equilibrium. ***ConsumerBehaviour: Law of Diminishing Marginal utility – Equi-marginal Utility*** – Indifference Curve – Definition,Properties and equilibrium

Unit III (15 Hrs)

Production: Law of Variable Proportion – Laws of Returns to Scale – Producer's equilibrium – Economies of Scale. Cost Classification – ***Break Even Analysis. Product Pricing*:** Price and Output Determination under Perfect Competition, Monopoly – Discriminating monopoly – Monopolistic Competition
– Oligopoly-Pricing objectives and Methods

Unit IV (15 Hrs)

National Income - Gross National Product -Net National Product - Measurement of National Income - Consumptions, savings and investments*.** Theory of Employment- Type of unemployment- Labourand Population theories- Definition of capital and growth of capital- Steps in capital formation. Money - Definition and functions of money- ***Quantity theory of money. Public Finance- Principle of taxation-
Direct and indirect taxes

Unit V (14 Hrs)

Monetary and Fiscal Policies– measures of money stock – policy and money supply – ***instruments of monetary policy*** – fiscal policy – the union budget – state budgets – Inflation -Deflation – Meaning – Causes & Effects – ***Measures to control inflation and deflation*** –* ***importance of the budget***.

Text Book

S.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Swami Parthasarathy	Corporate Governance	New Delhi Biztantra	5tEditionReprint 2008

Reference Books

S.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Kesho, Prasad	Corporate Governance	New Delhi: Prentice Hall	4th Edition, 2006
2.	Singh. S	Corporate Governance	New Delhi: Excel Books	2005

Skill Components

- Analyse the Corporate Governance mechanism and principles.
- To enable the students to do a study related to the implementation of CorporateGovernancein leading Indian companies.
- Role play on the duties and responsibilities of the person incharge of the implementation ofCorporate Governance in companies.
- Discuss the implementation of Corporate Governance code in different countries

Pedagogy

Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Course Designers

1. Mrs.S.Manasha
2. Dr.Mallika Haldorai

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
BP22A01	PRINCIPLES OF MARKETING	CORE	73	2	-	4

Preamble

- To understand how organizations identify customers and their wants/needs.
- To comprehend marketing decisions, based upon the combination of product, price, promotion, anddistribution elements.
- To learn and to understand E-Marketing and its strategies.

Prerequisite

- No prerequisite knowledge required.

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Identify the concepts of Market, marketing and market driven enterprises	K1
CLO2	Examine the basic elements of the marketing mix and to provide a framework to evaluate marketing decisions and initiatives	K2
CLO3	Summarize the principles and strategies of advertising and promotion.	K3
CLO4	Analysing the essential skills for interpreting market research data, analysing consumer behaviour, and evaluating the effectiveness of marketing campaigns.	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	M

CLO2	S	M	S	S	M
CLO3	S	S	M	S	M
CLO4	S	S	S	L	M

S- Strong; M-Medium; L-Low

Syllabus

UNIT I **(14Hrs)**

Market: - Meaning, Definition, ***Classification of Markets. Marketing**: - Meaning, Definition, Features,Importance, Evolution and Functions of Marketing- Difference between Marketing and Selling. Marketing-Environment: -Micro and Macro Marketing Environment, Controllable and Uncontrollable Factors- Modern Marketing Concepts – ***Marketing Mix – Definition and Elements** – ***Market Segmentation.**

UNIT II **(14Hrs)**

Product: - Meaning, Definitions – Elements of Product Policy and Branding Strategies – ***Product Life Cycle and New Product Planning**. Price: - Meaning, Definition, Importance, Factors affecting pricing decisions, ***Kinds ofPricing.**

UNIT III **(15Hrs)**

Promotion Mix: - Sales Promotion, Meaning, Definition, Objectives, Advantages and ***Kinds of Sales Promotion**. Advertising: - Meaning, Definition, Functions, Objectives, Advantages, Kinds of Advertising Media. Personal Selling: - Meaning, Definition, Objectives, Importance, Qualities of a Good Sales Man, Features and Processof Personal Selling. Channels of Distribution- Meaning, Definition, Importance, Types, E-Channels of distribution - ***Factors Determining Choice of Channel of Distribution.**

UNIT IV **(15Hrs)**

Rural Marketing: - Meaning, Definition, Nature and Types - Agricultural Marketing in India – Types ofagricultural goods - Problems and Remedies,* **Regulated Markets-Functions and Advantages.** Organized Markets-Characteristics, Commodity Exchange - Future Contracts – Hedging. ***Co-operative Marketing - Objectives – Features – Functions** - Advantages and Limitations.

UNIT V **(15Hrs)**

E-Marketing – Difference between e-marketing and e-business – ***E-Marketing past, present and future.**–. E-Marketing plan: overview – Creating- Steps in E-marketing plan. Services Marketing-Meaning and definition of service – Characteristics of service and types of services. Relationship Marketing – International Marketing – Objectives, Importance and policies

Text Books

S. No.	Author Name	Book Name	Publisher	Year and edition
1.	Pillai R.S.N. and Bagavathi	Modern Marketing Principles and Practices	S.Chand& Co. NewDelhi	4th Revised Edition(Reprint 2017)
2.	J P Mahajan	Principles of Marketing	Vikas Publishing House Pvt Ltd	2nd Edition,2017.

Reference Books

S. No.	Author Name	Book Name	Publisher	Year and edition
1.	Gupta C.B., Rajan Nair N.	Marketing Management	Sultan Chand andSons, New	2018 Edition

			Delhi	
2.	Philip Kotler, Gary Armstrong, Lioys C. Harris	Principles of Marketing	Pearson	8th Edition, 2020

Pedagogy

- Chalk and talk Seminar, Group Discussion, Assignment, Power point presentation.

Skill Components

- Critical thinking and problem-solving.
- Study the key marketing functions.
- Construct a standing plan for a new business venture.
- Demonstrate different promotional strategies through role play.
- Study the ethical policies in E-Marketing.

Course Designers

1. Mrs. S. Manasha
2. Dr. Mallika Haldorai

-

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA22C05	**DATABASE PROGRAMMING**	**THEORY**	**58**	**2**	**-**	**4**

Preamble

- To provide comprehensive knowledge about relational and NoSQL database management system

Prerequisite

- No prerequisite required

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLOs	CLO Statement	Knowledge Level
CLO1	Interpret relational database management concepts	K1
CLO2	Develop the tables using normalization	K2
CLO3	Illustrate SQL operators and keys	K3
CLO4	Understand the concepts of NOSQL, MONGODB and WEKA	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	M
CLO2	S	S	S	S	S
CLO3	M	S	S	S	M
CLO4	M	M	S	S	M

S- Strong; M-Medium; L-Low

Syllabus

Unit I **(12 Hrs)**

Introduction to Database Management System - Data Models - Database system architecture - The SQL Language - Relational Database Management System - ***Candidate key, primary tables key, Foreign Key - Relational Operators - Attribute domains and their Implementations - New conventions for Database Object*** - Structure of SQL statements and SQL writing Guidelines

Unit II **(12 Hrs)**

Functional Dependencies - Normalization process: 1NF, 2NF, 3NF, BCNF - Creating foreign keys andprimary keys - ***The E-R Model - Entities and Attributes-Relationships*** - Normalizing the Model- Creating Tables - Describing the structure of a Table - Populating tables - Table Instance Charts - Implementation of the selection Operator - ***Using aliases to control column Headings - Implementation of the projection and join Operators***

Unit III **(12 Hrs)**

Built in Functions – Numeric - Character Conversion Functions - Introduction to groupfunctions - sum, avg, max, min, count - combining single value and group functions - ***Displaying Specific Groups-Introduction to processing date and Time*** - Arithmetic with Dates - Date Functions - Formatting dates and time – Subqueries - Correlated Queries - ***Using subqueries to create, update, insert and delete rows from a Table – Transaction - Commit, rollback, save pointand auto Commit**

Unit IV **(12 Hrs)**

Overview and History of NoSQL Databases - Definition of the Four Types of NoSQL Database

- The Value of Relational Databases - Getting at Persistent Data – Concurrency – Impedance Mismatch - Application and Integration Databases - Attack of the Clusters - The Emergence of NoSQL - ***Aggregates - Key-Value and Document Data Models - Column-Family Stores - Summarizing Aggregate - Oriented Databases - More Details on Data Models - Distribution Models – Consistency*Introduction to MongoDB - Getting Started – Querying - Creating, Updating, and Deleting Documents*Designing Your Application: Indexing - Special Index and Collection Types***

Unit V **(10 Hrs)**

Introduction to WEKA – Installation - The Explorer – ***Getting started*** – Loading data – File formats-Processing data – ***Filtering algorithm***

Text Books

S.No.	Author Name	Book Name	Publisher	Year and Edition
1	Ramon A Mata-ToledoPauline K Cushman	Database Management System	Tata McGraw-Hill Publishingcompany limited, New Delhi.	2010, 2nd edition
2.	Pramod J. Sadalage & Martin Fowler	NoSQL Distilled	Pearson Education, Inc. O'Reilly Media, Inc.,	2013
3	Kristina Chodorow	MongoDB: The definitive guide	Pearson Education, Inc. O'Reilly Media, Inc.,	2013, 2nd Edition
4	Eibe Frank, Mark A. Hall, and Ian H. Witten	The WEKA workbench	Morgan Kaufmann	2016, 4th Edition

Reference Books

S.No.	Author Name	Book Name	Publisher	Year and

				edition
1	Ramakrishnan & Ge hrke	Database Management Systems	Tata McGraw Hill	2009, 8th edition
2	Nilesh Shah	Database Systems using Oracle	PHI learning pvtLtd	2014, 2nd edition
3	Alexis Leon & MathewsLeon	Fundamentals of databasemanagement systems	Tata McGraw Hill	2011, 3rd edition

Skill Components

- Understand the concepts of tables, queries and SQL.
- Demonstrate SQL queries, operators, aggregate function, subquery and join operators.
- Identify the concepts of normalization.
- Interpret SQL and NOSQL - MONGODB.
- Identify and evaluate the data and infer the results with WEKA.

Pedagogy

- Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Course Designers

1. Dr.S. Krishnaveni
2. Dr.M.Rajeswari

COURSE NUMBER	COURSENAME	CATEGORY	L	T	P	CREDIT
DA22CP3	**COMPUTER APPLICATION PRACTICALIII – DATABASE PROGRAMMING**	**PRACTICAL**	**-**	**3**	**42**	**1**

Preamble

- To enhance practical knowledge in Database Management using SQL, MongoDB

Course Outcomes

On the successful completion of the course, students will be able to analyse the data using query

CLOs	CLO Statements	Knowledge Level
CLO1	Show the features of database	K1
CLO2	Demonstrate data definition and data manipulation languages	K2
CLO3	Identify data store and query languages	K3
CLO4	Apply the databases in analytical tools	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	S	S	L
CLO2	S	S	M	S	L
CLO3	S	S	S	S	S
CLO4	S	M	M	M	S

S-Strong; M-Medium; L-Low

Syllabus

1. Normalize the following dataset: Employee database
2. Data Definition Language and Data Manipulation Language
   Table: StudentRegno number (5)primary key
   Stud
   name
   varchar2(
   15)
   Gender
   char (6)
   Dept name char (15)Address char (25)
   Percentage number (4,2)Queries:
   a. To create a table, describe a table, alter a table, drop a table, and truncate a table
   b. To insert values, retrieve records, update records, delete records
3. Create an Employee table with
   following field.Eno number(5)
   primary key
   Ename
   varchar
   2 (20) not null
   Deptno number
   (2)
   not nullDesig
   char(10) not null
   Sal
   number(9, 2) not
   null
   Comm.
   number (7,
   2) null
   Queries:
   a. Insert values and display the records
   b. Display sum, maximum amount of basic pay
   c. List the name of the clerks working in the department 20
   d. Display name that begins with „G"
   e. List the names having „I" as the second character
   f. List the names of employees whose designation are „Analyst" and „Salesman"
   g. List the different designation available in the Employee table without duplication (distinct)
4. Create a student table with the
   following fieldsStuno

number(5) primary key
Stunm varchar2(20)Age number(2) Mark1 number(3) Mark2 number(3) Mark3 number(3) Queries:

a. Insert values and display the records
b. List the names and age of the student whose age is more than 12
c. Display total and average of marks
d. Display the names of the maximum total & minimum total student
e. List the names of the student that ends with „A"
f. List the names of student whose names have exactly 5 characters

5. Create the table PAYROLL with the following fields and insert the values: Emplnonumber(8)
Emplnamevar
char2(8)Dept varchar2 (10)
Baspay number(8, 2)
HRA number(6, 2)
DA number(6, 2)
Pf number(6, 2)
Netpay
numbe
(8,2)
Querie
s:

a. Update the records to calculate the net pay.
b. Arrange the records of the employees in ascending order of the net pay.
c. Display the details of the employees whose department is "Sales".
d. Select the details of employees whose HRA>=1000and DA<=900.
e. Select the records in descending order.

6. Create a Table Publisher and Book with the following fields:
Table: publisherPubcode varchar2(5)
Pubname varchar2(10)Pubcity varchar2(12) PubStatevarchar2(10)
Bookcode varchar2(5) Table: Book
Booktitle varchar2(15)
Bookcode varchar2(5)
Bookprice varchar2(5)Queries:

a. Insert the records into the table publisher and book.
b. Describe the structure of the tables.
c. Show the details of the book with the title "DBMS".
d. Show the details of the book with price>300.
e. Show the details of the book with publisher name "Kalyani".
f. Select the book code, book title; publisher city is "Delhi".
g. Select the book code, book title and sort by book price.
h. Count the number of books of publisher starts with "Sultanchand".
i. Find the name of the publisher starting with "S".

MONGODB:

7. Create a Student Database in MongoDB using "use" Command.
8. Create program using CRUD operation using MongoDB.
9. Create program text search and indexes using MongoDB.

WEKA:

10. Demonstration of preprocessing on dataset student.arff
11. Demonstration of classification rule process on dataset employee.arff using J48 algorithm

12. Demonstration of clustering rule process on dataset iris.arff using simple K-means

Pedagogy

- Demonstration through System, Demonstration through PPT

Course Designers

1. Dr.S.Krishnaveni
2. Dr.M.Rajeswari

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA22SBP1	Skill Based Subject 1 - JAVAFundamentals Practical	SBS - Practical	-	4	41	3

Preamble

- To explore and acquire skills in Java Programming

Prerequisite

- Basic knowledge of Computers

Course Outcomes

On the successful completion of the course, students will be able to

CLOs	CLO Statement	KnowledgeLevel
CLO1	Show the fundamental programming concepts of Java	K1
CLO2	Demonstrate the classes and objects	K2
CLO3	Identify the various operations in Java	K3
CLO4	Apply the concepts of functions and methods	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	L	M	M
CLO2	S	M	M	S	M
CLO3	S	M	L	M	S
CLO4	S	M	M	M	S

S-Strong; M-Medium; L-Low

Syllabus

1. Write a program to find Fibonacci series without using Recursion.
2. Create a Java a program to Reverse a Number using while loop.
3. Write program to check whether the number is Positive or Negative.
4. Write a Java program that compute Sum of Natural Numbers.
5. Write a Java program for Sorting Arrays.
6. Create a Java program to multiply two Matrices.

7. Write a Java program to count the total number of Characters in a String.
8. Write a Java program to check whether the input year is leap or not.
9. Write a Java program to print right triangle Star Pattern 10.
10. Create a Java program to calculate Area of Rectangle

Pedagogy

Demonstration through System, Demonstration through PPT

Course Designers

1. Dr.S.Krishnaveni
2. Dr.M.Rajeswari

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
BP22CO6/ CM22C09	BUSINESS FINANCE	CORE	58	2	-	3

Preamble

- To Understand the Concepts of Business Finance and their Applications for Managerial Decision Making.
- To analyse the short term and long-term decision-making techniques
- To examine the various determinants of dividends

Prerequisite

- No prerequisite required

Course Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	State the concepts and approaches in finance	K1
CLO2	Demonstrate the possibilities for the optimum acquisition and application of the financial resources	K2
CLO3	Analyse the techniques required to select the feasible financial requirements of a Business Concern	K3
CLO4	Apply the concepts and tools of the financial decisions for adequate returns to the shareholders	K4

Mapping with Programme Outcomes

CLOs	PO1	PO2	PO3	PO4	PO5
CLO1	S	S	S	S	S
CLO2	S	S	S	S	M
CLO3	S	S	S	S	S

CLO4	S	S	S	M	M

S- Strong; M-Medium; L-Low

Syllabus

Unit I **(12Hrs)**

Business Finance **–** Meaning and Definition – ***Approaches to Finance Function –objectives of Financial Management*** – Scope – Financial Decisions. Financial Planning – Objectives – Characteristics –Time Value of Money – Practical Applications of Time Value Techniques.

Unit II **(11Hrs)**

Capital Budgeting **–** Meaning–***Importance**– Methods of Capital Budgeting. Cost of Capital – Meaning – ***Significance – Classification of Cost***–Computation of Cost of Capital: Cost of Debt, Preference, Equity, Retained Earnings and Weighted average Cost of Capital.

Unit III **(11Hrs)**

Capital Structure –Importance –***Theories of Capital Structure: Net Income Approach- Net Operating Income Approach-Traditional Approach and Modigliani and Miller Approach***. Leverage – Meaning – Types of Leverage – Impacts of Financial Leverage

Unit IV **(12 Hrs)**

Capitalisation –Theories of Capitalisation–Working Capital Management – Meaning – Classification-***Importance- Factors Determining the Working Capital Requirements***– Management of Working Capital – Methods of Estimating Working Capital Requirements.

Unit V **(12Hrs)**

Dividend Policy – Determinants of Dividend Policy – ***Types of Dividend Policy – Advantages and Disadvantages of Stable Dividend Policy – Theory of Relevance***and Irrelevance.

***Distribution of marks : Theory 40 % Problems 60 %**

***Highlighted Content offered in Blended Mode (Link Provided)**

Text Book

Sl.No.	Author name	Title of the book	Publisher	Year & Edition
1	Shashi. K. Gupta Sharma R. K	Financial Management	Kalyani Publishers	2018

Reference Books

Sl.No.	Author name	Title of the book	Publisher	Year & Edition
1	Ravi. M. Kishore	Financial Management - Problems and Solutions	Taxmann Publications Pvt Ltd	2017 Edition
2	Khan & Jain	Financial Management	Tata McGraw Hill	2018
3	Maheshwari S. N	Financial Management	Sultan Chand & Sons	15th Edition 2019

4	Alan C. Shapiro Peter Moles	International Financial Management	Wiley	2016 Edition

Skill Components

- Preparation of financial planning for the concern
- Application of time value techniques to the real situations
- Analyse the capital structure of different companies belong to different industries
- Estimate the cost of capital for the funds raised by the company
- Application of capital budgeting techniques to select the project proposals.
- Analyze the financial statements and Estimate the working capital requirements of the company.

Pedagogy

●Lecture, Group Discussion, Case study, Role playing, Activity based learning\

Course Designers

1.Dr. D. Vijayalakshmi, Department of Commerce

2. Dr. B. Thulasi Priya, Department of Commerce

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA22C07	**PYTHON**	**CORE**	**58**	**2**	**-**	**3**

Preamble

- To introduce Python concepts and to develop programming skills in Python Programming

Prerequisite

- No prerequisite required.

Course Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Relate Python concepts with Datasets	K1
CLO2	Recognize algorithms and Pandas	K2
CLO3	Identify various quantitative analysis techniques	K3
CLO4	Demonstrate the analyzed result with visualization	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PL03	PL04	PL05
CLO1	S	S	M	S	S
CLO2	S	M	S	S	M
CLO3	M	S	S	M	M
CLO4	M	S	S	M	M

S- Strong; M-Medium; L-Low

Syllabus

Unit I **(11 Hrs)**

Setting up Python - Your First Python Program – ***Data Types: Values and Variables*** - Expression and Arithmetic - ***Conditional Expressions and Iterations*** - Functions: Using functions - Writing functions and More on Functions.

Unit II **(12 Hrs)**

Lists – Tuples – ***Sets – Dictionaries*** - Comprehension: Working with files and dictionaries - ***List Comprehensions*** - Dictionary Comprehensions- Set Comprehension.

Unit III(12 Hrs)

Strings: ***Various String Methods*** - Slicing a string – Strings versus bytes - ***Regular expression*** - closure and generators – classes and iterators– Advanced iterators.

Unit IV **(12 Hrs)**

NumPy Basics: Arrays and Vectorized Computation: NumPy ndarray - File Input and Output with Array - Getting started with Pandas: Introduction to Pandas - ***Data structures - Handling Missing Data - Hierarchical Indexing - Data Wrangling: Clean, Transform - Merge*** - Reshape: Combining and Merging Dataset - Data Transformation - String Manipulation.

Unit V **(11 Hrs)**

Plotting and Visualization: A brief matplot API primer-Plotting functions in pandas-Line plot, Bar plot, Histogram and Scatter plot - ***Time Series: Basics-timezone handling*** - Resampling andFrequency Conversion - ***Time Series plotting***.

Text Books

S.No.	Author Name	Title of the book	Publisher	Year and Edition
1	Richard L.Haltman	Learning to Program with Python	Southern Adventist University	2011, Revised Edition
2	Phuong Vo. T.H., Martin Czygan	Getting started with Python Data Analysis	Packt Publishing	2015

Reference Book

S.No.	Author Name	Title of the book	Publisher	Year and Edition
1	Allen Downey	Think Python	Green Tea Press Needham, Massachusetts	2016 Edition

Skill Components

- To explore the object-oriented programming, Graphical programming aspects of python with help of built in modules.
- Remembering the concept of operators, data types, looping statements in Python programming.
- Understanding the concepts of Input / Output operations in file.
- Applying the concept of functions and exception handling.
- Analyzing the structures of list, tuples and maintaining dictionaries.
- Demonstrate significant experience with the python program development environment.

Pedagogy

- Demonstration through System, Demonstration through PPT

Course Designers

1. Dr. S. Krishnaveni, Department of Commerce (A
2. Mrs. N. Sathya

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
BP22A03	**BUSINESS LAW**	**ALLIED**	**73**	**2**	**-**	**4**

Preamble

- To provide students with an understanding of general principles of law of contract and special contracts
- To provide an insight into the sale of Goods Act.
- To familiarize with various types of Insurance and claim.

Prerequisite

- Basic Knowledge on Indian contract Act

Course Learning Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	State the fundamental rules of commercial law applicable to all the business context	**K1**
CLO2	Understand the different elements of business and legal terminology of procedures in this current business scenario	**K2**
CLO3	Examine the rules regarding the administration of agreements relating to the business activities	**K3**
CLO4	Apply the various principles of contracts and interpret the legal issues	**K4**

Mapping with Programme Learning Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	M	S	S	M
CLO2	S	S	S	L	S
CLO3	S	M	S	L	M
CLO4	S	S	S	M	S

S- Strong; M-Medium; L - Low

Syllabus

UNIT I **(15 Hrs)**

Indian Contract Act 1872 – ***Meaning of Contract – Definition***– Nature of Contract & Classification– ***Components of Valid Contract*-** Offer & Acceptance-Consideration – Capacity to Contract.

UNIT II **(15 Hrs)**

Free Consent – Unlawful Agreements – ***Quasi Contracts - Different Modes of Discharge of Contract*** – Remedies of Breach

UNIT III **(14 Hrs)**

Contract of Indemnity & Guarantee, Essential elements of Indemnity and Guarantee. Rights of Surety – Discharge of Surety.***Bailment & Pledge – Rights & Duties of Bailor & Bailee***

UNIT IV **(15 Hrs)**

Sale of Goods Act 1930 – Sale & Agreements to Sell – ***Rules Regarding Passing of Property in Goods***– Conditions & Warranties – Actual & Implied -Principle of "Caveat Emptor" and its Limitations. Law of Agency – Kinds of Agency –***Rights & Liabilities of Principal and Agent.***

UNIT V **(14 Hrs)**

Contract of Insurance - Nature and Fundamental Principles of Insurance – Life Insurance – Fire insurance –***Marine Insurance - Policy claims***

Text Book

S.No.	Authors	Title	Publishers	Year of Publication
1.	Kapoor N.D	Business Law	Sultan Chand & sons	23rd Revised Edition 2022

Reference Books

S.No.	Authors	Title	Publishers	Year of Publication
1.	Pillai. R.S.N & Bagavathi. B	Business Law	S.Chand & Co	Third Revised Edition 2015
2	P C Tulsian and Bharat Tulsian	Business Law	Tata McGraw-Hill	Third Revised Edition 2017

Skill Components

- Preparation of different types of Contract and to develop the working knowledge on execution of the same.
- Apply the regulatory framework on various laws pertaining to business and sale of goods in real case analysis.
- Framing a sample legal deed of understanding between bailor and bailee
- Compare and contrast different insurance policies to identify the most suitable options
- Develop Brochures, Websites or Social Media Content to promote insurance products

Pedagogy

Powerpoint presentations, Group Discussion, Seminar, Quiz, Assignment, Experience Discussion, Brainstorming, Activity, Case Study

Course Designers

1. Dr. R. Jayasathya
2. Mrs. R. Sangeetha

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA22A04	BUSINESS INTELLIGENCE	ALLIED	73	2	-	4

Preamble

- To equip knowledge on technical components of Business Intelligence

Prerequisite

- Basic knowledge in business operations

Course Outcome

- On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Identify the concepts of business intelligence tools & techniques	K1
CLO2	Interpret the strategies, performance, issues of legality and Privacy & Ethics of business intelligence	K2
CLO3	Apply the applications of text mining, web mining, social networking, databases and enterprise systems	K3
CLO4	Analyse the emerging trends of business intelligence & application opportunities.	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	M	M	L
CLO2	S	M	S	S	S
CLO3	S	M	M	M	S
CLO4	S	M	M	M	S

S - Strong; M - Medium; L – Low

Syllabus

Unit I (14 Hrs)

Introduction to Business Intelligence: Framework for Business Intelligence–Intelligence Creation– ***Transaction Processing Versus Analytic Processing–Major Tools and Techniques of BI***

Unit II (15Hrs)

Business Performance Management–***Strategize–Plan***–Monitor–Performance Measurement– ***BPM Methodologies–Performance Dashboards and Scorecards***

Unit III (15Hrs)

Text and web mining–text mining concepts and definitions–natural language processing – text mining applications– ***text mining process***– text mining tools – web mining overview – web content mining and web structure mining ***–web usage mining – web mining success stories***

Unit IV (15Hrs)

Business Intelligence Implementation***: Integration and Emerging Trends***– Implement BI–BI and Integration implementation–***Connecting BI systems to Databases and other enterprise systems***

Unit V **(14Hrs)**

On-Demand BI–Issues of Legality, Privacy and Ethics–***Emerging Topics in BI** *– the web2.0 Revolution –***online social networking***–virtual worlds– social networks and BI: collaborative decision making- ***RFID and new BI application opportunities*–**reality mining

Text Books

S.No.	Author Name	Book Name	Publisher	Year & Edition
1	Efraim Turban Ramesh Sharda Dursun Delen David King	Business Intelligence – A Managerial Approach	Pearson	2013 3rd Edition
2	Stuart Russel and Peter Norvig	Artificial Intelligence: A Modern Approach	Prentice Hall	2020, 4th Edition

Skill Components

- Identify the concept of Business Intelligence and its framework
- Understand the technique of BI
- Infer the knowledge of mining.
- Applying the concept of visualization and it BI trends

Pedagogy

Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar

Course Designers

1. Dr.S.Krishnaveni
2. Dr.M.Rajeswari

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA22A05	**BUSINESS DATA MINING**	**Allied**	**73**	**2**	**-**	**4**

Preamble

- To understand data mining techniques and algorithms in business analytics.
- To apply data preprocessing techniques and tools to solve business problems

Prerequisite

- No prerequisite knowledge required

Course Outcome

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Identify the data model and its operations	**K1**
CLO2	Classify the basic concepts and techniques of Data Mining	**K2**
CLO3	Apply data mining tools for solving practical business problems	**K3**
CLO4	Analyze the algorithms and concepts for real time execution	**K4**

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	L	M	M
CLO2	M	S	M	L	L
CLO3	M	M	S	S	L
CLO4	S	M	M	S	L

S - Strong; M - Medium; L – Low

Syllabus

Unit I **(14 Hrs)**

Data Mining Introduction-Data Warehousing and Online Analytical Processing-***Introduction to Knowledge Discovery from Databases* –** Data Preprocessing – Data Cleaning **– *Data Integration and Transformation*** – Data Reduction – Data Discretization and Concept Hierarchy Generation

Unit II **(15 Hrs)**

Association Rule Mining: Market Basket Analysis-***Frequent, Closed, Association Rules*-** Frequent Itemset Mining Methods: ***Apriori Algorithm, Generating frequent itemset*** - Pattern growth approach-***Correlation Analysis***

Unit III **(14 Hrs)**

Classification: ***Decision tree induction*-**Bayes Classification-Rule Based Classification-***Model Evaluation and Selection*** - Techniques to Improve Classification Accuracy

Unit IV **(15 Hrs)**

Clustering: Clustering Analysis*-** Partitioning Method-Hierarchical Method-Density based method-Grid based method*-** Evaluation Clustering

Unit V **(15 Hrs)**

Outlier Detection: Outlier and Analysis-Outlier Detection-Statistical Approaches- ***Proximity based approaches*-**Clustering and classification-based approaches- **Outlier detection in high dimension***

Text Book

S.No.	Author Name	Book Name	Publisher	Year and Edition
1	Jiawei Han, Micheline Kamber and Jian Pei	Data Mining: Concepts and Techniques	Morgan Kaufman	2022,4th Edition

Reference Books

S.No.	Authors	Title	Publishers	Year of Publication
1.	Ian H. Witten and Eibe Frank	Data Mining: Practical Machine Learning Tools and Techniques	Morgan Kaufman publications	2017, 4th Edition
2	M. H. Dunham	Data Mining: Introductory and Advanced Topics	Imprint Pearson Education	2011 4th Impression

3	Arun K. Pujari	Data Mining Techniques	Universities Press (India)Pvt. Ltd.	2013, Kindle Edition

Skill Components

- Identify the concept of using data in real time
- Analyze the fact of using algorithms incorporation in programming.
- Interpret various techniques to develop a well determined pattern.
- Applying the concept of statistical basis in data

Pedagogy

Demonstration through System, Lecture, PPT, Quiz, Assignment, Group Discussion, Seminar and Activity based learning

Course Designers

1. Dr.S.Krishnaveni
2. Dr.M.Rajeswari

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA22CP4	**COMPUTER APPLICATION PRACTICAL IV - PYTHON**	**CORE**	**-**	**-**	**60**	**2**

Preamble

- To explore and acquire skills in Python Programming

Prerequisite

- Basic knowledge of Computers

Course Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Relate statistical calculations	K1
CLO2	Describe pandas	K2
CLO3	Demonstrate the data structure	K3
CLO4	Apply plotting graphs	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	L	M	L
CLO2	S	M	M	S	M
CLO3	S	M	L	M	L
CLO4	S	M	L	L	L

S - Strong; M - Medium; L – Low

Syllabus

1. Word frequency analysis

Exercise 1.1. Write a program that reads a file, breaks each line into words, strips whitespace and punctuation from the words, and converts them to lowercase.

Exercise 1.2. Go to Project Gutenberg (http: // gutenberg. org) and download your favorite out-of- copyright book in plain text format. Modify your program from the previous exercise to read the book you downloaded, skip over the header information at the beginning of the file, and process the rest of the words as before.

Then modify the program to count the total number of words in the book, and the number of times each word is used. Print the number of different words used in the book. Compare different books by different authors, written in different eras. Which author uses the most extensive vocabulary?

Exercise 1.3. Modify the program from the previous exercise to print the 20 most frequently- used words in the book.

Exercise 1.4. Modify the previous program to read a word list (see Section 9.1) and then print all the words in the book that are not in the word list. How many of them are typos? How many of them are common words that should be in the word list, and how many of them are really obscure?

2. Random numbers

Exercise 2.1. Write a function named choose _from_ hist that takes a histogram as defined in and returns a random value from the histogram, chosen with probability in proportion to frequency.

3. Word histogram

Exercise 3.1. reads a file and builds a histogram of the words in the file

Exercise 3.2. reads emma.txt, which contains the text of Emma by Jane Austen.

Exercise 3.3. updates the histogram by creating a new item or incrementing an existing one.

Exercise 3.4. count the total number of words in the file by add up the frequencies in the histogram.

4. Most common words

Exercise 4.1. find the most common words by applying the DSU pattern; most_common takes a histogram and returns a list of word-frequency tuples, sorted in reverse order by frequency

Exercise 4.2. prints the ten most common words

5. Optional parameters

Exercise 5.1. prints the most common words in a histogram

6. Dictionary subtraction

Exercise 6.1. Python provides a data structure called set that provides many common set operations. Read the documentation at http: // docs. python. org/ 2/ library/ stdtypes. html#types- set and

Exercise 6.2. Write a program that uses set subtraction to find words in the book that are not in the word list. Solution: http: // think python. com/ code/ analyze_ book2. py .

7. Random words

Exercise 7.1: Use keys to get a list of the words in the book, Build a list that contains the cumulative sum of the word frequencies. The last item in this list is the total number of words inthe book, n, choose a random number from 1 to n. Use a bisection search to find the index where the random number would be inserted in the cumulative sum, Use the index to find the corresponding word in the word list.

Exercise 7.2. Write a program that uses this algorithm to choose a random word

from the book. Solution: http:// think python. com/ code/ analyze_ book3. py .

8. Markov analysis

- read a text from a file and perform Markov analysis
- add a function to the previous program to generate random text based on the Markov analysis.
- Finally, mashup: Solution:http://thinkpython.com/code/markov.py.You will also need http://thinkpython.com/code/emma.txt.

9. docstrings for polygon, arc and circle.

Draw a stack diagram that shows the state of the program while executing circle(bob,radius). Solution: http: // thinkpython. com/ code/polygon. py .

10. Draws an Archimedian spiral.

Read about spirals at http: // en. wikipedia. org/ wiki/ Spiral, then (or one of the other kinds). Solution: http:// thinkpython. com/ code/ spiral. Py

Pedagogy

- Demonstration through System, Demonstration through PPT

Course Designers

1. Dr.S.Krishnaveni

2. Mrs.N.Sathya

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA22SBP1	**Skill Based Subject 1 - JAVAFundamentals Practical**	**SBS - Practical**	**-**	**4**	**41**	**3**

Preamble

- To explore and acquire skills in Java Programming

Prerequisite

- Basic knowledge of Computers

Course Outcomes

On the successful completion of the course, students will be able to

CLO Number	CLO Statement	Knowledge Level
CLO1	Show the fundamental programming concepts of Java	K1
CLO2	Demonstrate the classes and objects	K2
CLO3	Identify the various operations in Java	K3
CLO4	Apply the concepts of functions and methods	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	S	L	M	M
CLO2	S	M	M	S	M
CLO3	S	M	L	M	S

CLO4	S	M	M	M	S

S-Strong; M-Medium; L-Low

Syllabus

1. Write a program to find Fibonacci series without using Recursion.
2. Create a Java a program to Reverse a Number using while loop.
3. Write program to check whether the number is Positive or Negative.
4. Write a Java program that compute Sum of Natural Numbers.
5. Write a Java program for Sorting Arrays.
6. Create a Java program to multiply two Matrices.
7. Write a Java program to count the total number of Characters in a String.
8. Write a Java program to check whether the input year is leap or not.
9. Write a Java program to print right triangle Star Pattern10.
10. Create a Java program to calculate Area of Rectangle

Pedagogy

Demonstration through System, Demonstration through PPT

Course Designers

1. Dr.M.Rajeswari
2. Dr.S.Krishnaveni

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA22SBCE	SKILL BASED SUBJECT I - COURSERA - DATA SCIENCE AND STATISTICS	SEC	45	-	-	3

COURSERA BUNDLE (45 HRS)

1. Data and Statistics Foundation for Investment Professionals (13 Hrs)

https://www.coursera.org/learn/data-statistics-foundation-investment

2. Statistics for Machine Learning for Investment Professionals (15 Hrs)

https://www.coursera.org/learn/statistics-machine-learning-investment

3. The Data Scientist's Toolbox (19 Hrs)

https://www.coursera.org/learn/data-scientists-tools

COURSE CODE	COURSE NAME	CATEGORY	L	T	P	CREDIT
NM22DTG	DESIGN THINKING	THEORY	30	-	-	2

Preamble

- To expose the students to the concept of design thinking as a tool for innovation
- To facilitate them to analyze the design process in decision making
- To impart the design thinking skills

Course Outcome

On the successful completion of the course, students will be able to:

CLO Number	CLO Statement	Knowledge Level
CLO1	Understand the concepts of Design thinking and its application in varied business settings	K1
CLO2	Describe the principles, basis of design thinking and its stages	K2
CLO3	Apply design thinking process in problem solving	K3
CLO4	Analyze the best practices of design thinking and impart them in business and individual day to day operations.	K4

Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
CLO1	S	M	M	S	S
CLO2	M	S	S	M	M
CLO3	S	S	S	M	S
CLO4	S	S	S	S	S

S-Strong; M-Medium; L-Low

Syllabus

UNIT – 1 **(6 Hours)**

Design Thinking Overview: ***Introduction to Design Thinking*** and Design Research Strategies -***Design Thinking Skills***

UNIT – II **(6 Hours)**

Design Thinking Mindset: *Principles of Design Thinking - Basis for design thinking - Design Thinking Hats* - Design thinking team

UNIT – III **(6 Hours)**

Empathize: Definition - Listen & ***Empathize*** with the Customers and / or Users - Tools and Techniques

UNIT – IV **(6 Hours)**

Define : Definition - ***Defining the Problem*** - Tools and Techniques - Journey mapping and ***Ideate*** - definition - Ideation techniques

UNIT – V **(6 Hours)**

Prototype: Definition - ***Prototype***Alternate Solutions - ***Test*** the Solutions - Visualization - Storytelling - Cautions and Pitfalls - Best Practices

Text Books

S.No.	Author(s)	Title of the Book	Publisher	Year of Publication
1.	Christian Mueller-Roterberg	Handbook of Design Thinking Tips& Tools for how to design thinking	Amazon Kindle Version	2018

2	Gavin AmbrosePaul Harris	Design Thinking	AVA Publishing Switzerland	2010
3	Sambhrant Srivastava and Vijay Kumar	A Text Book of DESIGN THINKING	Vayu Education of India	2022

Reference Books

S. No.	Author(s)	Title of the Book	Publisher	Year of Publication
1	Maurício Vianna Ysmar Vianna Isabel K. Adler Brenda Lucena Beatriz Russo	Design Thinking - BusinessInnovation	MJV Press	2011
2	Moritz Gekeler	A practical guide to designthinking	Friedrich- Ebert-Stiftung	2019
3	J. Berengueres	The Brown Book of DesignThinking	UAE University College, Al Ain	2014