



PSGR Krishnammal College for Women



College of Excellence, **nirf** 2023 -4<sup>th</sup> Rank  
Autonomous and Affiliated to Bharathiar University  
Reaccredited with A<sup>++</sup> 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-VI)**

**BACHELOR OF COMMERCE WITH BUSINESS ANALYTICS**

**2021 – 2024 BATCH**



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## 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 for business 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.



		DA21C03	R Programming	CC	6	86	4	3	50	50	100	5	
		TH21A16	Allied-Statistics II	GE	6	86	4	3	50	50	100	5	
		DA21CP2	Computer Application Practical II – Analysis with SPSS & R	CC	4	57	4	3	50	50	50*	2	
	<b>IV</b>		Open Course - Self Study Online Courses	-	-	-	-	-	-	-	-	2	
		NME19B2 NME19A2	Basic Tamil II** Advanced Tamil II **	AEC	-	-	-	-	-	-	-	GR	
	<b>VI</b>		Personality Development Programme	-	-	-	-	-	-	-	-	-	
	<b>III B</b>	NM12GAW	General Awareness – Online Exam	Selfstudy (Online)	-	-	-	-	100	-	100	GR	
	<b>V</b>	21PECM1	Professional English for Commerce and Management	AEC	3	40	5	2	50	50	100	2	
<b>III</b>		BP21C04	Business Management and Ethics	CC	5	71	4	3	50	50	100	4	
		BP21C05	Principles of Marketing	CC	5	71	4	3	50	50	100	4	
		DA21C06	Database Programming	CC	6	86	4	3	50	50	100	4	
		EC21A02/ DA21A01	Allied Group 1.Business Economics 2.Corporat Governance	GE	5	71	4	3	50	50	100	5	
		DA21CP3	Computer Application Practical III – Database Programming	CC	4	57	3	3	50	50	50*	2	
		DA21SBP1/ DA21SBCE	Skill Based Subject 1 - JAVA Fundamentals Practical/ Course Era- Data Science and Statistics	SEC	3	43	2	2	40	60	100	3	
		<b>IV</b>	NM21EVS	Foundation Course II Environmental Studies*	AECC	-	Self-Study Paper			100	-	100	Gr
			NM21UHR	Foundation Course III (Universal Human Values and Human Rights) *	AECC	2	26	4	-	100	-	100	2
				Job Oriented Course		-	60	-	-	--	--	--	Gr.
	<b>III A</b>	DA21C07	PYTHON	CC	4	56	4	3	50	50	100	4	
	<b>III A</b>	CM21C08	Business Law	CC	6	86	4	3	50	50	100	4	
	<b>III A</b>	CM21C09	Business Finance	CC	6	86	4	3	50	50	100	4	
	<b>III</b>	DA21A03 DA21A04	Allied Group 1.Business Data Mining 2. Business Intelligence	GE	5	71	4	3	50	50	100	5	

<b>IV</b>	<b>III A</b>	DA21CP4	Computer Application Practical IV – PYTHON	CC	4	57	3	3	50	50	50*	2
	<b>III A</b>	DA21SBP1/ DA20SBCE	Skill Based Subject II –JAVA Fundamental Practicals/ Coursera - Data Science and Statistics	SEC	3	45	-	-	-	-	100	3
	<b>III A</b>	NM21DTG	Foundation Course IV - Design Thinking	Finishing School Part-A	2	26	4	2	100	--	100	2
	<b>V</b>	COCOACT	NSS, NCC, YRC and Sports & Games, Eco Watch, YI Net, Rotaract	AECC	-	-	-	--	100	--	100	1
	<b>V</b>	COM15SER	Community Oriented Service	-	-	--	--	--	--	--	--	Gr.
<b>V</b>			Group A – Core									
	<b>III</b>	DA21C10	Machine Learning with Artificial Intelligence	CC	5	73	2	3	50	50	100	3
		CM21C11	Management Accounting	CC	5	73	2	3	50	50	100	4
		CM21C12	Direct Taxation	CC	6	88	2	3	50	50	100	4
			Group C- Elective I									
		CM21E01	Paper 14: Financial Markets and Services	GE	5	73	2	3	50	50	100	5
		DA21E02	Paper 15: Business Organization and Models	GE	5	73	2	3	50	50	100	5
		CM21E03	Paper 16: Performance Management	GE	5	73	2	3	50	50	100	5
		DA21CP5	Computer Applications Practical V – Machine Learning with Artificial Intelligence	CC	4	57	3	3	50	50	100	3
		DA21SBP2/ DA21SBCE	Skill Based Subject II - SAS & SciLab Practical/Coursera - Data Scienceand Statistics	SEC	3	41	4	-	100	-	100	3
			Personality Development	-	-	-	-	-	-	-	-	-
			Online Comprehensive Examination	-	-	-	-	-	-	100	-	Gr
	<b>IV</b>	NM21CS1	Cyber Security 1	SEC	2	30	-	-	100	-	100	-
<b>VI</b>	AF12AC1 AF12AC2	Advanced LearnersCourse Human Resource Management Logistics and SupplyChain Management	--	-				(Self Study)	100	-	100	5*
	INST1	Field Work / Institutional Training	-	-				-	100	-	100	2
		Community Services 30Hours	-	-				-	-	-	(Completed or not)	-

VI	III	DA21C13	Big Data Framework	CC	6	88	2	3	50	50	100	5
	III	CM21C14	Cost Accounting	CC	6	88	2	3	50	50	100	4
	III	BP21E03/ CM21E04/ DA21E05	Elective- Business Taxation/ Investment Banking Operations/ Banking, Theory, Law and Practice	GE	5	73	2	3	50	50	100	5
	III	DA21CP6	Computer Application Practical VI–Big Data Framework	CC	4	57	3	3	50	50	100	3
	III	DA21SBT2	Skill Based Subject II – Research Methodology	SEC	3	41	4	-	100	-	100	3
	III	DA16PROJ	Project Viva Voce	Project	6	-	-	-	20	80	100	5
	III	AF16AC3/ DA15AC4	Advanced Learners Course –Information Systems for Business/ Knowledge Management System	Self-study				3	25	75	100	5*

\*100 marks converted to 50

\*\* outside regular class hours

CC – Core Courses

GE – Generic Elective

AECC – Ability Enhancing Compulsory Course

CA – Continuous Assessment

ESE - End Semester Examination

SEC – Skill Enhancing Course

\*Credits applicable to candidates who take up Advanced level course examination

\*\* Outside regular class hours

\*100 marks converted to 50

### BLOOM'S TAXONOMY BASED ASSESSMENT PATTERN:- 2021-2022 ONWARDS

#### CA I & II: (Theory & Accounts)

Bloom's Category	Section	Marks		Total
<b>Remember (K<sub>1</sub>) Understand (K<sub>2</sub>) Apply, Analyse (K<sub>3</sub>, K<sub>4</sub>)</b>	<b>A – 5x2 marks</b>	<b>10</b>	<b>1 or 2 sentences</b>	<b>50</b>
	<b>B- 4x5 marks</b>	<b>20</b>	<b>250 words</b>	
	<b>C – 2 out of 3x 10 marks</b>	<b>20</b>	<b>500 words</b>	

## UG – End Semester Examination Pattern

Bloom's Category	Section	Marks		Total
Remember (K <sub>1</sub> ) Understand (K <sub>2</sub> ) Apply, Analyse (K <sub>3</sub> , K <sub>4</sub> )	A – 11 out of 13x2 marks	22	1 or 2 sentences	100
	B- 5 out of 7x6 marks	30	300 words	
	C – 4 out of 6x 12 marks	48	600-800 words	

### WEIGHTAGE ASSIGNED TO VARIOUS COMPONENTS OF CONTINUOUS INTERNAL ASSESSMENT

#### Theory

	CIA - I	CIA - II	Mode 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**

<b>Criteria</b>	<b>4 Marks</b>	<b>3 Marks</b>	<b>2 Marks</b>	<b>1 Mark</b>
<b>Focus Purpose</b>	Clear	Shows awareness	Showslittle Awareness	No awareness
<b>Main idea</b>	Clearly presents a main idea.	Main idea supported Throughout	Vague sense	No main idea
<b>Organization: Overall</b>	Well planned	Good overall organization	There is a sense of organization	No sense of organization
<b>Content</b>	Exceptionally well presented	Well presented	Content is sound	Not good
<b>Style: Details and Examples</b>	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**

<b>Criteria</b>	<b>4 Marks</b>	<b>3 Marks</b>	<b>2 Marks</b>	<b>1 Mark</b>
<b>Focus Purpose</b>	Clear	Shows Awareness	Showslittle Awareness	No awareness
<b>Main idea</b>	Clearly presents a main idea.	Main idea supported throughout	Vague sense	No main idea
<b>Organization: Overall</b>	Well planned	Good overall organization	There is a sense of organization	No sense of organization
<b>Content</b>	Exceptionally well presented	Well presented	Content is sound	Not good
<b>Style: Details and Examples</b>	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
<b>Level of Engagement in Class</b>	Student proactively contributes to 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
<b>Listening Skills</b>	Student listens when others talk, both in groups and in class. Student incorporates or builds off of the ideas of others.	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.
<b>Behavior</b>	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
<b>Preparation</b>	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

### BLOOM'S TAXONOMY BASED ASSESSMENT PATTERN:- 2022-2023 ONWARDS

#### 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)

### BLOOM'S TAXONOMY BASED ASSESSMENT PATTERN:-2023 ONWARDS

#### CIA 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 2marks (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)

### **INTERNSHIP TRAINING:**

Internship for a period of 15 days at the end of the semester IV during the vacation and report to be submitted in semester V which will be evaluated for 100 marks divided as follows:

#### **EVALUATION:**

Attendance	: 10 Marks
Work Diary	: 15 Marks
Report	: 50 Marks
Viva-voce	: 25 Marks
<b>Total</b>	<b>: 100 Marks</b>

#### **GROUP PROJECT & VIVA VOCE:**

Each group will comprise of 4 or 5 members and will be allotted to staff coordinator. A specific problem will be assigned to the students or they will be asked to choose a problem/area of their interest. The topic/area of work will be finalized at the end of the fourth semester allowing scope for the students to gather relevant literature during the vacation. The research work can be carried at the college or any other organization approved by the staff coordinator and the HoD.

#### **INTERNAL EVALUATION:**

I Review–Selection of the field of study, Topic & Literature Collection- 5 Marks

II Review–Research Design & Data Collection - 10 Marks

III Review–Analysis & Conclusion, Preparation of Rough draft - 5 Marks

**Total -20 Marks**

#### **ADVANCED LEARNERS COURSE:**

Eligibility- The student should secure 75% in Part III subjects till V semester (Optional not included for grant total and total credits earned). Extra credit 5 per paper.

#### **COURSERA COURSE:**

The students in the sixth semester must undergo the coursera course as a Skill Based Course titled Marketing and Business Analytics. This course includes the following three courses such as Data and Statistics Foundation for Investment Professionals, Statistics for Machine Learning for Investment Professionals, The Data Scientist's Toolbox.

#### **END SEMESTER EXAMINATION:**

Evaluation of the Project-	60 Marks
Viva Voce	- 20 Marks
<b>Total</b>	<b>- 80 Marks</b>

Viva voce/presentation will be conducted by a panel of internal examiners including the HOD and staff Co-Ordinator guiding the project.

## PROJECT VIVA VOCE

**Subject Code: DA16PROJ**

**Duration: 6 Hrs per Week**

**Credit: 5**

Project work, which is compulsory, carries 100 marks. Group of students (3 to 5 students) should select a topic for the project work in the beginning of the fifth semester and submit the project report (dissertation) at the end of the fifth semester. The guide and an internal examiner shall evaluate the project report and conduct the viva. The project work shall be related to commerce and its related applications.

### **Project Evaluation Internal 20 Marks:**

- Topic – 2 Marks
- Review of Literature – 3 Marks
- Research, Design & data Collection – 10 Marks
- Analysis, Conclusion & Rough Draft – 5 Marks

### **External 60 Marks:**

- Quality of Idea – 5 Marks
- Application of relevant Tools – 10 Marks
- Presentation of Report – 15 Marks
- Presentation of Project – 10 Marks (PPT)
- Explanation (Clarity) – 10 Marks
- Team Spirit – 5 Marks
- Plagiarism – 5 Marks

**VIVA – 20 Marks**

**MAPPING OF PLOs WITH CLOs**

COURSE	PROGRAMME OUTCOMES				
	PLO1	PLO2	PLO3	PLO4	PLO5
<b>COURSE-BP21C01</b>					
CLO1	S	S	S	S	M
CLO2	S	S	S	S	M
CLO3	S	S	S	S	M
CLO4	S	S	S	S	M
<b>COURSE – DA21C02</b>					
CLO1	S	S	M	S	M
CLO2	S	S	L	S	S
CLO3	M	M	S	S	M
CLO4	S	L	M	S	S
CLO5	M	S	M	M	S
<b>COURSE – DA21CP1</b>					
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
<b>COURSE – DA21C03</b>					
CLO1	S	S	M	S	S
CLO2	S	M	S	S	M
CLO3	M	S	S	M	M
CLO4	S	M	S	S	M
CLO5	M	S	S	M	M
<b>COURSE – DA21CP2</b>					
CLO 1	S	S	M	S	S
CLO2	S	M	M	S	M
CLO3	S	M	L	M	S
CLO4	S	L	L	S	M
<b>COURSE – BP21C04</b>					
CLO1	S	S	S	S	S
CLO2	S	S	S	M	S
CLO3	S	S	M	S	S
CLO4	S	S	M	M	M
<b>COURSE – BP21C05</b>					

<b>CLO1</b>	S	S	S	S	M
<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	M
<b>CLO4</b>	S	S	S	S	M
<b>COURSE – DA21C06</b>					
<b>CLO1</b>	S	S	S	S	M
<b>CLO2</b>	S	S	S	S	S
<b>CLO3</b>	M	S	S	S	M
<b>CLO4</b>	M	M	S	S	M
<b>COURSE – EC21A02</b>					
<b>CLO1</b>	S	M	S	S	S
<b>CLO2</b>	S	S	S	S	L
<b>CLO3</b>	S	M	S	M	S
<b>CLO4</b>	S	M	S	M	S
<b>COURSE – DA21A01</b>					
<b>CLO1</b>	S	S	S	M	S
<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	S
<b>CLO4</b>	S	S	S	S	S
<b>COURSE – DA21CP3</b>					
<b>CLO1</b>	S	S	S	S	L
<b>CLO2</b>	S	S	S	S	L
<b>CLO3</b>	S	S	S	S	L
<b>CLO4</b>	S	M	M	M	L
<b>COURSE – DA21SBP1</b>					
<b>CLO1</b>	S	S	L	M	M
<b>CLO2</b>	S	M	M	S	M
<b>CLO3</b>	S	M	L	M	S
<b>CLO4</b>	S	M	M	M	S
<b>COURSE – DA21C07</b>					
<b>CLO1</b>	S	S	M	S	S
<b>CLO2</b>	S	M	S	S	M
<b>CLO3</b>	M	S	S	M	M
<b>CLO4</b>	M	S	S	M	M
<b>COURSE – CM21C08</b>					
<b>CLO1</b>	S	M	S	S	M

<b>CLO2</b>	S	S	S	S	S
<b>CLO3</b>	S	M	S	S	M
<b>CLO4</b>	S	S	S	M	S
<b>COURSE – CM21C09</b>					
<b>CLO1</b>	S	S	S	S	S
<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	S
<b>CLO4</b>	S	S	S	M	M
<b>COURSE – DA21A03</b>					
<b>CLO1</b>	S	S	L	M	M
<b>CLO2</b>	M	S	M	L	L
<b>CLO3</b>	M	M	S	S	L
<b>CLO4</b>	S	M	M	S	L
<b>COURSE – DA21A04</b>					
<b>CLO1</b>	S	S	M	M	L
<b>CLO2</b>	S	M	S	S	S
<b>CLO3</b>	S	M	M	M	S
<b>CLO4</b>	S	M	M	M	S
<b>COURSE – DA21CP4</b>					
<b>CLO1</b>	S	S	L	M	L
<b>CLO2</b>	S	M	M	S	M
<b>CLO3</b>	S	M	L	M	L
<b>CLO4</b>	S	M	L	L	L
<b>COURSE –DA21C10</b>					
<b>CLO1</b>	S	S	L	M	M
<b>CLO2</b>	M	S	M	L	M
<b>CLO3</b>	M	M	S	S	M
<b>CLO4</b>	M	M	M	M	S
<b>COURSE –CM21C11</b>					
<b>CLO1</b>	S	S	S	M	S
<b>CLO2</b>	S	S	M	S	S
<b>CLO3</b>	S	M	S	M	S
<b>CLO4</b>	M	S	S	S	M
<b>COURSE –CM21C12</b>					
<b>CLO1</b>	S	S	S	S	S

<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	M
<b>CLO4</b>	S	S	S	M	M
<b>COURSE –CM21E01</b>					
<b>CLO1</b>	S	S	M	L	S
<b>CLO2</b>	S	S	M	S	M
<b>CLO3</b>	S	S	S	M	S
<b>CLO4</b>	S	S	S	M	S
<b>COURSE –DA21E02</b>					
<b>CLO1</b>	S	S	S	S	M
<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	M
<b>CLO4</b>	S	S	M	S	S
<b>COURSE –CM21E03</b>					
<b>CLO1</b>	S	S	S	S	S
<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	M
<b>CLO4</b>	S	S	S	S	M
<b>COURSE – DA21CP5</b>					
<b>CLO1</b>	S	S	L	M	L
<b>CLO2</b>	S	M	M	S	M
<b>CLO3</b>	S	M	L	M	L
<b>CLO4</b>	S	M	M	S	M
<b>COURSE – DA21SBP2</b>					
<b>CLO1</b>	S	L	M	L	M
<b>CLO2</b>	M	S	S	M	S
<b>CLO3</b>	S	S	S	S	M
<b>CLO4</b>	S	S	M	L	M
<b>COURSE-DA21C13</b>					
<b>CLO1</b>	S	S	M	S	S
<b>CLO2</b>	S	M	S	S	M
<b>CLO3</b>	M	S	S	M	M
<b>CLO4</b>	S	M	S	S	M
<b>COURSE- CM21C14</b>					
<b>CLO1</b>	S	S	S	S	S
<b>CLO2</b>	S	S	S	M	S



<b>CLO3</b>	S	S	M	S	S
<b>CLO4</b>	S	M	S	S	S
<b>COURSE- BP21E03</b>					
<b>CLO1</b>	S	S	S	S	S
<b>CLO2</b>	S	S	S	S	S
<b>CLO3</b>	S	S	S	S	S
<b>CLO4</b>	S	S	S	S	M
<b>COURSE- CM21E04</b>					
<b>CLO1</b>	S	S	S	M	S
<b>CLO2</b>	S	S	S	M	S
<b>CLO3</b>	S	S	S	M	S
<b>CLO4</b>	S	S	S	M	S
<b>COURSE- DA21E05</b>					
<b>CLO1</b>	S	S	S	S	M
<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	M
<b>CLO4</b>	S	S	M	S	S
<b>COURSE- DA21CP6</b>					
<b>CLO1</b>	S	S	L	M	S
<b>CLO2</b>	M	M	M	S	M
<b>CLO3</b>	S	M	S	M	L
<b>CLO4</b>	S	M	M	S	M
<b>COURSE- DA21SBT2</b>					
<b>CLO1</b>	S	S	L	M	L
<b>CLO2</b>	S	M	M	S	M
<b>CLO3</b>	S	M	L	M	L
<b>CLO4</b>	S	M	M	S	M

<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CATEGORY</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>CREDIT</b>
BP21C01	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.

### Course Learning Outcomes

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

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

### Mapping with Programme Outcomes

<b>CLOs</b>	<b>PLO1</b>	<b>PLO2</b>	<b>PLO3</b>	<b>PLO4</b>	<b>PLO5</b>
<b>CLO1</b>	S	S	S	S	M
<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	M
<b>CLO4</b>	S	S	S	S	M

S- Strong; M-Medium; L-Low

### Syllabus

**Unit I** (11 Hrs)

Basic Accounting Concepts- Final Accounts- Bank Reconciliation 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 Books**

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, 13 <sup>th</sup> Edition
2.	MC Shukla, T.S. Grewal & S.C. Gupta	Advanced Accountancy	S. Chand & sons	2013 Edition

**Pedagogy**

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

**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

**Course Designers:**

1. Mrs.R.Jayasathya
2. Mrs.NithyaRamadass

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21C02	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 science 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 identify with meaning and importance of business analytics and data science in business process and industry	K3
CLO2	To outline data integration, projecting, maintenance, designing and modeling of various data techniques	K2
CLO3	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
CLO4	To Illustrate the concepts of Datawarehouse, data profiling, data dimension, mobility and various related systems and their applications in different industries	K2
CLO5	To Experiment with business intelligence concepts, Industrial concepts 4.0 for enterprise reporting, industry impact on multiple factors, its sources and their implementation	K3

## 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
CLO5	M	S	M	M	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

**\* Highlighted Content offered in Blended Mode**

**Text Books**

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

**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.U.Sheeba

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

## Syllabus

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

- Enter the data, as shown, into a worksheet and format the table as shown.
- Create a formula to calculate rate of return for each year. Format the results as percentages with twodecimal places.
- Calculate the total return for the entire holding period. What is the compound average annual rate of return?
- Create a Line chart showing the stock price from May 2006 to May 2011. 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?
- 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

- Calculate the net profit margin for each year.
- 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?
- 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?
- 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 income over the long run? Why or why not?
- b) Which company was more profitable in 2010? Which was more profitable if you take a longer 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:

<b>FISCAL YEAR</b>	<b>2017</b>	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>
<b>SALES</b>	<b>\$ 2000.82</b>	<b>\$ 2082.76</b>	<b>\$ 2066.32</b>	<b>\$ 1886.96</b>	<b>\$ 1674.60</b>
<b>EBIT</b>	<b>729.31</b>	<b>812.08</b>	<b>854.82</b>	<b>743.27</b>	<b>674.77</b>
<b>TOTAL NET INCOME</b>	<b>477.00</b>	<b>533.54</b>	<b>576.14</b>	<b>515.45</b>	<b>464.91</b>
<b>DIVIDENDS PER SHARE</b>	<b>1.24</b>	<b>1.24</b>	<b>1.22</b>	<b>1.02</b>	<b>0.69</b>
<b>BASIC EPS FROM TOTAL OPERATIONS</b>	<b>1.32</b>	<b>1.48</b>	<b>1.56</b>	<b>1.35</b>	<b>1.23</b>
<b>TOTAL ASSETS</b>	<b>5,226.30</b>	<b>5,127.42</b>	<b>5,309.79</b>	<b>6,246.52</b>	<b>5,549.30</b>
<b>ACCOUNTS PAYABLE</b>	<b>37.3</b>	<b>37.33</b>	<b>40.25</b>	<b>46.96</b>	<b>46.67</b>
<b>TOTAL LIABILITIES</b>	<b>3,824.32</b>	<b>3,785.94</b>	<b>4,113.15</b>	<b>4,294.27</b>	<b>3,894.46</b>
<b>RETAINED EARNINGS</b>	<b>856.29</b>	<b>829.50</b>	<b>745.35</b>	<b>1,595.10</b>	<b>1,380.97</b>
<b>NET CASH FROM OPERATING ACTIVITIES</b>	<b>610.92</b>	<b>688.77</b>	<b>724.67</b>	<b>631.23</b>	<b>569.23</b>

- a) Calculate the ratio of each year's 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) for each 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 the variables 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 arithmetic and 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 that calculates 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	COURSE NAME	Category	L	T	P	Credit
NME21ES	INTRODUCTION TO ENTREPRENEURSHIP	Theory	26	4	-	2

### Unit 1 : (5 hrs)

#### **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 of Innovation – 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 - Significance of Businessplan – Components of Business plan

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

### Unit 5: (7 hrs)

#### **Project:** Interface with Successful Entrepreneurs – 4 hrs

**Business Plan Presentation** – 3 hrs

## 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 Entrepreneurial Organization, 2012, Pearson Education India

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21C03	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 its active 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

CLO No.	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	K2 and K3

## 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	S	M	S	S	M
CLO5	M	S	S	M	M

S- Strong; M-Medium; L-Low

## Syllabus

### UNIT I

(17Hrs)

An overview of R: Introduction to R expressions, variables, and functions- operators- data types-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 and installing 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 Statistical Programming Language (Wrox)	John Wiley & Sons, Inc.,	2016 revised edition

**Books for Reference:**

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

**Related Online Contents:**

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

### Pedagogy

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

### Course Designers

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

COURSE NUMBER	COURSENAME	CATEGORY	L	T	P	CREDIT
DA21CP2	Computer Application Practical II – ANALYSIS WITH SPSS & R	Practical	4	-	57	2

### Preamble

- To explore and acquire skills in SPSS and R Programming

### Prerequisite

- Basic 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 and K4
CLO4	Examine the approach to deal with data	K4
CLO5	Analyze the statistical formula to incorporate with R-programming	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
CLO5	S	M	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 using data frames and factors and plot a graph.

### R and SPSS

7. Create an SPSS and R Dataset and determine the number of 18–22-year-old population in 2000, 2004 and 2005

<b>PARTICULARS</b>	<b>2000</b>	<b>2004</b>	<b>2005</b>
UNIVERSITY STUDENT	47498	66309	70153
NUMBER OF TEACHERS	17302	19103	18098
NUMBER OF INSTITUTIONS	77	91	90
NUMBER OF STUDENTS IN THE % OF THE 18-22 YEAR-OLD POPULATION	10.4	13.9	15

8. The data below are about the number of tourists in Hungary between 1988 and 1994.

<b>Year</b>	<b>Quarters</b>	<b>Number of tourists (thousand persons)</b>	<b>Year</b>	<b>Quarters</b>	<b>Number of tourists (thousand persons)</b>
1988	1	687.5	1990	4	1061.2
1988	2	944.7	1991	1	839
1988	3	1212.8	1991	2	1446
1988	4	999.4	1991	3	2274.7
1989	1	839.8	1991	4	1281.5
1989	2	1126.6	1992	1	868.1
1989	3	1423.4	1992	2	1374
1989	4	1164.8	1992	3	1823.9
1990	1	896.2	1992	4	1319.3
1990	2	1307.8	1993	1	854
1990	3	1887.8			

- a) Is there any trend in this model? (Normality test)
  - b) Create a graph from the time series!
  - c) Which seasonal decomposition should you use? Why?
  - d) Do a seasonal decomposition! Analyze the parameters and the seasonal factors!
  - e) Create graphs from the seasonal factors (saf\_1, sas\_1, stc\_1)!
  - f) Determine the number of tourists for the 2nd, 3rd and 4th quarter of 1993!
9. Open the Employee\_data.sav file! and analyse the following in SPSS and R Transform / Select Data
    - a) What is the proportion of custodials?
    - b) What is the proportion of women within managers?

### Graphs

Create a column diagram about the proportion of employees grouped by gender! Embellish the

graph! Put the value of proportions into the chart!

- a) Transform this column diagram into a pie chart!
- b) Create a scatter plot about month since hire and beginning salary if you set markers by gender! Embellish the graph!
- c) Create a scatter plot about month since hire and previous experience if you set marker sby employment category! Embellish the graph!
- d) Define simple box plot about previous experience! Embellish the graph!
- e) Define simple box plot about the month since hire categorized by the employment category! Embellish the graph!
- f) Define box plot about the previous experience categorized by the employment category clustered by gender! Embellish the graph!
- g) Create a graph to test the normal distribution of beginning salary!

Central Tendencies, Measures of Distribution, Measures of Asymmetry

- a) Define the central tendencies of month since hire!
- b) Define the characteristics of distribution of previous experience!
- c) What is the average salary of employees belonging to the minority? Correlation and

Linear Regression

Is there any relation between previous experience and month since hire?

- b) Determine a linear relation between the month since hire and previous experience of employees!
- c) Define a 90% confidence interval for its  $b_0$  and  $b_1$  parameters!
- d) Define a 90% confidence interval for the y variable!
- e) Open the Cars.sav file!

Transform / Select Data

- a) How old are the cars? Create a new variable as age!
- b) What is the ratio of American, European and Japanese cars within cars with higher consumption than 20 miles per gallon?
- c) What is the ratio of those American cars which have 4-6-8 cylinders?

10. Estimation and Hypothesis Testing

- a) Define a 95% confidence interval for the vehicle weight!
- b) Define a 90% confidence interval for the horsepower!
- c) Define a 98% confidence interval for the time to accelerate!
- d) Test the hypothesis that the average consumption of cars is 20 miles per gallon! ( $\alpha = 5\%$ )
- e) Use One Sample T Test to determine whether or not the average miles per gallon significantly differ from 24 at 10% significance level!
- f) Test the hypothesis that the average horsepower of cars is 100! ( $\alpha = 5\%$ )
- g) Test the hypothesis that the average consumption of Japanese and American cars is the same! ( $\alpha = 5\%$ )
- h) Test the hypothesis that the average consumption of European and American cars is the same! ( $\alpha = 10\%$ )
- i) Check if the horsepower follows a normal distribution or not!

Statistical Dependence

Create a crosstab from the model year and the country of origin!

- a) Create a crosstab from the number of cylinders and the country of origin!
- b) Is there any relationship between the country of origin and engine displacement?
- c) Is there any relationship between the country of origin and horsepower?
- d) Is there any relationship between the country of origin and vehicle weight?

## Pedagogy

- Demonstration through System, Demonstration through PPT

## Course Designer

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

COURSE NUMBER	COURSENAME	Category	L	T	P	Credit
21PECM1	PROFESSIONAL ENGLISH FOR COMMERCE AND MANAGEMENT	Theory	40	5	-	2

## Preamble

- To develop the language skills of students by offering adequate practice in professional contexts.
- 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 the target 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

## 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 question

Listening 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 and Extended 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 (Subject specific)

**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 – Recommendations – Interpreting 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 Life Skills)

**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 for Higher Education (TANSCH)	English for Commerce and Management Semester 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 van, P Bhaskaran Nair	Written English for you	Emerald	1998

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
BP21C04	BUSINESS MANAGEMENT AND ETHICS	CORE	71	4	-	4

## Preamble

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

## Prerequisite

- Basic Knowledge on Business Management

## Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Recognize the fundamental concepts and principles of management, Planning, Organisation, leadership and control including the function and its 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 FDrucker, McGregor, Elton Mayo-**\*Management as a Science, Art, Profession- Management and Administration\***– Principles of Management

### Unit II (14 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 (14 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.

### \* Highlighted Content offered in Blended Mode

#### Text Books

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

## Reference Books

S. No.	Authors	Title	Publishers	Year of Publication
1.	Dr.C.N.Sontakkai	Principles of Management	Kalyani Publishers,	2016 reprint
2.	P.C.Tripathi & P.N Reddy	Principles of Management	Tata Mcgraw Hill Publishing Co Ltd	2017 ed.
3.	Robbins, De Cenzo, & Coulter.	Fundamentals of Management	Pearson Education Ltd	10th 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 organization

## 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
BP21C05	PRINCIPLES OF MARKETING	CORE	71	4	-	4

## Preamble

- To understand how organizations identify customers and their wants/needs.
- To comprehend marketing decisions, based upon the combination of product, price, promotion, and distribution 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

CLOs	CLO Statement	Knowledge Level
CLO1	Identify marketing and market driven enterprises	K1

<b>CLO2</b>	Examine the basic elements of the marketing mix and to provide a framework to evaluate marketing decisions and initiatives	K2
<b>CLO3</b>	Formulate marketing strategies for products and services	K3
<b>CLO4</b>	Analysing the recent marketing strategies	K4

### Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
<b>CLO1</b>	S	S	S	S	M
<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	M
<b>CLO4</b>	S	S	S	S	M

S- Strong; M-Medium; L-Low

### Syllabus

#### UNIT I

(DL hrs=14)

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

(DL hrs=14)

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 of Pricing.

#### UNIT III

(DL hrs=15)

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 SalesMan\***, Features and\***Process of Personal Selling\***.Channels of Distribution- Meaning, Definition, Importance, Types,\***E-Channels of distribution - Factors Determining Choice of Channel of Distribution\***.

#### UNIT IV

(DL hrs=14)

\***Rural Marketing: - Meaning, Definition, Nature and Types\*** - Agricultural Marketing in India – Types of agricultural 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

(DL hrs=14)

\***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\***.

\***Highlighted Content offered in Blended Mode**

### 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. New Delhi	4 <sup>th</sup> Revised Edition (Reprint 2017)
2.	J P Mahajan	Principles of Marketing	Vikas Publishing House Pvt Ltd	2 <sup>nd</sup> 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 and Sons, New Delhi	2018 Edition
2.	Philip Kotler, Gary Armstrong, Lioys C. Harris	Principles of Marketing	Pearson	8 <sup>th</sup> Edition, 2020

### Skill Components

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

### Pedagogy

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

### Course Designers

1. Dr.R.Jayasathya
2. Mrs.M.Prem Grace

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21C06	DATABASE PROGRAMMING	CORE	86	4	-	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

(18 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-Creating Tables-Describing the structure of a Table-Populating tables.

### Unit II

(17 Hrs)

Functional Dependencies-Normalization process: 1NF- 2NF-3NF-BCNF. **\*The E-R Model- Entities and Attributes-Relationships\***- Normalizing the Model-Table Instance Charts- Implementation of the selection Operator-**\*Using aliases to control column Headings- Implementation of the projection and join Operators\***-Creating foreign keys and primary keys and check constraints-adding and modifying Columns-Removing constraints from a table

### Unit III

(17 Hrs)

**\*Built in Functions-Numeric-Character Conversion Functions\***-Introduction to group functions-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 andtime. Subqueries- Correlated Queries-**\*Using subqueries to create, update, insert and delete rows from a Table-Transaction-Commit, rollback, save point and auto Commit- Introduction to PL/SQL-user defined Functions-Triggers-Stored procedures\***

### Unit IV

(17 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, Integration, Impedance Mismatch, Application and Integration Databases, Attack of the Clusters, The Emergence of NoSQL. Aggregate Data Models: **\*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 – Querying – **\*Designing Your Application: Indexing - Special Index and Collection Types\*** – Aggregation

## Unit V

(17 Hrs)

Introduction to WEKA – The Explorer – \*Getting started\* – Exploring the explorer – **\*Filtering algorithm\***

**\*Highlighted Content offered in Blended Mode**

### Text Books

S.No.	Author Name	Book Name	Publisher	Year and Edition
1	Ramon A Mata-Toledo Pauline K Cushman	Database Management System	Tata McGraw-Hill Publishing company limited, New Delhi.	2010, 2 <sup>nd</sup> edition
2.	Pramod J. Sadalage & Martin Fowler.  Kristina Chodorow	NoSQL Distilled  MongoDB: The definitive guide	Pearson Education, Inc. O'Reilly Media, Inc.,	2013  2013, 2 <sup>nd</sup> Edition
3.	Eibe Frank, Mark A. Hall, and Ian H. Witten <b>Unit: 5</b>	The WEKA workbench	Morgan Kaufmann	2016, 4 <sup>th</sup> Edition

### Reference Books

S.No.	Author Name	Book Name	Publisher	Year and edition
1	Ramakrishnan & Ge hrke	Database Management Systems	Tata McGraw Hill	2009, 8 <sup>th</sup> edition
2	Nilesh Shah	Database Systems using Oracle	PHI learning pvt Ltd	2014, 2 <sup>nd</sup> edition
3	Alexis Leon & Mathews Leon	Fundamentals of database management systems	Tata McGraw Hill	2011, 3 <sup>rd</sup> 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	COURSE NAME	CATEGORY	L	T	P	CREDIT
EC21A02	BUSINESS ECONOMICS	ALLIED	71	4	-	5

### Preamble

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

### Prerequisite

- Basic knowledge in economics

### Course Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Define and understand the various laws and concepts of economics	K1
CLO2	Demonstrate and interpret different market structure, utility, production and pricing methods	K2
CLO3	Identify and develop economic theories and public finance system.	K3
CLO4	Analyse the functioning of economy at the macro level.	K4

### Mapping with Programme Outcomes

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

S- Strong; M-Medium; L-Low

### Syllabus

#### Unit I

(14 Hrs)

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

#### Unit II

(14 Hrs)

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



**Unit III****(14 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 – Gross Domestic Product - **\*Measurement of National Income - Consumptions, savings and investments\***. Theory of Employment- Type of unemployment- **\*Labour and 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\*** - Effect of taxation on production and distribution - Deficit financing system

**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 – **\*Finances of the union and the states – The Finance commission\*** – Importance of the budget.

**\*Highlighted Content offered in Blended Mode****Text Books**

Sl.No.	Author Name	Title of the book	Publisher	Year and Edition
1	Sundharam KPM, Sundharam E N	Business Economics	Sultan Chand & Sons - New Delhi – 02	2015 Edition
2	Shankaran S	Business Economics	Margham Publications, Chennai - 17	2012, 3 <sup>rd</sup> Edition
3	Francis Cherunilam	Business Environment	Himalaya Publishin House, Mumbai – 04	2017, 25 <sup>th</sup> Edition

**Reference Books**

Sl.No.	Author Name	Title of the book	Publisher	Year and Edition
1	Chaudhary C.M	Business Economics	RBSA Publishers, Jaipur-03	2015 Edition
2	Mehta P.L	Managerial Economics–Analysis, Problems & Cases	Sultan Chand & Sons - New Delhi – 02.	2015, 14 <sup>th</sup> Edition

**Course Designers**

1. Dr.A.Karthika
2. Dr. S. Yesodha

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21A01	CORPORATE GOVERNANCE	ALLIED	71	4	-	5

**Preamble**

- To analyse corporate governance mechanism and principles
- To understand the code and guidelines of corporate governance

## Prerequisite

- Basic Knowledge of Corporate Governance

## Course Learning Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Find and Summarize mechanism, principles, and issues related to corporate governance.	K1
CLO2	Illustrate the corporate governance code and guidelines	K2
CLO3	Develop and examine the role of corporate governance in national and international companies	K3
CLO4	Analyse mechanisms, principles, issues related to corporate Governance	K4

## Mapping with Programme Outcomes

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

S-Strong; M-Medium; L-Low

## Syllabus

### UNIT I

(14 Hrs)

**Corporate Governance** – Introduction – People Orientation of Public Governance- **\*Different Systems in Public Governance\*** - Structure of Public Governance and Corporate Governance - Comparison between Corporate Governance and Public Governance - **\*History of Corporate Governance – Concept of Corporate Governance & Stakeholder\***

### UNIT II

(14Hrs)

**Corporate Governance Mechanism and Overview** – 4 P's of Corporate Governance - Wealth Creation, Management and Distribution – **\*Disclosure in Offer Documents - Clause 49\*** Principles of Corporate Governance – Introduction – OECD Principles of Corporate Governance – **\*Annotations to the OECD Principles of Corporate Governance\*** – Issues Related to Corporate Governance- Introduction – **\*Need for Good Corporate Governance\*** - Role and Responsibilities of Investors - Competency and Training

### UNIT III

(15Hrs)

**Decision System** - Role of the Directors and Management – The Board Performs its Oversight Function - Relationships with Stockholders and other Constituencies - Corporate capital and its property rights - Mechanism and control – **\*Systemic Problem of Corporate Governance\*** - Introduction and History – **\*Code of Business Conduct\*** - Code of Business Ethics. – **\*Corporate Social Responsibility\*** - Introduction – implementation Generate Business Benefits

**UNIT IV****(14 Hrs)**

**Codes and Guidelines** - Guidelines for Person incharge – Duties and Responsibilities of Person in charge- **\*General Code of Corporate Governance\*** - Guidelines- Rules and Regulations – **\*Enforcement of Regulations - e-Governance\***

**UNIT V****(14Hrs)**

**International Corporate Governance – \*Germany – France\*** - United Kingdom- USA – Corporate Governance in leading Indian Companies

**\* Highlighted Content offered in Blended Mode**

**Text Book**

S.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Swami Parthasarathy	Corporate Governance	Biztantra , New Delhi	5 <sup>th</sup> Edition, Reprint 2008

**Reference Books**

S.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Kesho, Prasad	Corporate Governance	New Delhi: Prentice Hall	4 <sup>th</sup> Edition, 2006
2.	Singh. S	Corporate Governance	New Delhi: Excel Books	3 <sup>rd</sup> Edition, 2005

**Skill Components:**

- Analyse the Corporate Governance mechanism and principles.
- To enable the students to do a study related to the implementation of Corporate Governance in leading Indian companies.
- Role play on the duties and responsibilities of the person incharge of the implementation of Corporate 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	COURSENAME	CATEGORY	L	T	P	CREDIT
DA21CP3	COMPUTER APPLICATION PRACTICAL III – DATABASE PROGRAMMING	Practical	-	3	57	2

**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

CLO Number	CO 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	S	S	L
CLO3	S	S	S	S	L
CLO4	S	M	M	M	L

S-Strong; M-Medium; L-Low

## Syllabus

1. Normalize the following dataset: Employee database
2. Data Definition Language and Data Manipulation  
LanguageTable: Student
 

Regno	number(5)	primary key
Studname	varchar2(15)	
Gender	char (6)	
Deptname	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	varchar2 (20)	not null
Deptno	number (2)	not null
Desig	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 fields
- |       |              |             |
|-------|--------------|-------------|
| Stuno | number(5)    | primary key |
| Stunm | varchar2(20) |             |
| Age   | number(2)    |             |
| Mark1 | number(3)    |             |
| Mark2 | number(3)    |             |
| Mark3 | number(3)    |             |

Queries:

- Insert values and display the records
- List the names and age of the student whose age is more than 12
- Display total and average of marks
- Display the names of the maximum total & minimum total student
- List the names of the student that ends with „A“
- List the names of student whose names have exactly 5 characters

5. Create the table PAYROLL with the following fields and insert the

values:Emplno	number(8)
Emplname	varchar2(8)
Dept	varchar2 (10)
Baspay	number(8, 2)
HRA	number(6, 2)
DA	number(6, 2)
Pf	number(6, 2)
Netpay	number (8, 2)

Queries:

- Update the records to calculate the net pay.
- Arrange the records of the employees in ascending order of the net pay.
- Display the details of the employees whose department is "Sales".
- Select the details of employees whose HRA $\geq$ 1000 and DA $\leq$ 900.
- Select the records in descending order.

6. Create a Table Publisher and Book with the following fields:Table: publisher

Pubcode	varchar2(5)
Pubname	varchar2(10)
Pubcity	varchar2(12)
PubState	varchar2(10)
Bookcode	varchar2(5)

Table: Book

Booktitle	varchar2(15)
Bookcode	varchar2(5)
Bookprice	varchar2(5)

Queries:

- Insert the records into the table publisher and book.
- Describe the structure of the tables.
- Show the details of the book with the title "DBMS".
- Show the details of the book with price $>$ 300.
- Show the details of the book with publisher name "Kalyani".
- Select the book code, book title; publisher city is "Delhi".
- 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".

7. Create Orders table and customers table with following fields:

Orderid	number(10)
Customerid	number(5)
Orderdate	date

Table: customers

Customerid	number(5)
Custname	varchar2(10)
Contactname	varchar2(10)
Country	varchar2(10)

- a) Perform INNERJOIN, that selects records that have matching values in both tables
- b) Perform LEFTJOIN, that selects records that have matching values in both tables
- c) Perform RIGHTJOIN, that selects records that have matching values in both tables

8. Create Customer Table and supplier table with following fields:

Table: Customer

cusid	number(10)
FirstName	varchar2(10)
LastName	varchar2(10)
City	varchar2(10)
Country	varchar2(10)
Phone	number (10)

Table: Supplier

Supid	number(10)
Company Name	varchar2(10)
ContactName	varchar2(10)
City	varchar2(10)
Country	varchar2(10)
Phone	number(10)
Fax	number(10)

- a) Insert the records into the table customer and supplier.
- b) Describe the structure of the tables.
- c) List details of customer table and supplier table.
- d) Perform full outer join from customer on supplier table order by country

**MONGODB:**

- 9. Create a Student Database in MongoDB using “use” Command.
- 10. Create program using CRUD operation using MongoDB.
- 11. Create program text search and indexes using MongoDB.
- 12. Create the replica set in the Mongoshell and test the configuration

**WEKA:**

- 13. Demonstration of preprocessing on dataset student.arff
- 14. Demonstration of classification rule process on dataset employee.arff using J48 algorithm
- 15. Demonstration of clustering rule process on dataset iris.arff using simple K-means
- 16. Demonstration of association rule process on dataset test.arff using Apriori algorithm.

## 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
DA21SBP1	Skill Based Subject 1 - JAVA Fundamentals Practical	SBS - Practical	-	2	43	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	CO 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 NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21C07	PYTHON	CORE	56	4	-	4

## 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 (11Hrs)

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

### Unit III (11Hrs)

**\*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 matplotlib API primer-Plotting functions in pandas-Lineplot, Bar plot, Histogram and Scatter plot - **\*Time Series: Basics-time zone handling\*** - Resampling andFrequency Conversion - **\*Time Series plotting\***.

**\*Highlighted content offered in Blended Mode (Link Provided)**

## Text Books

Sl.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

## Refernce Book

Sl.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 python program development environment.

### Pedagogy

- Demonstration through System, Demonstration through PPT

### Course Designers

1. Dr.M.Rajeswari
2. Dr.S.Krishnavenis

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
CM21C08	BUSINESS LAW	CORE	86	4	-	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 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 Outcomes

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

S - Strong; M - Medium; L – Low

## Syllabus

### Unit I

(17Hrs)

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

### Unit II

(17Hrs)

Free Consent – Unlawful Agreements – **\*Quasi Contracts - Different Modes of Discharge of Contract\*** – Remedies of Breach – Principles for awarding Damages.

### Unit III

(17Hrs)

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

### Unit IV

(18Hrs)

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 –**\*Rights of Unpaid Vendor.\*** Law of Agency – Kinds of Agency –**\*Rights & Liabilities of Principal and Agent.\***

### Unit V

(17 Hrs)

Contract of Insurance - Nature and Fundamental Principles of Insurance – Life Insurance – Fire insurance – **\*Marine Insurance - Policy claims - IRDA and its functions.\***

**\*Theory Only**

**\*Highlighted Content offered in Blended Mode**

## Text Book

S.No	Authors	Title	Publishers	Year of Publication
1.	Kapoor N.D	Business Law	Sultan Chand & sons	Seventh Revised Edition 2020

## 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
- Analyse the significant aspects in IRDA and calculate the claim of the insured.

### **Pedagogy:**

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

### **Course Designers:**

Dr. B.Thulasi Priya, Department of Commerce

Dr. S.Sujatha, Department of Commerce

<b>COURSE NUMBER</b>	<b>COURSE NAME</b>	<b>CATEGORY</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>CREDIT</b>
<b>CM21C09</b>	<b>BUSINESS FINANCE</b>	<b>CORE</b>	<b>86</b>	<b>4</b>	<b>-</b>	<b>4</b>

### **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

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

### **Mapping with Programme Outcomes**

<b>CLOs</b>	<b>PLO1</b>	<b>PLO2</b>	<b>PLO3</b>	<b>PLO4</b>	<b>PLO5</b>
<b>CLO1</b>	S	S	S	S	S
<b>CLO2</b>	S	S	S	S	M
<b>CLO3</b>	S	S	S	S	S
<b>CLO4</b>	S	S	S	M	M

S- Strong; M-Medium; L-Low

## Syllabus

### Unit I

(17Hrs)

Business Finance – Meaning and Definition – **\*Approaches to Finance Function – Fixed and variable objectives of Financial Management\*** – Scope – Financial Decisions. Sources of Finance. Financial Planning – Objectives – Characteristics – **\*Steps in financial planning – Estimation of Long Term and Short-Term Financial Needs – Limitations of Financial Planning.\*** Time Value of money – Practical Applications of Time Value Techniques.

### Unit II

(17Hrs)

Capital Budgeting – Meaning – Need – **\*Importance – Kinds and Process of Capital Budgeting\*** – Methods of Capital Budgeting (Traditional and Modern methods only). 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

(17Hrs)

Capital Structure – Introduction – Importance – Factors Determining the Capital Structure **\*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 - Significance and Limitations.

### Unit IV

(18Hrs)

Capitalisation – Concept – Need- Theories of Capitalisation – **\*Fair capitalization – Over Capitalization – Under Capitalization – Watered Stock – Over Trading and Under Trading.\*** Working Capital Management – Meaning – Classification- **\*Importance- Factors Determining the Working Capital Requirements\*** – Management of Working Capital – Methods of Estimating Working Capital Requirements.

### Unit V

(17Hrs)

Receivables Management – Forming of credit policy. Inventory Management – Tools and Techniques. 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**

## 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.
- Analyse 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. Thulasipriya, Department of Commerce

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21A03	BUSINESS DATAMINING	Allied	71	4	-	5

### Preamble

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

### Prerequisite

- No prerequisite knowledge required

### Course Outcomes

- 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	Analyse 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

(14 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 Evolution and Selection\***-Techniques to Improve Classification Accuracy

### Unit IV

(14 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\***

**\*Highlighted Content offered in Blended Mode**

## 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, 4 <sup>th</sup> 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, 4 <sup>th</sup> Edition
2	M. H. Dunham	Data Mining: Introductory and Advanced Topics	Imprint Pearson Education	2011 4 <sup>th</sup> 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 NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21A04	BUSINESS INTELLIGENCE	ALLIED	71	4	-	5

### 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 (14Hrs)

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 (14Hrs)

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 miningsuccess stories\*

### Unit IV (14Hrs)

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

\*Highlighted Content offered in Blended Mode

## Text Book

S.No.	Author Name	Book Name	Publisher	Year & Edition
1	Efraim Turban Ramesh ShardaDursun Delen David King	Business Intelligence – A Managerial Approach	Pearson	2013 3 <sup>rd</sup> Edition
2	Stuart Russel and Peter Norvig	Artificial Intelligence: A Modern Approach	Prentice Hall	2020, 4 <sup>th</sup> 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 its 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
DA21CP4	COMPUTER APPLICATION PRACTICAL IV - PYTHON	Practical	-	3	57	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](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:// thinkpython. com/ code/ analyze\\_ book2. py](http://thinkpython.com/code/analyze_book2.py) .

## 7. Random words

**Exercise 7.2:** 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 in the 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:// thinkpython. com/ code/ analyze\\_ book3. py](http://thinkpython.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](http://thinkpython.com/code/polygon.py) .

#### 10. Draws an Archimedian spiral.

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

### Pedagogy

- Demonstration through System, Demonstration through PPT

### Course Designers

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

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21C10	MACHINE LEARNING WITH ARTIFICIAL INTELLIGENCE	THEORY	73	2	-	3

### Preamble

- To understand machine learning techniques and AI algorithm
- To get insight on analysis and AI technique.

### Prerequisite

- No prerequisite required.

### Course Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Identify the data model and its operation	K1
CLO2	Classify the basic concepts and techniques of Data Mining	K2
CLO3	Apply data mining tool for solving practical business problem	K3
CLO4	Apply Artificial Techniques applications	K4

### Mapping with Programme Outcomes

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

S- Strong; M-Medium; L-Low

## Syllabus

### Unit – I

(14 Hrs)

Machine Learning: Introduction - What is Machine Learning - Types of Machine Learning - **\*Machine Learning Algorithms\*** - Tools Available: Programming Languages – Frameworks - **\*Databases - Deployment Tools\***

### Unit II

(14 Hrs)

Application Areas of Machine Learning: Transportation - Education - Social Media - Financial World - Machine Learning Concepts: Supervised Learning - **\*Unsupervised Learning - Reinforcement Learning\***

### Unit III

(15 Hrs)

Machine Learning Models in Product Development and Its Statistics Evaluation: Introduction - Methods for Model Building - Product Development - Smart Manufacturing - Quality Control Aspects - **\*Machine Learning Methods\***- Statistical Measures - **\*Algorithm for Data Analytics - Real-Time Applications\***

### Unit IV

(16 Hrs)

Artificial Intelligence: Introduction - Artificial Intelligence: What and Why? - History of AI - Foundation of AI - The AI Environment - **\*Application Domains of AI - AI Tools - Challenges in AI\*** -Future Prospects of AI - Artificial Intelligence and Gender: What is Artificial Intelligence - What is Machine Learning - What is Deep Learning? -Artificial Intelligence Enterprise Applications - **\*Artificial Intelligence and Gender\***

### Unit V

(14 Hrs)

Artificial Intelligence Application Areas: AI in Various Medical Imaging Modalities - AI in Environmental Management - Disease Diagnosis via Smartphone Applications - **\*Ubiquitous Smart Learning - Educational Environments\***

**\* Highlighted Content offered in Blended Mode**

## Text Book

Sl.No.	Author Name	Title of the book	Publisher	Year and Edition
1	P,Kaliraj & Dr.T.Devi	Artificial Intelligence Theory, Model & Applications	CRC Press	2022, Current Edition

## Reference Books

Sl.No.	Author Name	Title of the book	Publisher	Year and edition
1	Mitchell	Machine Learning	McGraw Hill	2013
2	Stuart Russell, Peter Norvig	A Modern Approach	Pearson	2004

## Skill Components

- Understanding of the fundamental issues and challenges of machine learning: data, model selection, model complexity, etc.
- Explain about the concepts of computational learning theory and dimensionality reduction

- Apply basic principles of AI in solutions that require problem solving, inference, perception, knowledge representation, and learning.
- Demonstrate awareness and a fundamental understanding of various applications of AI techniques in intelligent agents, expert systems, artificial neural networks and other machine learning models.

### 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
CM21C11	MANAGEMENT ACCOUNTING	Theory	73	2	-	4

### Preamble

- To provide the fundamental knowledge and techniques in Management Accounting
- To apply the tools and techniques used to plan, control and make decisions
- To learn the Budgetary control procedures, reporting of organizational performance and calculation of variances

### Prerequisite

- Basic Knowledge in Financial Statements

### Course Outcomes

- On the successful completion of the course, students will be able to prepare and present information for management decision making and control process

CLO Number	CLO Statement	Knowledge Level
CLO1	Define the fundamental concept of management accounting and its objectives in facilitating decision making	K1
CLO2	Understand the different types of activity-based management tools through the preparation of estimates.	K2
CLO3	Analyze cost-volume-profit techniques using relevant costing and benefits to determine optimal managerial decisions.	K3
CLO4	Apply managerial accounting and its objectives in a way that demonstrates a clear understanding of ethical responsibilities.	K4

### Mapping with Programme Outcomes

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

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

S- Strong; M-Medium; L-Low

## Syllabus

### Unit I (15 Hrs)

Management Accounting- Meaning, **\*Objectives & Scope – Need\*** and Significance - **\*Relationship between Management Accounting, Cost Accounting & Financial Accounting. Financial Statement and the importance\***-Tools for Analysis and Interpretation- Common Size Statements, Comparative statement and Trend Analysis

### Unit II (15 Hrs)

**\*Ratio Analysis - Significance of Ratios - Uses and Limitations of Ratios – Classification of Ratios\*** -Analysis of Short Term Financial Position - Analysis of Long Term Financial Position -Profitability Ratios– Leverage Ratios.

### Unit III (14 Hrs)

**\*Fund Flow Analysis: Meaning and Concept of Funds and Flow of Funds- Difference between Fund Flow Statement, Income Statement and Balance Sheet- Uses, Importance and Limitations of Fund Flow Statement \*** - Statement / Schedule of Changes in Working Capital- Funds from Operation -Statement of Sources and Application of Funds. **\*Cash Flow Analysis: Meaning- Classification of Cash Flows - Comparison between Fund Flow and Cash Flow Statement – Uses, Importance and Limitations of Cash Flow Statement-** **\*Preparation of Cash Flow Statement Using Direct and Indirect methods -Accounting Standard AS 3**

### Unit IV (15 Hrs)

**\*Budgeting and Budgetary Control Definition, Importance, Essentials and Classification of Budgets\***- Preparation of Cash Budget, Sales Budget, Production Budget, Direct Labour Budget, Purchase Budget, Material Budget, Overhead Budgets–Flexible Budget -Master Budget- **\*Budgetary control – Steps in Budgetary Control–Zero Base Budgeting\***.

### Unit V (14 Hrs)

**\*Marginal Costing–Cost-Volume-Profit Analysis and Break-Even Analysis\***, Managerial Applications of Marginal Costing including transfer pricing- Significance and limitations of Marginal Costing.**\*Standard Costing-Meaning, suitability as a management tool-limitation- Variance Analysis\***-Material and Labour Variances only

**Distribution of Marks - Theory 20% and Problems 80%**

**\* Highlighted Content offered in Blended Mode**

## Text Book:

Sl.No.	Author Name	Title of the book	Publishers	Year and Edition
1	Sharma R.K Sashi K.Gupta Neeti Gupta	Management Accounting	Kalyani Publishers	Reprinted 2017, IV Edition

### Books for References:

Sl.No.	Author Name	Title of the book	Publishers	Year and Edition
1	Jain and Narang	Cost and Management Accounting	Kalyani Publishers	2013, 21 <sup>st</sup> Edition
2	Dr. Maheswari S.N & Dr.S.N.Mittal	Management Accounting	Sultan Chand and Sons	2020, Reprint
3	Reddy T.S and Reddy H.P	Management Accounting	Margham Publications	2013, VIII Edition

### Pedagogy:

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

### Skill Components

- Identify the financial tools for analyzing the financial reports
- Apply the different types of ratios to income & expenditure and balance sheet statement
- Analyse the working capital position of the company
- Prepare the different types of budgets for any of the business entity
- Calculate the breakeven point for a company

### Course Designers

- Dr. G. Kavitha – Department of Commerce
- Dr. G.Indrani - Department of Commerce

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
CM21C12	DIRECT TAXATION	Theory	88	2	-	4

### Preamble

- To gain expert Knowledge of the provisions of Income tax Act under different heads of incomes.

### Prerequisite

No prerequisite Knowledge required

### Course Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Define the basic principles of the Income Tax Act	K1
CLO2	Understand the assessment procedure of different heads of incomes	K2
CLO3	Apply the various procedures for submission of income tax return	K3
CLO4	Analyse the taxable income of an assessee	K4



## Mapping with Programme Outcomes

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

S- Strong; M-Medium; L-Low

## Syllabus

### Unit I

(DL 18 Hrs)

**\*Basic Concepts - Assessment Year, Previous Year, Person, Assessee, Types of Assessee, Income, Gross Total Income, Total Income\***, Agricultural Income, Exempted Incomes, Incomes which do not form part of Total Income, Tax Rates, Difference between exemption and deduction, **\*Capital and Revenue – Receipts, Expenditure, Losses\***, - Problems on distinguishing between agricultural and non-agricultural income, capital and revenue- Residential Status and Incidence of Tax - Relationship between residential status and incidence of tax – Simple problems.

### Unit II

(DL 18 Hrs)

Income under the head ‘Salaries’: **\*Income under the head ‘Salaries’: Meaning, Basis of charge, Forms of Salary\***, Allowances, Perquisites, Provident Fund, **\*Permissible deductions under section 16\***, Retirement benefits – **\*Death-cum-retirement Gratuity\***, Leave Salary, Pension, Commutedpension.

### Unit III

(DL 18 Hrs)

Income under the head ‘Income from House property’: **\*Definition of House Property, Basis of charge, Annual Value, Deductions out of annual value\***, Income from let-out house property, incomefrom self-occupied house property, unrealized rent, vacancy allowance, interest on loan, pre- construction interest, arrears of rent. **\*Profits and Gains of Business or Profession - Meaning of Business or Profession\*** - Computation of Profits and Gains of Business or Profession of Individual - Expenses Expressly Allowed –Expense Expressly Disallowed.

### Unit IV

(DL 17 Hrs)

Income from Capital Gains - **\* Computation of Capital Gains\*** - Income from Other Sources - Computation of Income from Other Sources.

### Unit V

(DL 17 Hrs)

Permissible deductions from gross total income : **\*Permissible deductions from gross total income 80C, 80CCG, 80D, 80DD, 80DDB, 80E, 80G, 80GG, 80GGA, 80GGB, 80GGC, 80JJA, 80QQB, 80RRB, 80U\*** – Set off and Carry Forward Set off losses - Computation of total income and taxliability- Assessment of Individuals. Introduction to e-Filing, Penalties, prosecution and appeals

**Distribution of Marks - Theory 20% and Problems 80%**

**\* Highlighted Content offered in Blended Mode**

## Text Book

Sl. No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Gaur V.P. and Narang D.B	Income Tax and Practice	Kalyani Publishers	Current Edition

## Reference Books

Sl. No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Dinkar Pagare	Income Tax and Practice	Sultan Chand & Sons	Current Edition
2	Mehrothra	Income Tax and Practice	Sultan Chand & Sons	Current Edition

## Pedagogy

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

## Skill Components

- Identify various sources of incomes that are of revenue and capital in nature.
- To apply various concepts and practical calculations with reference to provisions.
- Collect the list of scientific research institutions under Business/Professions
- Preparations of Tax statement for sample income.
- Filling of Demo Returns.

## Course Designers

1. Dr. B. Thulasipriya– Department of Commerce
2. Dr. S. Sujatha - Department of Commerce

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
CM21E01	FINANCIAL MARKET AND SERVICES	Theory	73	2	-	5

## Preamble

- To acquire knowledge on the capital market sector.
- To understand about investments funds and foreign exchange.
- To know about the equities, risk of owning shares and types of capital market.

## 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	Acquire knowledge on the capital market sector.	K1
CLO2	Understand about investments funds and foreign exchange.	K2

<b>CLO3</b>	Demonstrate the theoretical foundation of capital market	<b>K3</b>
<b>CLO4</b>	Critically analyse and apply the provisions that are prevailing in the current trends in the market.	<b>K4</b>

### Mapping with Programme Outcomes

CLOs	PLO1	PLO2	PLO3	PLO4	PLO5
<b>CLO1</b>	S	S	M	L	S
<b>CLO2</b>	S	S	M	S	M
<b>CLO3</b>	S	S	S	M	S
<b>CLO4</b>	S	S	S	M	S

S- Strong; M-Medium; L-Low

### Syllabus

#### Unit I

(15 Hrs)

**Capital Market: \*Meaning – Features – Functions - Primary Market – Secondary Market\*** - Reasons for the sale of securities by Govt and companies – Why do investors buy securities? – Return on investment – Who invest in securities – Market participants – Issuers – Investors – Regulators - Intermediaries – **\*Stock Exchange - Stock Broker – Sub-Broker - Prime Broker\*** – Investment Banking (IB) – Underwriter - Investment Management (IM) – Depository & Depository Participants – Custodian - **\*Clearing Agency – Registrar and Transfer Agents (R&TA) – Credit Rating Agency -Data Vendors – Stock Market Indices\***.

#### Unit II

(14 Hrs)

**Asset Classes:** Introduction to Financial Securities – Equity – Fixed Income – **\*Money Market –Treasury Bill – Commercial Paper – Certificate of Deposit – Derivatives – Warrants\*** – Investment Funds – Introduction to Investment Fund and Mutual Fund – Fund structure – **\*Open Ended Fund , Closed Ended Fund\***, Exchange traded fund – Pension Fund – Insurance -Funds - Hedge fund – Private equity – Foreign Exchange (FX) – Introduction – **\*Spot Vs Forward Market\*** – Reading Currency Pair – Bid, Ask, Spread, PIP and Lot Size – Buying and Selling Forex.

#### Unit III

(15 Hrs)

**\*Equities: Introduction, Features & Benefits – Types of Equity Capital\*** - Common stock & Preferred stock – Risk of Owning shares – Corporate Action – Mandatory corporate action, Voluntary corporate action and mandatory with choice – Corporate Action Dates – Declaration date, CUM Date, Ex-date, Record Date & Payment Date – Introduction to EPS & PE Ratio – Procedures to invest in stock based on Price-earnings ratio (PE) – Over valued or Undervalued – Depository Receipts – Introduction – **\*American Depository Receipt (ADR) – Global Depository Receipt (GDR)\*** – Securities identifiers – Introduction - Committee on Uniform Securities Identification Procedures(CUSIP) - **\*stock exchange daily official list (SEDOL) - International Securities Identification Numbering system (ISIN)\*** – Types of Order – Market, Limit & Stop order - Equity trade ticket.

#### Unit IV

(15 Hrs)

**Fixed Income: \*Introduction – features and benefits of bond – Why do people Invest in Bond – Who will issue Bonds? - Types of Bonds (Zero coupon, Callable, Puttable, Convertible, Floating rate, Step-up & step-down, Government, Corporate, Asset-backed securities – ABS & Mortgage- backed securities – MBS)\*** – Influence of market interest rate on the bond price– Introduction to risk –Types of risk (Interest Rate, credit, liquidity, inflation etc.) – Accrued Interest of the Bond – Day CountConvention - Present Value of a

Single payment received/paid in Future - Present Value of an Annuity- Basic Relationships for Premiums and Discounts - Selling Price of a Bond - **\*Components of Bond Trade Ticket\***.

## Unit V

(14 Hrs)

**Derivatives:** Introduction – **\*Spot Vs Derivative Market – Players in Derivative Market – Hedgers ,Speculators , Arbitrageurs – Forwards – Non-deliverable forward, Deliverable forward\***, Sample trade – Futures – Underlying instruments – Market to market margin – Sample Trade - Futures Trade Ticket – Option – Types of Option – Call & Put Option – **\*Exchange Traded Vs OTC Option\*** – Swaption – Option on futures – Interest Rate Option – Option Exercising – Option Strategies – Option Trade Ticket – Swaps – Interest rate, Currency, Credit Default Swaps

**\*Theory Only**

**\* Highlighted Content offered in Blended Mode**

### Text Book

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	E. Gordon and K. Natarajan	Financial Markets and Services	Himalaya publishing house	2016

### Reference Books

Sl.No.	Author Name	Title of the Book	Publisher	Year and Edition
1.	Gurusamy . S	Financial markets and Institutions	Vijay Nicole Imprints Pvt Ltd	4th edition 2015
2.	Bhole .N	Financial Institutions & Markets	Tata McGraw-Hill Education	2015

### Pedagogy

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

### Skill Components

- Analyse the application of IoT in Fintech.
- Prepare a list of basic usage of Fintech application in Banking services
- Analyse and Evaluate the components of Insurtech of different insurance companies
- Analyse the application of blockchain technology in Cryptocurrency exchanges
- Analyse and interpret the digital lending practices in SMEs

### Course Designers

1. Dr. D. Vijayalakshmi– Department of Commerce
2. Dr. B. Thulsipriya – Department of Commerce

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21E02	BUSINESS ORGANISATION AND MODELS	Core	73	2	-	5

## Preamble

- To enable the students to learn principles and concepts of Business.
- To provide a theoretical knowledge about the process of decision making with models of business.

## 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	Enumerate the basic ideas, Planning and models of Business Organization	K1
CLO2	Indicate the Preparation method, Financial and Marketing models of business.	K2
CLO3	Interpret procedural aspects, Sources and human resource management in the various models of business	K3
CLO4	Analyze the different business plans, competition strategies and organization procedures of business organizations.	K4

## Mapping with Programme Learning 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	M	S	S

S- Strong; M-Medium; L-Low

## Syllabus

### Unit I

(14 Hrs)

**Meaning of Business – Entrepreneur (Meaning, Characteristics of an entrepreneur)- Enterprise-** a business venture- Business idea and opportunity- **Examining some business ideas in agriculture**, agro-based enterprises, general trade (including shops), manufacturing products and services (including hotels) and their unique features by incorporating outsourcing.

### Unit II

(14 Hrs)

Preparing a Business Plan – Retail selling grocery shop; a textiles selling shop; any other consumer goods selling business; a small scale manufacturing unit –**Printing Press-Electrical and Electronic goods dealership. Contract works as business** - Estimating the returns or profits- Preparing a conceptual and graphic model.

### Unit III

(15 Hrs)

**Financing model for a business: Sources for a small business-** owned capital, friends and relatives; banks; government sources; suppliers and customers; interest and other costs and the terms and conditions attached to such sources and investing the finance in assets-The working capital cycle.

**Unit IV****(14 Hrs)**

**Marketing and Selling models-** Advertising and soliciting customers, customer relationship; Quality assurance; **Pricing Methods**; Competition and strategies in facing the competition.

**Unit V****(14 Hrs)**

**Models for Managing the human resources in the business-** recruitment, training, employee productivity and compensation; Building up organizational procedures and commitment, **loyalty**.

**\*Theory Only**

**\*Highlighted Content offered in Blended Mode**

**Text Books**

Sl.No	Author Name	Title of the Book	Publisher	Year and edition
1	Y.K.Bhushan	Business Organisation and Management	Sultanchand& sons	2012 edition
2	C.B. Gupta	Business Organisation and Management	Mayur Paperbacks	2011 edition
3	S.A. Sherlekar	Modern Business Organisation and Management- A System Approach	Himalaya	2010 edition

**Reference Books**

Sl.No	Author Name	Title of the Book	Publisher	Year and edition
1	R.K.Chopra	Office Management	Himalaya Publishing House	2014 edition
2	Peter F.Drucker	Innovative Entrepreneurship	Harper Business	Reprint Ed. 2006
3	Peter Theil	Zero to One: Note on Start- ups or How to build the future	Crown Business	2014 edition
4	SangramKeshari Mohanty	Fundamentals of Entrepreneurship	PHI	2005 edition
5	Alexander Osterwandler	Business Model Generation	Crown Business	2014 editon

**Pedagogy**

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

**Skill Components**

- To examine the recent trends in business era.
- To examine the various sources of funds available to small business units.
- To develop various strategies to face competition in the area of marketing and selling.
- To examine the recruitment process adopted by companies in India.
- To analyze various case studies related with business organisation.

**Course Designers**

1. Mrs. D. Sujini
2. Dr. MallikaHaldorai

COURSE NUMBER	COURSE NAME	Category	L	T	P	Credit
CM21E03	PERFORMANCE MANAGEMENT	Theory	73	2	-	5

### Preamble

- To provide an in depth study of the both financial and non-financial performance measures in management and the difficulties in assessing performance in divisionalized businesses

### 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	Understand the applications of modern techniques of costing in industrial settings	K1
CLO2	Illustrate how a business should be managed and controlled and how information systems can be used to facilitate this	K2
CLO3	Examine the problems surrounding scarce resource, pricing and make or buy decisions.	K3
CLO4	Apply how scarce resource and pricing relates to the assessment of performance	K4

### Mapping with Programme Outcomes

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

ABC, Calculate costs per driver and per unit using ABC, Compare ABC and traditional methods of overhead absorption based on production units, labour hours or machinehours. **\*Target costing\***-Derive a target cost in manufacturing and service industries; Explain the difficulties of using targetcosting in service industries; **\*Suggest how a target cost gap might be closed. Life cycle costing\***-**\*Identify the costs involved at different stages of the life-cycle\***; Derive a life cycle cost in manufacturing and service industries; Identify the benefits of life cycle costing.

#### Unit II

(15 Hrs)

**\*Specialist Management Accounting Techniques\*** – Throughput accounting - Discuss and apply the theory of constraints, Calculate and interpret a throughput accounting ratio (TPAR), Suggest how a TPAR could be improved, **\*Apply throughput accounting to a multi-product**

**decision-making problem\***. Environmental accounting - Discuss the issues business face in the management of environmental costs; **\*describe the different methods a business may use to account for its environmental costs\***.

**Unit III (15 Hrs)**

**\*Decision Making Techniques\*** – Relevant cost analysis - **\*Cost volume profit analysis\*** – Limiting Factors Pricing decisions - **\*Make-or- buy and other short-term decisions\*** - Dealing with risk and uncertainty in decision making.

**Unit IV (15 Hrs)**

**\*Budgeting and Control\***: Budgetary systems and types of budget - **\*Quantitative analysis in budgeting Standard costing\*** - **\*Material mix and yield variances\*** - **\*Sales mix and quantity variances\*** - Planning and operational variances

**Unit V (14 Hrs)**

**\*Performance Measurement and Control\*** Performance management information systems -**\*Sources of management Information\*** - **\*Management reports\*** - Performance analysis in private sector organizations - **\*Divisional performance and transfer pricing\*** - **\*Performance analysis in not\***- for - profit organizations and the public sector - **\*External considerations\*** and behavioral aspects

**Distribution of Marks: Theory: 20% Problems: 80%**

**\* Highlighted Content offered in Blended Mode**

**Text Book:**

S. No	Authors	Title	Publishers	Year of Publication
1	Performance Management(ACCA),- Kaplan Publishing			

**Books for References:**

S. No	Authors	Title	Publishers	Year of Publication
1	R K Sahu	Performance Management System	Excel Books	2007
2	T V Rao	Performance Management: Toward Organizational Excellence	Sage Publications Pvt Ltd	2 <sup>nd</sup> Edition 2016
3	PremChandha	Performance Management: It's About Performing - Not Just Appraising	Laxmi Publication	2003

**Pedagogy**

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

**Skill Components**

- To Examine about business and financial modelling for Cost Volume and Profit Analysis
- To Interpret about Environmental Cost issues faced by business organization
- To Apply Throughput Accounting to a multi – product decision making problem



- To identify the difficulties of using target Costing in service industries
- To analyse about material mix and yield variances through Budgetary control.

### Course Designers

1. Dr. G. Kavitha– Department of Commerce
2. Dr. B. Thulasipriya – Department of Commerce

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21CP5	COMPUTER APPLICATION PRACTICAL V - MACHINE LEARNING WITH ARTIFICIAL INTELLIGENCE	Practical	-	3	57	3

### 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

CLOs	CLO Statement	Knowledge Level
CLO1	Enumerate and demonstrate the database in Python/Java	K1
CLO2	Applying Clustering, Classification Algorithms.	K2
CLO3	Understand and apply AI algorithm	K3
CLO4	Demonstrate the process for algorithm with concepts	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	M	S	M

S- Strong; M-Medium; L-Low

## Syllabus

1. Implement and demonstrate the FIND-S algorithm for finding the most specific hypothesis based on a given set of training data samples. Read the training data from a .CSV file.
2. For a given set of training data examples stored in a .CSV file, implement and demonstrate the Candidate-Elimination algorithm to output a description of the set of all hypotheses consistent with the training examples.
3. Write a program to demonstrate the working of the decision tree based ID3 algorithm. Use an appropriate data set for building the decision tree and apply this knowledge to classify a new sample.
4. Build an Artificial Neural Network by implementing the Backpropagation algorithm and test the same using appropriate data sets.
5. Write a program to implement the naïve Bayesian classifier for a sample training data set stored as a .CSV file. Compute the accuracy of the classifier, considering few test data sets
6. Assuming a set of documents that need to be classified, use the naïve Bayesian Classifier model to perform this task. Built-in Java classes/API can be used to write the program. Calculate the accuracy, precision, and recall for your data set.
7. Write a program to construct a Bayesian network considering medical data. Use this model to demonstrate the diagnosis of heart patients using the standard Heart Disease Data Set. You can use Java/Python ML library classes/API.
8. Apply EM algorithm to cluster a set of data stored in a .CSV file. Use the same data set for clustering using the k-Means algorithm. Compare the results of these two algorithms and comment on the quality of clustering. You can add Java/Python ML library classes/API in the program.
9. Write a program to implement k-Nearest Neighbour algorithm to classify the iris data set. Print both correct and wrong predictions. Java/Python ML library classes can be used for this problem.
10. Implement the non-parametric Locally Weighted Regression algorithm in order to fit data points. Select the appropriate data set for your experiment and draw graphs.

## Pedagogy

- Demonstration through System, Demonstration through PPT

## Course Designers

- a. Dr.M.Rajeswari
- b. Dr.S,Krishnaveni

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21SBP2	SKILL BASED SUBJECT II - SAS & SCILAB PRACTICAL	PRACTICAL	-	4	41	3

## Preamble

- To explore and acquire skills in Statistical and Numerical Analysis.

## Prerequisite

- Basic knowledge of Computers

## Course Outcomes

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

CLOs	CLO Statement	Knowledge Level
CLO1	Show the Statistical Functions	K1
CLO2	Demonstrate the Dataset usage	K2
CLO3	Identify Numerical Computational Package	K3
CLO4	Analyze Logical Operations	K4

## Mapping with Programme Outcomes

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

S- Strong; M-Medium; L-Low

## Syllabus

### SAS

1. Student database: Writing a Basic SAS Program for Accessing Data in SAS Libraries
  - a. Create a SAS program by getting input from the users for name, age, phone, address.
  - b. Give datelines with required variables.
  - c. Enter the print command to display result of student
2. Car database: Reading and Generating CSV Files using Snippets & using the Import Data Utility in SAS Studio
  - a. Import a car database from permanent database from sas using snippets
  - b. Rename the file name and generate the same csv file.
  - c. By using the import utility option, import an excel file into sas and display the result.
3. Car Database: Creating a New Column in SAS and Performing Conditional Logic in SAS
  - a. From permanent database take car dataset
  - b. Add new column called Markup by subtracting MDRP with Invoice
4. Iris Database: Create Histogram, Bar Chart and Bar-Line Chart
  - a. Transform the dataset and set analysis variable, categorical variable.
  - b. Apply necessary arguments for the selected graph and display the result
5. Class Database: Perform One Way Frequency and Table Analysis
  - a. Assign a single variable to analyse.
  - b. Apply necessary arguments for the selected graph and display the result.

6. Cars Database: Perform Correlation Analysis, One-Way ANOVA
  - Set required variable and give statistic measure to plot the graph
7. Fish Database: Analysis of Covariance & Forecasting Using SAS Studio
  - a. Assign a single variable to analyse.
  - b. Apply necessary arguments for the selected graph and display the result.

### SciLab

8. Matrix manipulation using Scilab
9. Least Square Curve Fitting and plotting in scilab
10. Solve an ODE using Scilab

### Pedagogy

- Demonstration through System, Demonstration through PPT

### Course Designers

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

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21C13	BIG DATA FRAMEWORK	CORE	88	2	-	5

### Preamble

- To explore and acquire skills in Hadoop, Pig and Hive.

### 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	Relate Hadoop concepts with Datasets	K1
CLO2	Recognize tools and techniques	K2
CLO3	Identify various data frames and models	K3
CLO4	Apply Map Reducing Techniques	K4

### Mapping with Programme Learning 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	S	M	S	S	M

S- Strong; M-Medium; L-Low

## Syllabus

### Unit I

(17 Hrs)

**Meet Hadoop:** Data – Data Storage and Analysis – Comparison with other systems – A brief history of Hadoop – The Apache Hadoop Project – **Map Reduce:** A weather dataset – Scaling out - Hadoop streaming - Hadoop pipes.

### Unit II

(18 Hrs)

**The Hadoop Distributed File System:** The design of HDFS – HDFS concepts – The Command Line interface – Hadoop File Systems – The Java Interface – Data Flow – Parallel copying with distcp – Hadoop archives. **Hadoop i/o:** Data Integrity – Compression – Serialization – File based data structure.

### Unit III

(18 Hrs)

**Developing a MapReduce Application:** The Configuration API – Configuring the development environment – Writing a Unit Test – Running locally on test data – Running on a cluster – Tuning a job – Map Reduce workflows. **Map Reduce Types and Formats:** MapReduce Types – Input Formats – Output Formats.

### Unit IV

(18 Hrs)

**MapReduce Features:** Counters – Sorting – Joins – Side Data Distribution – MapReduce library classes. **Setting up a Hadoop Cluster:** Hadoop Specification – Cluster setup and installation – SSH Configuration – Hadoop Configuration – Post Installation – Benchmarking a Hadoop Cluster – Hadoop in the cloud.

### Unit V

(17 Hrs)

**PIG:** Features – modes – modes – PIG Latin – Dataset – Commands and Functions – Operators – Evaluation Functions – Batch Mode – Embedded Mode – PIG vs. SQL. **HIVE:** Features – Architecture – Data Units – HIVE Query Languages – Database Operations – Tables – Joins – HIVE vs. PIG

\* **Highlighted Content offered in Blended Mode**

## Text Book

S No.	Author Name	Title of the book	Publisher	Year and Edition
1	Tom White	Hadoop: The Definitive Guide	O'Reilley	4 <sup>th</sup> Edition, 2015

## Reference Book

S No.	Author Name	Title of the book	Publisher	Year and edition
1	Mark Kerzner, Sujee Maniyam	Hadoop Illuminated	Git-HUB	2016 Edition

## Pedagogy

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

### Skill Components

- Understand and critically apply the concepts and methods of business analytics
- Demonstration the various methodologies of map reduce
- Analyze the modeling uncertainty and data inference
- Evaluate the analytical functions using PIG & HIVE

### Course Designers

1. Dr. S. Krishnaveni, Department of B Com (A&F) and (BA)
2. Mrs. N. Sathya, Department of B Com (A&F) and (BA)

CM21C14	COST ACCOUNTING	Category	L	T	P	Credit
		Theory	88	2	-	4

### Preamble

- To provide an in-depth study of the Cost Accounting Principles and Techniques for Identification, Analysis and Classification of Cost Components
- To Explain the Basic Concepts and Processes in Determination of Cost of Products and Services
- To Facilitate Managerial Decision-Making Process

### Prerequisite

- Knowledge on Classification of Material, Labor and Overheads

### Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Know the areas of Application of Costing Techniques.	K1
CLO2	Understand and Explain the Conceptual Framework of Cost Accounting	K2
CLO3	Apply the Concept and Role of Cost Accounting in the Business Management of Manufacturing and Non-Manufacturing Companies	K3
CLO4	Analyze in detail on Cost Ascertainment	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	M	S	S	S

S- Strong; M-Medium; L-Low

## Syllabus

### Unit I (17 Hrs)

Cost Accounting – Definition, Meaning & Scope – **\*Relationship of Cost Accounting with Financial Accounting and Management Accounting – Methods of Costing\*** – Cost Analysis, Concepts and Classifications – Elements of Cost, Preparation of Cost Sheet and Tender – Costing as an Aid to Management – Limitations and Objections Against Cost Accounting - Reconciliation of Costs and Financial Accounts.

### Unit II (18 Hrs)

Materials – Purchasing of Materials, **\*Procedure and Documentation Involved in Purchasing\***- Requisitioning for Stores – **\*Techniques of Materials Control\*** - Maximum, Minimum & Re-ordering Levels – Economic Order Quantity – Perpetual Inventory. Methods of Valuing Material Issues - FIFO, LIFO, Simple and Weighted Average methods.

### Unit III (18 Hrs)

Labour – **\*concept and treatment of Idle Time - Control Over Idle Time\*** – Labour Turnover- Methods of wage payment - Time Rate, Piece Rate, Taylor’s Differential piece rate, Merrick’s Multiple piece rate – Incentive Methods - Halsey & Rowan Plan – Group Incentive Scheme

### Unit IV (18 Hrs)

**\*Classification of Overheads\*** - Allocation & Apportionment – Primary Distribution - Secondary Distribution - Reapportionment of Service Department Costs to Production Departments - Direct Method - Reciprocal Methods - Repeated Distribution Method and Simultaneous Equation Method - Absorption of Overheads and Computation of Machine Hour Rate. **\*Activity Based Costing\***

### Unit V (17 Hrs)

**\*Process Costing – Features\*** – Process Losses, Waste, Scrap, Normal Process Loss, Abnormal Process Loss, Abnormal Gain and Inter-process Profit (Excluding Equivalent Production) – **\*Accounting for Joint and By-products\***.

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

**\* Highlighted Content offered in Blended Mode**

## Text Book

S. No	Authors	Title	Publishers	Year of Publication
1.	Jain and Narang	Cost Accounting	Kalyani Publishers	Reprint 2018

## Books for Reference

S. No	Authors	Title	Publishers	Year of Publication
1.	Pillai R.S. N and Bagawathi	Cost Accounting	S Chand & co	2015 Edition
2	Maheswari. S N	Principles of Cost Accounting	Sultan Chand & sons	Reprint 2016

## Pedagogy

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

## Skill Components

- Preparation of real time cost sheet and reconciliation of cost and financial statements
- Applications of material and wage system in real time business environment
- Analyze the classification of overheads for products and services
- To ascertain the cost of production for every process, department or service of a business

## Course Designers

1. Dr. G. Kavitha - Department of Commerce
2. Dr. C. Gomathy - Department of Commerce

BP21E03	BUSINESS TAXATON	Category	L	T	P	Credit
		ELECTIVE	73	2	-	5

## Preamble

- To understand the basic concepts, definitions and terms related to taxation
- To understand the concepts and development of different sub structures related to taxation.
- To provide an in-depth study of the various provisions of indirect taxation laws and their impacton business decision-making

## 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	Remember and relate the basic principles underlying the Indirect Taxation	K1
CLO2	Interpret the provisions under taxation applicable to different statutes related to business	K2
CLO3	Apply the concepts and procedures for registration, assessment, powers, duties, offences, penalties etc.	K3
CLO4	Analyze the changes in the taxation for practical exposure in business.	K4

## Mapping with Programme Outcomes

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

S- Strong; M-Medium; L-Low



## Syllabus

### Unit I

(14Hrs)

**Assessment of Firms (Including LLP) – \*Meaning of Partnership, Firm and Partners – New Scheme of Taxation of Firms\*** – Assessment of Firms (Section 184) – Computation of Firm's Business Income – Treatment of Interest, Commission, Remuneration received by partners. Problems on Computation of tax liability. (Theory only)

### Unit II

(14Hrs)

**Assessment of Companies** – Introduction – **\*Meaning of Company – Types of Companies\*** – Computation of Depreciation u/s 32 – Computation of Taxable Income of Companies – **\* Minimum Alternative Tax (MAT)\*** – Deductions u/s 80G, 80GGB, 80IA, 80 IB and Problems on Computation of Tax Liability. (Theory only)

### Unit III

(15 Hrs)

**Introduction to Goods and Services Tax (GST)** – Objectives and basic scheme of GST, meaning – Salient features of GST – Subsuming of taxes – Benefits of implementing GST – Constitutional amendments – **\*Structure of GST (Dual Model) – Central GST – State / Union Territory GST – Integrated GST\*** - GST Council: Structure, Powers and Functions. Provisions for amendments (Theory only). **Procedure and Levy under GST**: Definition- Goods and Services, Aggregate turnover, Business, Place of business, Person, Casual taxable person, Non-resident person, Supply, **\*Composite supply, Mixed supply, Exempt supply, Outward supply, Principal supply\***.

### Unit IV

(15 Hrs)

Place of supply, Supplier, Manufacture, Input tax credit, Input service distributor, **\*Forward Charges, Reverse charge\***, Works contract, Adjudicating authority. Scope of supply, Tax liability on Mixed and Composite supply, Time of supply of goods and services, **\*Value of taxable supply, Inter-state supply, intra-state supply, Zero rates supply\***, – Computation of taxable value and tax liability. Input tax Credit: eligibility, apportionment, Inputs on capital goods, **\*Distribution of credit by Input Service Distributor (ISD)\*** - Simple Problems on valuation, payment of tax, Input tax credit adjustment. (Simple problems) .GST Registration – Procedure – Returns - E- Way Bills .

### Unit V

(15 Hrs)

**Customs Act**: Meaning – Features – objective – **\*Types of Custom Duties\*** – Valuation for Customs Duty – Tariff Value – Customs Value – **\*Methods of Valuation for Customs\*** – Problems on valuation and payment of Custom Duty. (Theory only)

**Distribution of Marks: Theory 80% Problems 20%**

**\* Highlighted Content offered in Blended Mode**

## Text Books

Sl.No.	Author Name	Title of the book	Publisher	Year and edition
1	Gaur V.P and Narang D.B – UNIT I&II	Income Tax and Practice	Kalyani Publishers	Current Edition
2	Dr.R.Parameshwaran CA. P. Viswanathan – UNIT III,IV,V	Indirect Taxes GST and Custom Laws	Kavin Publications	Current Edition

**Reference Books**

<b>Sl.No</b>	<b>Author Name</b>	<b>Title of the book</b>	<b>Publisher</b>	<b>Year and edition</b>
1	Dr. Vinod K. Singhania and KapilSinghania	Direct Tax Law and Practice	Taxmann Publication	2018 Edition
2	Dr. Mehrotra and Dr. Goyal	Direct Taxes Law and Practice	Sahitya Bhavan Publication.	2018
3	Dr. Vandana Bangar, Yogendra Bangar	Indirect Tax Laws	Aadhya Prakashan Allalabad	2018
4	V.S. Datey	All About GST	Taxmann Publication	2018
5	V.S. Datey	Indirect Taxes Law and Practice	Taxmann Publication	2018
6	V.S. Datey	GST Law and Practice with Customs and FTP	Taxmann Publication	2018
7	K.M Bansal	GST and Customs Law	Taxmann Publication	2018
8	Dr. Vinod K. Singhania and Monica Singhania	Student's guide to Income Tax including Service Tax/ VAT/ Excise Duty/ Custom Duty/ CST	Taxmann publication	2018
9	Dr. Vinod K. Singhania and Monica Singhania	Student's guide to Income Tax with Problems and Solution,	Taxmann publication	2018
10	Dr. Mehrotra and Dr. Goyal	Income Tax Law and Practice	SahityaBhavan Publication	2018
11	DinakarPagare	Law and Practice of Income Tax	Sultan Chand and sons	2018
12	B.B. Lal and N. Vashisht	Income Tax Law and Practice	I.K. International Publishing House Pvt. Ltd	2018
13	Mahesh Chandra	Income Tax Law and Practice	Pragati Publication	2018
14	V.P. Gaur, D.B. Narang, Puja Gaur, Rajeev Puri	Income Tax Law and Practice	Kalyani Publications	2018

## Pedagogy

- Power point presentations, Group Discussion, Interactive Presentation, Scenario Analysis, Seminar, Quiz, Assignment

## Skill Components

- Gather the yearly tax tables, instructions, and forms to compute taxes for clients.
- To prepare a sample invoice for different types of Goods and services.
- Preparation of sample tax returns and reports as needed.
- Analyse the procedure for registration and to fill the registration form.
- To calculate input tax credit for a given sample.

## Course Designers

1. Dr. B. Thulasi Priya, Department of Commerce
2. Dr. M. Rajarajeswari, Department of Commerce

CM21E04	INVESTMENT BANKING OPERATIONS	Category	L	T	P	Credit
		Theory	73	2	-	5

## Preamble

- To understand the basic concepts of investment Banking Operations
- To know the different types of risk involved in investment banking operations
- To provide in-depth knowledge on trade life cycle and fund administration

## Prerequisite

- Basic Knowledge on Investment Avenues

## Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Acquire knowledge on the Investment Banking Operations	K1
CLO2	Gain knowledge on services offered by Investment Bank	K2
CLO3	Examine the Risks & Market Data Providers	K3
CLO4	Analyze about the Trade Life Cycle and Fund Administration	K4

## Mapping with Programme Outcomes

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

S- Strong; M-Medium; L-Low

## Syllabus

### Unit I

(14 Hrs)

Investment Banking – Introduction - Investment Banking Services – **\*Underwriting and types - Investment bank structure - Types of Investment Banks\*** – Commercial Bank vs Investment Bank - Role of Investment Banking in Financial Market – **\*Global Corporate and Investment Banking\*** - Role of investment banks during the last financial crisis 2008.

### Unit II

(15 Hrs)

**Introduction - Custody Services - Transfer Agency – \*Safekeeping & Settlements, Reporting & Record keeping\* – Investible Cash - Income Process - Corporate Actions – Collateral Services - Reconciliation - Securities Valuation – Pricing - \*Fund Accounting– Financial Reporting\***

### Unit III

(15 Hrs)

Risk: What is Risk – Risk Management – Types of Risk – **\*Market Risk - Credit Risk – Liquidity Risk – Regulatory Risk – Operational Risk\***. Market Data Providers: – Meaning – Players – Reference Data – Market Data

### Unit IV

(14 Hrs)

Trade Life Cycle – Introduction – Transaction Types - **\*Stages of trade life cycle - Pre- Trade – Trade - Post Trade – Equity Trade Life Cycle - Front office - Middle office - Back office\*** – Parties in Trade Life Cycle.

### Unit V

(15 Hrs)

**\*Fund Administration – Role of Fund Administrator – Support Functions of Fund Administration\*** - Responsibilities of Fund Administrator – Technology – Fees – Accounting and other reporting services – Compliance Services – Portfolio Administration – \*NAV, pricing and valuations – NAV – Pricing of funds – Pricing Assets – Pricing controls & failure impact\*

**\* Highlighted Content offered in Blended Mode**

## Textbook

Sl.No.	Author Name	Title of the book	Publishers	Year and Edition
1	Pratap Giri S	Investment Banking – Concept Analyses and Cases	MC Graw Hill	2021 – 4 <sup>th</sup> Edition

## Books for Reference

Sl.No.	Author Name	Title of the book	Publishers	Year and Edition
1	Gratz Exafin	Investment Banking – Complete Overview	Kindle	2023 Edition
2	Joshua Rosenbaum and Joshua Pearl	Investment Banking – Valuation, Leveraged Buyouts and Merger and Acquisitons	Wiley	2015 Edition

## Pegagogy

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

### Skill Components

- Identify the types of underwriting
- Prepare the Financial Report
- Analyse the different types of risk involved in investment banking operations
- Investigate the stages of trade life cycle and take investment decision
- Calculation of pricing of funds and assets

### Course Designers

1. Dr. D. Vijayalakshmi – Department of Commerce
2. Dr. M. RajaRajeswari – Department of Commerce

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21E05	BANKING THEORY, LAW AND PRACTICE	ELECTIVE	73	2	-	5

### Preamble

- To instill understanding of the legal procedures formulated under Banking Regulation Act, Negotiable Instruments Act and other legal issues.

### 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	To show specialized knowledge of law and practice relating to Banking	K1
CLO2	Explain about the banking instruments and the new advancements in the banking sector	K2
CLO3	Identify the banking forms of securities that will be useful for the business	K3
CLO4	Inspect the legal procedures formulated under Banking Regulation Act, and other recent services of banking	K4

### Mapping with Programme Learning 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	M	S	S

S- Strong; M-Medium; L-Low

## Syllabus

### UNIT I

(14 Hrs)

**\*Banking Regulation Act 1949 – Definition of Banker and Customer\*** – Relationships between Banker and Customer – Obligations of a Banker – **\*Banker’s Right.** \*

### UNIT II

(14 Hrs)

**\*Central Bank – Functions – Opening of Account\* – Types of Deposit – FDR - Bank Pass Book – Special Types of Customers - KYC norms - \*Recent developments in banking sector\*.**

### UNIT III

(15 Hrs)

**\*Negotiable Instruments – Cheques\*** – Material Alteration - Crossing of Cheques – Types of Crossing - **\*Collection of Cheques\*** – Statutory Protection - Payment of Cheques- Statutory Protections to Paying Banker - Refusal of Payment Cheques - Holder & Holder in Due Course–Duties –RTG’s.

### UNIT IV

(14 Hrs)

**\*Loan and Advances\*** – Classification – Factors Limiting the Level of Bank’s Advances –Secured Advances- Non-Fund Based Advances – Unsecured Loan- **\*Modes of Creating Charge\*** - Lien - Pledge - Hypothecation – Mortgage – Guarantees – Indemnity – Letter of Credit.

### UNIT V

(14 Hrs)

**\*E-Banking\*** – Meaning- E-Banking services - Internet banking - Meaning – Internet banking Vs Traditional Banking – **\*Frauds in Internet banking. Mobile banking\*** - Electronic Mobile Wallets. ATM Evolution –Concept - Features – Types. Electronic money - Categories – Electronic Funds Transfer (EFT) system.

**\* Highlighted Content offered in Blended Mode**

## Text Book

Sl.No.	Author Name	Title of the book	Publisher	Year and edition
1	Sundaram Varshney	Banking Theory, Law and Practice	Sultan chand & sons	20 <sup>th</sup> Revised edition 2014

## Books for Reference

Sl.No.	Author Name	Title of the book	Publisher	Year and edition
1	Gordon Natarajan	Banking Theory, Law and Practice	Himalaya Publishing House	29 <sup>th</sup> edition 2012
2	Kandasami K.P Natarajan S Parameswaran R	Banking Law and Practice	S. Chand & Co. Ltd.	Fourth Revised Edition

3	Tannanm. Lrt. Honorable Tayakar M R	Banking Law and Practice in India	Thacker And Co Ltd -Bombay	27 <sup>th</sup> Edition2017
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### Pedagogy

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

### Skill Components

- To identify the recent amendments made in Banking Regulation Act 1949.
- To examine the special services provided by banks to the customers.
- To identify the different types of negotiable Instruments dealt in banking.
- To examine and compare the different types of loans provided by the commercial banks
- To analyze their recent amendments relating to Banking Fraud.

### Course Designers

1. Dr. S. Manasha, Department of B Com (A&F) and (BA)
2. Mrs. D. Sujaritha, Department of B Com (A&F) and (BA)

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21CP6	COMPUTER APPLICATION PRACTICAL VI – BIG DATA FRAMEWORK	PRACTICAL	3	-	57	3

### Preamble

- To explore and acquire skills in Hadoop Programming

### Prerequisite

- Basic 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	Show Big Data Framework Installation process	K1
CLO2	Demonstrate Hadoop features with various dataset	K2
CLO3	Identify Map Reduce Operations	K3
CLO4	Analyze Real Time Datasets	K4

### Mapping with Programme Learning Outcomes

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

S- Strong; M-Medium; L-Low

## Syllabus

1. Perform File Management in Hadoop.
2. Perform Health Care Analysis using Map Reduce.
3. Perform Word Count in Map Reduce using Politics dataset.
4. Find Maximum temperature using Map Reduce.
5. Perform Inner joins in PIG using Human Resource dataset.
6. Program to perform job tracker, word count using Travel dataset.
7. Perform PIG operations using Telecom dataset.
8. Perform HIVE operations using Politics dataset.
9. Cross Operation in PIG using Logistics dataset.
10. Order the data by Ascending and Descending operations Retail Dataset.

## Pedagogy

- Demonstration through System, Demonstration through PPT

## Course Designers

1. Dr. S. Krishnaveni, Department of B Com (A&F) and (BA)
2. Mrs. N. Sathya, Department of B Com (A&F) and (BA)

COURSE NUMBER	COURSE NAME	CATEGORY	L	T	P	CREDIT
DA21SBT2	SKILL BASED SUBJECT – II RESEARCH METHODOLOGY	SKILL BASED SUBJECT	41	-	-	3

## Preamble

- To explore and acquire skills in Research methodology

## Prerequisite

- No prerequisite needed

## Course Learning Outcomes

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

CLO Number	CLO Statement	Knowledge Level
CLO1	Introduction of research in social science	K1
CLO2	Demonstrate the various research techniques	K2
CLO3	Identify the usage of data collection and scaling models	K3
CLO4	Analyze Real Time Datasets and writing research reports	K4

## Mapping with Programme Learning 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	M	S	M

S- Strong; M-Medium; L-Low



## Syllabus

### UNIT I

(9 Hrs)

**Introduction to Social Science Research** - Definition, concepts (Theory -Inductive and Deductive, Data, variables), objectives, Types of research, Scope of social work Research, Social science research process, Research Design. Research-Based Practice: Research-informed practice and practice-informed research

### UNIT II

(9 Hrs)

**Sampling**- Population and Sampling: Concepts- Types of Sampling, Sampling Size, Errors in sampling.

### UNIT III

(9 Hrs)

**Data Collection** - Primary and Secondary data collection methods. Questionnaire design: process of designing the questionnaire. Secondary data collection: Scoping review and Review of Literature. Measurement and Scaling Techniques: Basic measurement scales. Attitude measurement scale. Problem Formulation in research. Hypothesis: Introduction, Type I Error, Type II Error, Basics of Analysis.

### UNIT IV

(9 Hrs)

**Plan of Analysis** - Construction of tools: pre-test and pilot study; Scales: need for Scales. Some prominent scaling procedures; Secondary data: types, uses of secondary data and disadvantages.

### UNIT V

(9 Hrs)

**Report writing and Presentation** - Report writing: Importance of report writing, types of the research report, report structure, guidelines for effective documentation. Referencing styles, Plagiarism, Citation and paraphrasing. Writing Social science Research Article, Social Work Research Proposals and Reports

## Text Book

Sl.No.	Author Name	Title of the book	Publisher	Year and edition
1	Alston, M., & Bowles, W.	Research for social workers: An introduction to methods.	Rawat Publications	2004

## Books for Reference

Sl.No	Author Name	Title of the book	Publisher	Year and edition
1	D'Cruz, H., & Jones, M.	Social Work Research: Ethical and Political Contexts	Sage Publications	2006
2	Lal Das, D. K.	Practice of social research: Social work perspective. Rawat Publications Roger, G.	Social research methodology; A critical introduction	2008

## Course Designers

1. Dr. S. Krishnaveni, Department of B Com (A&F) and (BA)
2. Mrs. R. Hemapriya, Department of B Com (A&F) and (BA)

**ADVANCED LEARNERS COURSE – SELF STUDY PAPER**  
**INFORMATION SYSTEMS FOR BUSINESS**  
**SUBJECT CODE: AF16AC3**

**Objectives**

- To gain knowledge of ERP, MIS, SAD, Database and Knowledge management.
- To develop understanding of Information Technology and its use in Decision Making areas of business environment
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**Syllabus**

**UNIT I**

**Management Information systems in a Digital Firm:** Concept - Definition – Role of MIS – Impact – MIS and User – Management as a Control System – MIS: support to Management – Management effectiveness and MIS-Organization as a System – Organization effectiveness – MIS for a Digital Firm. Decision Making: Concepts – Process – Decision analysis by Analytical Modelling – Behavioral Concepts in Decision Making – Organizational Decision-Making – MIS and Decision Making.

**UNIT II**

**Systems Engineering Analysis and Design:** System Concepts – System Control – System Types – Handling System Complexity – Classes of Systems – General Model of MIS – Need for System Analysis – System Analysis of Existing system- New Requirement – System development Model – SSAD-OOA-OOT-OOSAD. Development Process of MIS: Long Range plans – Ascertaining class of Information – Determining – Development and Implementation of MIS – Management of Information Quality in MIS – Organization for Development of MIS- Development Process Model.

**UNIT III**

**Decision support system and Knowledge Management:** Concept - GDSS – DSS application in- Enterprise - Knowledge Management - Knowledge Management Systems – KBES - MIS and the benefits of DSS. Enterprise Management Systems: EMS-ERP System – ERP Models and Modules – Benefits - ERP Product Evaluation-ERP Implementation – SCM - Information Management in SCM – CRM - EMS and MIS. **Applications in Manufacturing and Service Sector:** Personnel management – Financial management – Production management – Material management – Marketing management – Introduction to service sector – Applications in service industry.

**UNIT IV**

**Information, Knowledge, Business Intelligence:** Concepts – Classification – Methods - Value of Information - Business Intelligence - MIS and Information and knowledge. Database and Client Server Architecture: Concepts-Models-Data Models-Database Design- Conceptual Model and Physical Model – RDBMS-Client - Server Architecture – Client - Server Implementation Strategies - MIS and RDBMS.

**UNIT V**

**Information Security Challenges in e-Enterprises:** Introduction-Security Threats and Vulnerability-Controlling Security Threat and Vulnerability-Managing Security Threat in e-

Business-Disaster Management-Information Security. Information Technology Impact on Society: Introduction – Impact of IT on Privacy — virtual currency – Models of E-banking – Advantages – Constraints –Security measures– Electronic payment system– NEFT, RTGS, SWIFT, WIRE.

**Text Book**

Sl.No.	Author Name	Title of the book	Publisher	Year and edition
1	Jawadekar W.S	Management Information Systems	TMGH, New Delhi	Reprint 2009

**Books for reference**

Sl.No.	Author Name	Title of the book	Publisher	Year and edition
1	Gordon B Davis and Margethe H Olson	Management Information Systems	TMGH, New Delhi	2010, 2 <sup>nd</sup> Edition
2	Sadagopan	Management Information Systems	Prentice hall of India	2012, 1 <sup>st</sup> Edition

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**ADVANCED LEARNERS COURSE – SELF STUDY PAPER  
KNOWLEDGE MANAGEMENT SYSTEM  
SUBJECT CODE: DA15AC4**

**Syllabus**

**UNIT I**

**Knowledge Management:** KM Myths – KM Life Cycle – Understanding Knowledge Knowledge, intelligence – Experience – Common Sense – Cognition and KM – Types of Knowledge – Expert Knowledge – Human Thinking and Learning.

**UNIT II**

**Knowledge Management System Life Cycle: Challenges** in Building KM Systems – Conventional Vrs KM System Life Cycle (KMSLS) – Knowledge Creation and Knowledge Architecture – Nonaka’s Model of Knowledge Creation and Transformation. Knowledge Architecture.

**UNIT III**

**Capturing Knowledge: Evaluating** the Expert – Developing a Relationship with Experts – Fuzzy Reasoning and the Quality of Knowledge – Knowledge Capturing Techniques, Brain Storming – Protocol Analysis – Consensus Decision Making – Repertory Grid- Concept Mapping – Black boarding.

#### UNIT IV

**Information System Success:** Expenses and funding - Expenses of knowledge management staff, Benefits of knowledge management initiative, Success of knowledge management systems, User satisfaction, impact on collectives of people, Impact on the Organisation.

#### UNIT V

**Knowledge Transfer and Sharing: Transfer Methods – Role of the Internet – Knowledge Transfer in e-world – KM System Tools – Neural Network – Association Rules – Classification Trees – Data Mining and Business Intelligence – Decision Making Architecture – Data Management – Knowledge Management Protocols – Managing Knowledge Workers.**

#### Text Books

S. No	Author	Title of Book	Publisher	Year of Publication
1	Elias.M. Award & Hassan M. Ghaziri	Knowledge Management	Pearson Education	2003 Edition
2.	Ronald Maier	Knowledge Management System	Springer Publications	2007

#### Books for Reference

S. No	Author	Title of Book	Publisher	Year of Publication
1	Guus Schreiber, Hans Akkermans, Anjo Anjewierden, Robert de Hoog, Nigel Shadbolt, Walter Van de Velde and Bob Wielinga	Knowledge Engineering and Management	Universities Press	2001 Edition
2	C.W. Holsapple	Handbooks on Knowledge Management	International Handbook On Information Systems	Vol 1&2 2003 edition

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