GSFC UNIVERSITY
EDUCATION RE-ENVISIONED

COURSE CURRICULUM

BBA Business Analytics

Batch:2022-2023
Academic Year: 2023-24
Updated on: July, 2023

GSFC University
School of Science, Vigyan Bhavan, P. O. Fertilizernagar, Vadodara - 391750, Gujarat, India

Bachelor of Business Administration

in

Business Analytics

Course Curriculum

Batch: 2021-2024

Academic Year: 2022-23

W.E.F. July 2021

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GSFC University, Vigyan Bhavan, P. O. Fertilizernagar, Vadodara - 391750, Gujarat, India

VISION

- GSFCU strives to be the best compact boutique institution with a futuristic approach, encouraging student centric culture and sharpened focus on developing industry ready & employable students with all-round development.

MISSION

- Establish an institution, which promotes creativity and innovation.
- Develop unique quality standards for academic excellence and pedagogical innovations.
- Remain agile through learning ecosystem with flexible processes & systems.
- Holistic growth for industry readiness.

No.	Programme Outcomes (POs)	Blooms' Taxonomy Domain	Blooms' Taxonomy Sub Domain
PO1	Understanding of business concepts and principles relevant to analytics	Cognitive Domain	Understanding
PO2	Ability to apply data analytics techniques and tools to real-world business situations	Cognitive Domain	Applying
PO3	Proficiency in statistical analysis and data visualization	Cognitive Domain	Analysing
PO4	Ability to develop predictive models using machine learning algorithms	Cognitive Domain	Creating
PO5	Critical thinking and problem-solving abilities with a focus on data-driven decision makin5	Cognitive Domain	Analysing and Evaluating
PO6	Ethical decision-making skills with respect to the use of data and analytics	Affective Domain	Valuing
PO7	Entrepreneurial mind-set and innovation skills with respect to the development and implementation of data-driven business strategies	Cognitive Domain	Creating
PO8	Leadership and teamwork skills to effectively collaborate with diverse teams in a data-driven environment	Affective Domain	Organizing

No.	Programme Specific Outcomes (PSOs)	Blooms' Taxonomy Domain	Blooms' Taxonomy Sub Domain
PSO1	Demonstrate a futuristic approach and adapt to changing business trends, thereby becoming industry-ready professionals	Cognitive Domain	Creating
PSO2	Communicate effectively with stakeholders using various contemporary technologies and develop proficiency in business communication	Cognitive Domain	Evaluating
PSO3	Value and demonstrate managerial competencies, such as leadership, teamwork, and decision-making, to achieve professional and personal development	Affective Domain	Valuing
PSO4	Understand ethical and professional behavior in all aspects of business operations	Affective Domain	Valuing
PSO5	Apply critical thinking and problem-solving skills to identify, analyze, and solve complex business problems, and evaluate the effectiveness of solutions	Cognitive Domain	Analyzing and Evaluating

Mapping of POs & PSOs:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	P8O	PO9	PO10
PSO1	2	0	0	0	0	1	0	0	2	3
PSO2	0	0	0	0	3	0	0	0	0	3
PSO3	1	0	3	3	0	3	0	0	0	3
PSO4	0	0	0	0	0	0	0	0	0	3
PSO5	0	0	0	0	0	0	3	2	0	2

1: Slight (Low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Definition of Credit:

1 Hr. Lecture (L) per week	1 credit
1 Hr. Tutorial (T) per week	1 credit
2 Hours Practical (P) per week	1 credit

1 Hours Practical (P) per week	0.5 credit

Course code Definitions:

Lecture	L
Tutorial	T
Practical	P
Basic Science Courses	BSC
Engineering Science Courses	ESC
Humanities and Social Sciences including Management courses	HSMC
Professional core courses	PCC
Professional Elective courses	PEC
Open Elective courses	OEC
Laboratory course	LC
Mandatory courses	MC
Non-credit courses	NC
Project	PROJ

B. Range of Credits:. Three-year Under Graduate BBA business analytics degree program has about 127 credits.

Table Structure of Undergraduate Engineering program:

Sr. No.	**Category**	**Credit Breakup for BBA BA students**
1	Humanities and Social Sciences including Management Courses	
2	Basic Science courses	
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	
4	Professional core courses	
5	Professional Elective courses relevant to chosen specialization/branch (from other Programmes)	
6	Open subjects – Electives from other technical and /or emerging subjects	

7	Project work, seminar and internship in industry or Elsewhere	
8	Mandatory Courses [Environmental Sciences, InductionProgram, Indian Constitution, Essence of Indian Knowledge Tradition]	(non-credit)
	Total	163

*Minor variation is allowed as per need of the respective disciplines.

About the Programme (Max 1000 words):

Business analytics is a process of making sense of data that can help companies make informed decisions on the future of business. Business analytics deals with the study, analysis and interpretation of big data of organisations whether, profit making or non-profit making. Business Analytics as a discipline is emerging as an important part of management science. In the Organisation, decision making process is buy and large data-driven. In view of, huge data across functional areas like marketing, finance, Production, Purchase, HR, Logistics. The complexity of data is increasing with the growth of the business and competition in the concerned sector. Therefore, Business analytics is becoming an effective tool in dealing with decision making which is complex in terms of magnitude of data.

Teaching Scheme

Semester – I

Sr. No.	Course Code	Course Name	Teaching Scheme (Hours/week)				Teaching Credit				Evaluation Scheme					
			L	P	T	Total	L	P	T	Total	Theory : MS Marks	Theory : CEC Marks	Theory : ES Marks	Theory Marks	Practical Marks	Total Marks
1	AECC101	Fundamentals of English	**L**	**0**	**0**	**3**	3	0	0	3	**20**	**40**	**40**	**0**	**0**	**100**
2	BA101	Principles of Management	**L**	**0**	**0**	**3**	3	0	0	3	**20**	**40**	**40**	**0**	**0**	**100**
3	BA102	Marketing Management	**L**	**0**	**0**	**3**	3	0	0	3	**20**	**40**	**40**	**0**	**0**	**100**
4	BA103	Human Resources Management	**L**	**0**	**0**	**3**	3	0	0	3	**20**	**40**	**40**	**0**	**0**	**100**
5	BA104	Financial Accounting	**L**	**0**	**0**	**3**	3	0	0	3	**20**	**40**	**40**	**0**	**0**	**100**
6	BA105	Introduction of MIS	**L**	**0**	**0**	**3**	3	0	0	3	**20**	**40**	**40**	**0**	**0**	**100**
7	BA106	Introduction to Data Science	**L**	**0**	**0**	**3**	3	0	0	3	**20**	**40**	**40**	**0**	**0**	**100**
	BAI1	Internship	**L**	**0**	**0**	**2**					**20**	**40**	**40**	**0**	**0**	**100**
	SECC101	Foundation Course				**2**										**100**

Note: L = Lecture, P = Practice, T= Tutorial, MS - Mid Semester, CEC - Continuous Evaluation Component, ES - End Semester

Teaching Scheme

Semester – 2

S.N.	Course Code	Course Name	Course Type	Teaching Scheme (Hours/Week)			Total Credit	Examination Scheme					
				L	T	P		Theory			Practical		Total Marks
								MSE	CEC	ESE	LW	LE/VIVA	
1	AECC201	Communication Skills	**Comp**	**L**	**0**	**0**	**2**	**20**	**40**	**40**	**0**	**0**	**100**
2	0BA 201	Managerial Economics	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
3	BA 202	Business Statistics-I	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
4	BA 203	Organizational Behavior	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
5	BA 204	Management Accounting	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
6	BA 205	Programming with C, C++	**Comp**	**L**	**0**	**p**	**3**	**20**	**40**	**20**	**0**	**20**	**100**
7	BA 206	Data Visualization Tools - MS Excel	**Comp**	**L**	**0**	**P**	**3**	**20**	**40**	**20**	**0**	**20**	**100**
8	BAI2		**Comp**	**L**	**0**	**0**	**2**				**0**	**0**	**100**

*L-Lecture, T-Tutorial, P-Practical, MSE-Mid Semester Examination, CEC- Continuous Evaluation Component, ESE- End Semester Examination, LW-Lab Work, LE-Lab Exam

Teaching Scheme

Semester –3

S.N.	Course Code	Course Name	Course Type	Teaching Scheme (Hours/Week)			Total Credit	Examination Scheme					
				L	T	P		Theory			Practical		Total Marks
								MSE	CEC	ESE	LW	LE/VIVA	
1	AECC301	Entrepreneurship Development	**Comp**	**L**	**0**	**0**	**2**	**20**	**40**	**40**	**0**	**0**	**100**
2	BA 301	Business Strategy	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
3	BA 302	Business Statistics - II	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
4	BA 303	Consumer Behviour	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
5	BA 304	Managerial Finance	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
6	BA 305	Basics of DBMS	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
7	BA 306	Data Visualization- Tools MS Power BI	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**20**	**0**	**20**	**100**
8	BAI3	Internship	**Comp**	**L**	**0**	**0**	**2**				**0**	**0**	**100**
9.													

*L-Lecture, T-Tutorial, P-Practical, MSE-Mid Semester Examination, CEC- Continuous Evaluation Component, ESE- End Semester Examination, LW-Lab Work, LE-Lab Exa

Teaching Scheme

Semester – IV

S.N.	Course Code	Course Name	Course Type	Teaching Scheme (Hours/Week)			Total Credit	Examination Scheme					
				L	T	P		Theory			Practical		Total Marks
								MSE	CEC	ESE	LW	LE/VIVA	
1	AECC101	Environmental Studies	**Comp**	**L**	**0**	**0**	**2**	**20**	**40**	**40**	**0**	**0**	**100**
2	BA401	Introduction to AI & Machine Learning	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
3	BA402	HR Analytics	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
4	BA403	Web & Social Media Analytics	**Comp**	**L**	**0**	**0**	**3**	**20**	**40**	**40**	**0**	**0**	**100**
5	BA404	DBMS- SQL	**Comp**	**L**	**0**	**p**	**3**	**20**	**40**	**20**	**0**	**20**	**100**
6	BA405	Programming in Python	**Comp**	**L**	**0**	**p**	**3**	**20**	**40**	**20**	**0**	**20**	**100**
7	BA406	Data Visualization Tools - Tableau	**Comp**	**L**	**0**	**P**	**3**	**20**	**40**	**20**	**0**	**20**	**100**
8	BAI4	Internship	**Comp**	**L**	**0**	**0**	**2**						**100**
		Total					**22**						**800**

Teaching Scheme

Semester – V,VI

S.N.	Course Code	Course Name	Course Type	Teaching Scheme (Hours/Week)			Total Credit	Examination Scheme					
				L	T	P		Theory			Practical		Total Marks
								MSE	CEC	ESE	LW	LE/VIVA	
1	AECC301	Disaster Risk Management	Comp	L	0	0	2	20	40	40	0	0	100
2	BA501	Digital Transformation of Business	Comp	L	0	0	3	20	40	40	0	0	100
3	BA502	Web and Social Media Analytics	Comp	L	0	0	3	20	40	40	0	0	100
4	BA503	Programming in Python	Comp	L	0	0	3	20	40	40	0	0	100
5	BA504	Data Visualisation Tools-Power BI	Comp	L	0	p	3	20	40	20	0	20	100
6	BA505	Consumer Behaviour	Comp	L	0	p	3	20	40	20	0	20	100
7	BA506	Disaster Risk Management	Comp	L	0	P	3	20	40	20	0	20	100
8	BAI4	Internship	Comp	L	0	0	2						100
		Total					22						800
1	AECC601	Indian Constitution	Comp	L	0	p	3	20	40	20	0	20	100
2	BA601	Research Methodology	Comp	L	0	P	3	20	40	20	0	20	100
3	PW602	Project Work	Comp	L	0	P	3	20	40	20	0	20	100
		Total					18						300

COURSE CODE AECC101	COURSE NAME Fundamentals of English	SEMESTER I

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
30	00	00	30	30	00	00	2

Course Pre-requisites	Student should have cleared 12th Science
Course Category	Mandatory Course
Course focus	Communicational Skills
Rationale	It enables humanity to experience the benefits of chemistry when we apply it in the exploitation of materials and energy.
Course Revision/ Approval Date:	14/03/2023
Course Objectives **(As per Blooms' Taxonomy)**	1 To emphasize the development of listening and reading skills among learners 2 To equip them with writing skills needed for academic as well as workplace context 3 To enable learners of Engineering and Technology develop their basic communication skills in English 4 To strengthen the fundamentals in English Language. 5 To build up the confidence to communicate with the world.

Course Content (Theory)	Weightage	Contact hours
Unit 1: Language Basics Parts of speech, word formation, prefix-suffix, synonyms, antonyms, homophones and standard abbreviations	**20%**	6
Unit 2: Elementary Reading/Writing Skills Types of the sentences, structures of the sentences, use of phrases and clauses, punctuation, creative writing and coherence, comprehension, essay, paragraph writing, creative writing	**30%**	9
Unit 3: Elementary Spoken Skills	**30%**	9

Greetings, farewell and introduction, making an apology, accepting an apology, making an appointment, JAM, group discussion, debate, public speaking		
Unit 4: Practicing and Identifying the Common Error Tense, subject-verb agreement, noun-pronoun agreement, articles, prepositions, modal auxiliaries, voice, reported speech	**20%**	6

Instructional Method and Pedagogy:
Classroom Lecture, Case Studies, Quizzes, Presentations, Role Play, Expert Lecture (Consultant)

Course Objectives:
After successful completion of the above course, students will be able to: CO1: To emphasize the development of listening and reading skills among learners CO2: To equip them with writing skills needed for academic as well as workplace context CO3: To enable learners of Engineering and Technology develop their basic communication skills in English CO4: To strengthen the fundamentals in English Language. CO5: To build up the confidence to communicate with the world.

Learning Resources	
1.	Textbook
2.	Reference books 1. Murphy, Raymond "Murphy's English Grammar with CD" Cambridge University Press, 2004. . 2. Thorpe, Edgar and Showick Thorpe "Basic Vocabulary" Pearson Education India, 2012. 3. Green, David. "Contemporary English Grammar Structures and Composition" MacMillan Publishers, New Delhi, 2010. Wren &Martin (2001),English Grammar & Composition, New York
3.	Journal

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks

Theory: Continuous Evaluation Component Marks		Attendance	10 marks
		MCQs	10 marks
		Skill enhancement activities / case study	10 marks
		Presentation/ miscellaneous activities	10 marks
		Total	**20 Marks**

Mapping of PSOs & COs

	PSO1	PSO2	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	1	1	1						
CO2	1	1	1						
CO3	1	1	1						
CO4	1	1	1						
CO5	1	1	1						

Mapping of POs & COs

	PO1	PO2	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	2	2	3	2	0	0		
CO2	3	3	3	3	2	0	0		
CO3	3	2	3	3	2	0	0		
CO4	3	1	3	3	3	0	0		
CO5	3	2	2	3	2	0	0		

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA101	PRINCIPLES OF MANAGEMENT	I

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	H.S.C. from any stream
Course Category	Core Course
Course focus	Skill Enhancement
Rationale	This course will provide students with the necessary knowledge and skills to organize resources, create a project timeline, set goals, delegate responsibilities, and monitor progress. This knowledge is essential for analytic professionals who work within organizations.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1. To understand the basic principles and concepts of management. 2. To evaluate the evolution of management thought and how they have contributed to the development of management theories and practices. 3. To analyze the importance of planning and decision making in organizational success. 4. To acquaint students with various functional areas of management. 5. To apply the principles of direction and control in real world.

Course Content (Theory)	Weightage	Contact hours
Unit 1: INTRODUCTION TO MANAGEMENT Definition, Functions, Process, Scope and Significance of Management, Nature of Management, Managerial Roles and Managerial Skills, Difference between Management and Administration.	**20%**	**8**

Unit 2:EVOLUTION OF MANAGEMENT THOUGHT Early Management, Classical Approach - Scientific Management, Administrative Management, Neo - Classical Approach - Hawthorne Experiments, Modern Approach- System and Contingency approach	**20%**	**8**
Unit 3: PLANNING & DECISION MAKING Meaning & Definition of Planning, Nature and Importance of Planning, Planning Process, Types of Plans, Decision Making- Concept, Definitions, Process, Individual vs. Group Decision Making	**15%**	**8**
Unit 4 : ORGANISING & STAFFING Nature & Significance of Organization, Authority & Responsibility Relationships, Span of Control, Centralization & Decentralization, Organization Structures, Types, Advantages & Disadvantages, Factors affecting staffing, Recruitment & Selection	**25%**	**13**
Unit 5: DIRECTION & CONTROL Direction:Meaning, Definition, Features, Principles; Control: Meaning, Definitions, Process, Reasons for Resistance to control; Methods: TQM, Budgetary Control, Break Even Control, Kaizen, Six Sigma	**20%**	**8**

Instructional Method and Pedagogy: (Max. 100 words)

Encouraging students to apply the concepts learned in real-world scenarios through projects and internships.

Lecture/cases/Presentation/ Assignment/ role playing.

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: **Blooms' Taxonomy word** should be highlighted CO1: **Understand** the basic principles and concepts of management CO2: **Evaluate** and compare the evolution of management thought CO3:**Analyze** the importance of planning and decision making in organizational success CO4: **Apply** the principles of organization and staffing to real-world situations. CO5:**Create** a plan for directing and controlling organizational activities	CO1: Understand CO2: Evalaute CO3: Analyze CO4: Apply CO5: Create

Learning Resources	
1.	**Textbook** : L.M. Prasad, Principles of Management, Sultan Chand Sons
2.	**Reference books :** 1. Harold Koontz and Heinz Weihrich, Essentials of Management: An International and Leadership Perspective, McGraw Hill Education. 2. Stephen P Robbins and Madhushree Nanda Agrawal, Fundamentals of Management: Essential Concepts and Applications, Pearson Education. 3. George Terry, Principles of Management, Richard D. Irwin 4. Griffin, Management Principles and Application, Cengage Learning 5. Peter F Drucker, Practice of Management, Mercury Books, London
3.	**Journals, Periodicals, Reference** 1. Journal of Management 2. Prabandhan : Indian Journal of Management 3. Journal of International Management 4. Journal of Management and Organisation
4.	**Other Electronic Resources:** www.omicsonline.org

Evaluation Scheme	Total Marks
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	3	0	0	0	0	0	0	0
CO3	3	0	0	0	1	0	0	0
CO4	3	0	0	0	0	0	0	0
CO5	3	1	0	0	0	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	0	2	0	0
CO2	0	0	0	0	0
CO3	1	0	3	0	3
CO4	0	0	1	0	0
CO5	1	0	3	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA102	MARKETING MANAGEMENT	I

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	H.S.C. from any stream
Course Category	Core Course
Course focus	Skill Enhancement
Rationale	This course will help students in understanding customer needs and preferences, build strong brands, and develop effective marketing strategies aligned with the business objectives. It also provides insights into the external factors that affect marketing activities, allowing students to make data-driven decisions and improve business performance.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives (As per Blooms' Taxonomy)	1. To understand the marketing environment and its impact on marketing decisions. 2. To assess the consumer buying behavior process and how it affects marketing strategy. 3. To create a comprehensive marketing strategy by understanding the strategic planning process and competitive strategies. 4. To evaluate the importance of product decisions. 5. To analyze contemporary issues in marketing such as marketing of services and how they affect marketing decisions and strategy.

Course Content (Theory)	Weightage	Contact hours
Unit 1: Basic concepts: Nature & Scope of Marketing, Concepts - production, product, selling marketing & societal marketing, marketing environment –marketing management and its environment.	**20%**	**8**
Unit 2: Consumer buying behaviour: Consumer decision making process (five step model), factors affecting buying behaviour, purchase behaviour, buyer's role. Market Segmentation: Meaning, Definition, Different ways to Segmentation, Essential of effective Market Segmentation, Destination between differential Marketing & Concentrated Marketing	**20%**	**8**
Unit 3: Planning Marketing Strategy Strategic Planning Process, marketing and competitive strategies, Marketing Mix strategy,	**15%**	**8**

Marketing mix and environment, Assembling and managing marketing mix		
Unit 4: Product decisions: Product definition, new product development process, and product life cycle, positioning, branding (Definition of Brand and Brand Equity, Selection of Brand Name,), packaging & labeling decisions Pricing decisions: importance, objectives Concept of Price, Factors Influencing Pricing, Methods of Pricing (Cost based and Competition oriented) & strategies Product promotion: promotion mix and factors affecting. Distribution: channel decisions, types & factors, physical distribution system & its components	**25%**	**13**
Unit 5: Contemporary Issues Marketing of Services -Rural Marketing – Consumerism and Consumer Protection Act, 1986- Retailing	**20%**	**8**

Instructional Method and Pedagogy: (Max. 100 words)
Emphasize experiential learning, critical thinking, and practical application of marketing concepts. Lecture/cases/Presentation/ Assignment/ role playing.

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: **Blooms' Taxonomy word** should be highlighted CO1: **Understand** the marketing environment and its impact on marketing decisions. CO2: **Assess** the consumer buying behavior process and how it affects marketing strategy. CO3: **Create** a comprehensive marketing strategy by understanding the strategic planning process and competitive strategies. CO4: **Evaluate** the importance of product decisions CO5: **Analyze** contemporary issues in marketing such as marketing of services and how they affect marketing decisions and strategy	CO1: Understand CO2: Assess CO3: Create CO4: Evaluate CO5: Analyze

Learning Resources	
1.	**Textbook** : Marketing Management by Philip Kotler and Kevin Lane Keller, Pearson Education, 15th Edition, 2016
2.	**Reference books :** 1. Kotler, P., Kartajaya, H., & Setiawan, I. (2016). Marketing 4.0: Moving from Traditional to Digital. John Wiley & Sons. 2. Vaynerchuk, G. (2018). Crushing It!: How Great Entrepreneurs Build Their Business and Influence—and How You Can, Too. HarperCollins. 3. Isaacson, W. (2011). Steve Jobs. Simon & Schuster. 4. Rajan, N. N. (2019). Marketing Management. SAGE Publications India.

3.	**Journals, Periodicals, Reference** 1. The IUP Journal of Marketing Management 2. International Journal of Marketing Management
4.	**Other Electronic Resources:** https://www.economicsdiscussion.net/marketing-management/what-is-marketingmanagement/31788 https://www.professionalacademy.com/blogs-and-advice/marketing-theories---themarketing-mix---from-4-p-s-to-7-p-s https://www.investopedia.com/terms/f/four-ps.asp https://www.ukessays.com/essays/marketing/contemporary-issues-in-marketingmarketing-essay.php https://yourbusiness.azcentral.com/examples-contemporary-issues-marketing-field26524.html

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	3	1	0	1	0	0	0	0
CO3	3	0	0	0	0	0	1	0
CO4	3	0	0	0	0	0	0	0
CO5	3	0	0	0	1	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	0	3	0	0
CO2	0	0	2	0	0
CO3	2	0	3	0	2
CO4	1	0	2	0	1
CO5	1	0	3	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA103	HUMAN RESOURCE MANAGEMENT	I

Teaching Scheme (Hours)				Teaching Credit			
Lecture	Practical	Tutorial	Total Hours	Lecture	Practical	Tutorial	Total Credit
45	0	0	45	3	0	0	3

Course Pre-requisites	H.S.C. from any stream
Course Category	Core Course
Course focus	Skill Enhancement
Rationale	This course will help students in understanding customer needs and preferences, build strong brands, and develop effective marketing strategies aligned with the business objectives. It also provides insights into the external factors that affect marketing activities, allowing students to make data-driven decisions and improve business performance.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives (As per Blooms' Taxonomy)	1. To recall the different functions of HRM. 2. To evaluate the effectiveness of HRM practices and programs, and recommend improvements based on evidence. 3. To analyze HR data and metrics to identify trends and patterns, and make informed HR decisions. 4. To develop innovative HR solutions to address current and emerging HR challenges and opportunities. 5. To enable the students to integrate various HR concepts in order to take correct business decisions.

Course Content (Theory)	Weightage	Contact hours
Unit 1: Introduction to Human Resource Management: Meaning, Function, Significance & Challenges of HRM, HR Policies Strategic role of HR and its implications.	**20%**	**8**
Unit 2: Acquisition of Human Resources: videos HR Planning; Job analysis - job description and job specification; recruitment - sources and process; selection process - tests and interviews; placement and induction	**20%**	**8**
Unit 3: Maintenance of Human Resources: staff welfare activities, safety, communication Job changes - transfers, promotions/demotions, separations	**15%**	**8**
Unit 4: Training and Development: Concept and importance of training; types of training; methods of training; design of training programme; evaluation of training effectiveness; executive development - process and techniques; career planning	**25%**	**13**

Unit 5: Performance Appraisal Performance appraisal - concept and objectives; traditional and modern methods, limitations of performance appraisal methods. Compensation and Maintenance: Compensation: job evaluation - concept, process and significance; components of employee remuneration - base and supplementary; maintenance: overview of employee welfare, health and safety, social security	**20%**	**8**

Instructional Method and Pedagogy: (Max. 100 words)
Emphasize experiential learning, critical thinking, and practical application of HRM concepts through Simulations/Lecture/cases/Presentation/ Assignment/ role playing.

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: **Blooms' Taxonomy word** should be highlighted CO1: **Recall** the different functions of HRM CO2: **Evaluate** the effectiveness of HRM practices and programs, and recommend improvements CO3: **Analyze** HRM systems and practices to identify trends and patterns, and make informed HR decisions CO4: **Develop** innovative HR solutions to address current and emerging HR challenges and opportunities. CO5: **Enable** to integrate various HR concepts in order to take correct business decisions	CO1: Recall CO2: Evaluate CO3: Analyze CO4: Develop CO5: Enable

Learning Resources	
1.	**Textbook** : Dessler, G. (2020). Human resource management (16th ed.). Pearson.
2.	**Reference books :** 5. Aswathappa, K. (2019). Human Resource Management: Text and Cases (7th ed.). Tata McGraw-Hill Education.. 6. Khanka, S. S. (2021). Human Resource Management (Text and Cases) (5th ed.). S. Chand & Company Ltd. 7. Ahuja, S. (2017). Human Resource Management (2nd ed.). Excel Books.
3.	**Journals, Periodicals, Reference** 1. Human Resource Management Journal 2. International Journal of Human Resource Management 3. Journal of Management 4. Academy of Management Journal 5. Personnel Psychology 6. Journal of Organizational Behavior
4.	**Other Electronic Resources:**

	https://www.thebalancecareers.com/what-is-human-resource-management-1918143 https://www.coursera.org/specializations/human-resource-management https://hbr.org/1981/09/managing-human-resources https://www.humanresourcesedu.org/what-is-human-resources/

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	1	0	0	0
CO2	1	3	0	0	1	0	0	0
CO3	3	0	0	0	1	0	0	0
CO4	3	0	0	0	1	0	0	0
CO5	3	0	0	0	1	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	2	0	0
CO2	1	0	2	0	0
CO3	2	0	3	1	0
CO4	2	0	3	0	1
CO5	2	0	3	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE BA104	COURSE NAME Financial Accounting	SEMESTER I

Teaching Scheme (Hours)				Teaching Credit			
Lecture	Practical	Tutorial	Total Hours	Lecture	Practical	Tutorial	Total Credit
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Finance and Account Terminology
Course Category	Accounting & Finance Electives
Course focus	Skills
Rationale	**Financial accounting** is a branch of accounting concerned with the summary, analysis, and reporting of financial transactions related to a business.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	1. To provide knowledge on Goodwill 2. To understand the terms used in the accounting system. To know the accounting system for a nonprofit organisation 4. To enable the students to prepare different kinds of Financial Statements 5. Facilitate Decision making

Course Content (Theory)	Weightage	Contact hours
Unit 1: Analysis and interpretation of the financial statement Advantages and limitations of financial statement analysis, techniques of financial statement analysis: comparative financial statement, common size statement, and trend percentage, **Ratio analysis:** Advantages and limitations of ratio analysis, **Liquidity, and solvency ratio, Profitability Ratio Efficiency Ratio:**	20%	**9**
Unit 2:Fund Flow Analysis Preparation of statement showing changes in working capital, preparation of fund flow statement (Including additional information), and adjusted profit and loss account.	20%	**9**

Unit 3: Cash Flow Statement Cash Flow Statement Uses, Advantages, Cash from Operations, cash from Financing and Cash from Investing	20%	**9**
Unit 4: VALUATION OF GOODWILL AND SHARES Valuation of goodwill, Factors affecting the value of goodwill Methods of valuation of shares, Computation of valuation of shares.	20%	**9**
Unit 5: ACCOUNTING FOR NON-TRADING CONCERNS: Meaning of Non-Trading Concern, Annual Financial Statements of Non-Trading Concerns (NTC), How NTC differs from Trading Concern, Identification of Capital and Revenue Items for nontrading organizations, Receipts and Payments Account, Income and Expenditure Account, Balance Sheet, Concept of different funds and their accounting treatment. (Practical Examples of Clubs & Hospitals)	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Discussion on concepts and issues on insurance use in an organization, case discussion on the claim of insurance products, Projects/ Assignments/ Quizzes/ Class participation.

Course Objectives:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to:	
CO1: **Prepare** and Analyse the financial statements.	CO1: Prepare
CO2 **Acquire** the basic concept of accounting terms.	CO2: Acquire
CO3 **Rectify** the errors in the bank reconciliation statement.	CO3: Rectify
CO4 **Exposed** to various methods of valuation of goodwill.	CO4: Expose
CO5 **Demonstrate** insight into single and double-entry systems of accounting.	CO5: Demonstrate

Learning Resources	
1.	Reference Books: 1. Textbook : P.C. Tulsian, " Financial Accounting", Tata MC Graw Hill Ltd 2. T.S.Reddy&A.Murthy, "Financial Accounting", Margham Publications 3. Assish K. Bhattacharyya, "Financial Accounting", Prentice of hall of India 4. 3. N. Vinayagam and B. Charumaki, "Financial Accounting", S.Chand& Company Ltd.

2.	Journals, Periodicals, Reference 1. Journal of Accounting Research 2. Contemporary Accounting Research 3. Accounting, Organisations and Society
3.	Other Electronic Resources: www.onllinelibrary.wiley.com • https://accountinginfocus.com/managerial-accounting-2/introduction-managerial-accounting-2/what-is-managerial-accounting/ • https://www.coursera.org/lecture/accounting-for-managers/learning-objectives-and-what-is-managerial-accounting-CIrg0 • https://www.edx.org/course/management-accounting • https://courses.lumenlearning.com/wm-accountingformanagers/chapter/key-components-of-managerial-accounting/

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PSO1	PSO2	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	2	3							
CO2	1	2					1		
CO3		3				3			
CO4		2				2			2
CO5		3				2			2

	PROGRAMME OUTCOMES
	By the end of the Programme, the Graduate will be
PO1	Business Environment and Domain Knowledge
PO2	Critical thinking, Business Analysis, Problem Solving, and Innovative Solutions
PO3	Business Communication
PO4	Global Exposure and Cross-Cultural Understanding
PO5	Social Responsiveness and Ethics
PO6	Environmental & Sustainability
PO7	Leadership and Teamwork
PO8	Lifelong learner

Mapping of POs & COs

	PSO1	PSO2	PSO3	PSO4
CO1	0	0	1	0
CO2	0	1	0	0
CO3	2	3	2	2
CO4	2	1	3	1
CO5	1	0	2	2

	PROGRAMME SPECIFIC OUTCOMES
POS1	To prepare graduates who will be industrial ready, futuristic approach, encouraging student-centric culture.
POS2	To prepare graduates who will be proficient in business communication and the use of contemporary technologies with academic excellence and pedagogical innovations.
POS3	To prepare graduates with managerial competencies that act as a foundation for their successful professional and personal development.
POS4	To prepare graduates with comprehensive exposure to basic business situations and encourage them to pursue life-long learning to fulfill their goals.

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA105	MANAGEMENT INFORMATION SYSTEM	I

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Information Technology
Course Category	Core Course
Course focus	Skill Enhancement
Rationale	This course equips students with the necessary knowledge and skills to manage and leverage information systems for better decision-making, improved efficiency, and competitive advantage. Students will learn how to evaluate, select, design, implement, and manage information systems to achieve organizational goals and objectives.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives (As per Blooms' Taxonomy)	1. To understand the role of information systems in global business today and how they can facilitate global e-business and collaboration. 2. To analyze the ethical and social issues that arise in the context of information systems and their impact on organizations and society. 3. To evaluate the different components of IT infrastructure and emerging technologies, including telecommunications, the internet, and wireless technology. 4. To apply principles of database management to enhance decision-making processes and achieve operational excellence and customer intimacy. 5. To assess the benefits and challenges of enterprise-wide knowledge management systems and intelligent techniques for enhancing decision-making processes in organizations.

Course Content (Theory)	Weightage	Contact hours
Unit 1: Organizations, Management, and the Networked Enterprise □ Information Systems in Global Business Today □ Global E-Business and Collaboration □ Information Systems, Organizations, and Strategy Ethical and Social Issues in Information Systems	**20%**	**8**
Unit 2: Information Technology Infrastructure	**20%**	**8**

IT Infrastructure and Emerging Technologies Telecommunications, the Internet, and Wireless Technology		
Unit 3: Database Management Foundations of Business Intelligence: Databases and Information Management Managing Knowledge Enhancing Decision Making	**15%**	**8**
Unit 4: Information System Applications for the Digital Age Achieving Operational Excellence and Customer Intimacy Enterprise Applications Building Information System	**25%**	**13**
Unit 5: Managing Knowledge: The knowledge management landscape, Enterprise wideknowledge management system, Knowledge work systems, Intelligent techniques. Enhancing Decision Making: Decision making and information systems, Business intelligence in the enterprise. Business intelligence constituencies.	**20%**	**8**

Instructional Method and Pedagogy: (Max. 100 words)
Use of technology and software programs for data analysis and visualization can enhance the learning experience. Simulations/Lecture/cases/Presentation/ Assignment

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: **Blooms' Taxonomy word** should be highlighted CO1: **Understand** the role of information systems in global business today and how they can facilitate global e-business and collaboration CO2: **Analyze** the ethical and social issues that arise in the context of information systems and their impact on organizations and society CO3: **Evaluate** the different components of IT infrastructure and emerging technologies, including telecommunications, the internet, and wireless technology CO4: **Apply** principles of database management to enhance decision-making processes and achieve operational excellence and customer intimacy CO5: **Assess** the benefits and challenges of enterprise-wide knowledge management systems and intelligent techniques for enhancing decision-making processes in organizations.	CO1: Understand CO2: Analyze CO3: Evaluate CO4: Apply CO5: Assess

Learning Resources	
1.	**Textbook** : Kenneth C. Laudon and Jane P. Laudon: Management Information System, Managing the Digital Firm, Pearson Education
2.	**Reference books :** 1. James A. O' Brien, George M. Marakas: Management Information Systems, Global McGraw Hill, 2. Steven Alter: Information Systems The Foundation of E-Business, Pearson Education. 3. W.S. Jawadekar: Management Information Systems, Tata McGraw Hill
3.	**Journals, Periodicals, Reference** 1. Journal of Information Technology Management 2. Information Technology and Management 3. International Journal of Information Technology and Management
4.	**Other Electronic Resources:** https://www.misq.org/ http://www.ieeelms.com/rvce

Evaluation Scheme	Total Marks
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	1	0	0	0	3	0	0	0
CO3	2	0	0	0	0	0	0	0
CO4	3	0	0	0	1	0	0	0
CO5	3	1	0	0	1	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	0	3	0	0
CO2	0	0	0	3	0
CO3	1	0	2	0	1
CO4	1	0	1	0	3
CO5	1	0	3	0	2

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA106	INTRODUCTION TO DATA SCIENCE	I

Teaching Scheme (Hours)				Teaching Credit			
Lecture	Practical	Tutorial	Total Hours	Lecture	Practical	Tutorial	Total Credit
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Knowledge about Information Technology
Course Category	Core Course
Course focus	Skill Enhancement
Rationale	This course will equip students with the necessary skills to work with large datasets, understand statistical models, and develop predictive models, which will enable them to contribute significantly to the organization's growth and success. Additionally, data science is an increasingly in-demand field, and knowledge in this area can open up numerous career opportunities.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives (As per Blooms' Taxonomy)	1. To evaluate different data analysis tools available in Python for performing exploratory data analysis and making data-driven decisions. 2. To analyze and interpret descriptive statistics to gain insights into the characteristics of a dataset. 3. To compare and contrast different data structures available in Pandas and use them effectively for data wrangling. 4. To create and apply statistical tests to infer information about a population based on a sample data set. 5. To design and develop machine learning models for performing predictive analysis, including linear regression, classification, and clustering methods.

Course Content (Theory)	Weightage	Contact hours
Unit 1: 1. Introduction to data analysis tools in Python 2. Descriptive statistics 3. Data structures with Pandas 4. Introductory hypothesis testing and statistical inference	**20%**	**8**
Unit 2: 1. Web scraping and data acquisition via APIs 2. Linear regression	**20%**	**8**

3. Classification methods, including logistic regression, knearest neighbours, decision trees, and support vector machines		
Unit 3: 1. Data visualization 2. Clustering methods 3. Dimensionality reduction, including principle component analysis	**15%**	**8**
Unit 4: 1. Network analysis 2. Rating, ranking, and elections 3. Cleaning and reformatting messy datasets using regular expressions or dedicated tools such as open refine	**25%**	**13**
Unit 5: 1. Natural language processing 2. Ethics of big data	**20%**	**8**

Instructional Method and Pedagogy: (Max. 100 words)
Usage of real-world datasets to teach students data analysis, machine learning, and statistical modeling techniques. Students will be encouraged to collaborate in teams to work on projects and learn how to present their findings using data visualization tools. Simulations/Lecture/cases/Presentation/ Assignment

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: **Blooms' Taxonomy word** should be highlighted CO1: **Evaluate** different data analysis tools available in Python for performing exploratory data analysis and making data-driven decisions. CO2: **Analyze** descriptive statistics to gain insights into the characteristics of a dataset. CO3: **Compare** and contrast different data structures available in Pandas and use them effectively for data wrangling. CO4: **Apply** statistical tests to infer information about a population based on a sample data set CO5: **Design** machine learning models for performing predictive analysis, including linear regression, classification, and clustering methods.	CO1:Evaluate CO2: Analyze CO3: Compare CO4: Apply CO5: Design

Learning Resources	
1.	**Textbook** : Data Science from Scratch: First Principles with Python, 2nd Edition Book by Joel Grus Publisher: Shroff/ O'Reilly
2.	**Reference books :** 4. Irizarry, R. (2019). Introduction to data science: data analysis and prediction algorithms with R. CRC Press. 5. Igual, L., Seguí, S., Puertas, E., Radeva, P., Pujol, O., Escalera, S., ... & Garrido, L. (2021). Introduction to Data Science: A Python Approach to Concepts, Techniques and Applications. CRC Press.

3.	**Journals, Periodicals, Reference** 1. Journal of Data Science 2. IEEE Transactions on Knowledge and Data Engineering 3. ACM Transactions on Knowledge Discovery from Data 4. Journal of Big Data 5. Journal of Machine Learning Research
4.	**Other Electronic Resources:** UC Irvine Machine Learning Repository https://archive.ics.uci.edu/ml/index.php Variety of consumer datasets https://www.kaggle.com/datasets World Bank https://data.worldbank.org/data-catalog/ US Government Data https://www.data.gov/

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	Attendance: 05 marks MCQs: 10 marks Open Book Assignment: 15 marks Article Review: 10 marks **Total: 40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	0	3	0	1	3	0	0	0
CO2	0	0	3	0	0	0	0	0
CO3	1	2	0	0	2	0	0	0
CO4	1	0	3	0	0	0	0	0
CO5	0	1	2	3	0	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	0	0	0	1
CO2	1	0	0	0	1
CO3	1	0	0	0	0
CO4	1	0	0	0	1
CO5	2	0	1	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE BA201	COURSE NAME Managerial Economics	SEMESTER II

Teaching Scheme (Hours)				Teaching Credit			
Lecture	Practical	Tutorial	Total Hours	Lecture	Practical	Tutorial	Total Credit
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**
Course Category	Basic Core Courses
Course focus	Employability/Skills/Analytical Ability
Rationale	The Micro Economics course is an essential part of a Bachelor of Business Administration (BBA) program as it provides students with a foundational understanding of the behavior of individual economic agents, such as consumers and firms, and their interactions in the market. The course is designed to equip students with the necessary skills and knowledge to understand the microeconomic principles underlying the decision-making of businesses and individuals in the marketplace.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1. Learn the basic economic principles so that you can examine a variety of social issues from the perspective of economics. 2. Be able to apply the concepts studied in class to the real world, and understand the political and economic jargon in everyday news. 3. To familiarize students with the basic concepts of micro economics. 4. To understand the effect of micro economics principles on the business decisions.

	5. Recognize that even though economic ideas are often abstract and ideologically driven, they are nevertheless a powerful tool for social change.

Course Content (Theory)	Weightage	Contact hours
Unit 1: Fundamentals of Micro Economics: 1. Meaning and concepts : Wants, Desire, Demand 2. Utility and Satisfaction 3. Indifference Curves	**15%**	**9**
Unit 2: Demand Analysis: 1. The demand function 2. Demand curve, 3. Determinants of demand 4. Elasticity of demand 5. Estimation and forecasting of demand	**25%**	**10**
Unit 3 : Production and Cost Analysis : 1. Basic production and cost concepts 2. Short run and long run estimation of cost 3. Economics of scope	**15%**	**9**
Unit 4 : Revenue Concepts: 1. Total Revenue 2. Variable and Fixed Revenue 3. Average and Marginal Revenue	**20%**	**9**
Unit 5: Market conditions: 1. Market Structure: Perfect Competition – Monopoly - Imperfect Market 2. Price Output determination under different market conditions	**25%**	**8**

Instructional Method and Pedagogy: (Max. 100 words)

Lecture/cases/Presentation/ Assignment/ role playing.

Course Objectives:	Blooms' Taxonomy Domain
After successful completion of the above course, students will be able to: CO1: **Understand** the ideas of Economics CO2: **Show** the concepts studied in class to the real world, and understand the political and economic jargon in everyday news CO3: **Examine** critical thinking skills by challenging the existing economic paradigm CO4: **Learn** to get familiar with major economic debates CO5: **Evaluate** the effect of micro economics principles on the business decisions.	CO1: Understand CO2: Show CO3: Examine CO4: Learns CO5: Evaluate

Learning Resources	
1.	Reference Books: 1. P L Mehta, Managerial Economics, Sultan Chand 2.Allen, W. B., Doherty N. A., Weigelt, K., & Mansfield. E. Managerial economics: theory, applications and cases London: W. W. Norton & company. 3. Baumol, W.J. Economic theory and operations analysis. New Delhi: Prentice Hall. 4. Brickley, J. A, Smith, C. W. & Zimmerman, J. L. Managerial economics & organizational architecture New Delhi: McGraw Hill
2.	Journals, Periodicals, Reference 1. Journal of Monetary Economics 2. Journal of International Economics 3. The American Economic Review 4. Journal of Economics & Business
3.	Other Electronic Resources: www.economicsonline.co.uk

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	3	0	2	1	0	1	2
CO2	3	2	2	1	1	1	1	2
CO3	2	3	1	1	2	0	2	1
CO4	1	2	2	2	1	1	2	2
CO5	3	3	1	2	1	1	2	2

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PS05
CO1	2	1	0	1	1
CO2	2	0	0	1	2
CO3	1	1	1	3	1
CO4	3	0	3	2	3
CO5	1	1	2	1	3

COURSE CODE BA202	COURSE NAME Business Statistics	SEMESTER II

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**
Course Category	Basic Core Courses
Course focus	Employability/Skills/Analytical Ability
Rationale	Business statistics is a crucial subject in the field of business and management. It provides a framework for understanding and analyzing data related to business operations and decision-making. Business statistics enables managers to make informed decisions based on quantitative data, rather than relying solely on intuition or subjective opinions.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1.To develop the student stability to deal with numerical and quantitative issues in business 2. To enable the use of statistical, graphical and algebraic techniques wherever relevant. 3. To have proper understanding of statistical applications in Economics and Management. 4. To apply discrete and continuous probability distribution to various business problems.

Course Content (Theory)	Weightage	Contact

		hours
Unit 1: Statistical Description of Data 1. Statistical Representation of Data, 2. Diagrammatic representation of data, 3. Frequency distribution, 4. Graphical representation of Frequency Distribution – Histogram, Frequency , Polygon, Ogive, Piechart	**15%**	**9**
Unit 2: Measure of Central Tendency and Dispersion 1. Measure of Central tendency 2. Dispersion, 3. Mean, Median, Mean Deviation, 4. Quartile and Quartile Deviation, 5. Standard Deviation Co-Efficient of Variation	**25%**	**10**
Unit 3: Probability & Theoretical Distribution 1. Probability, 2. Independent and depended events 3. Mutually exclusive events, total and compound probability 4. Mathematical Expectation 5. Binominal Distribution 6. Poisson Distribution 7. Basic Application and normal Distribution– Basic Application	**15%**	**9**
Unit 4: Correlation and Regression 1. Scatter diagram, Karl Person's Coefficient of Correlation 2. Rank Correlation, 3. Probable Error and Probable Limits, 4. Regression Lines, 5. Regression Equations, 6. Regression Coefficient	**20%**	**9**
Unit 5: Index Numbers and Time Series 1. Index Numbers: Use of Index Numbers. Problems involved in construction of index Numbers, Methods of construction of Index Numbers 2. Time Series analysis: Components of Time Series and calculation of Trend of Moving Average Methods.	**25%**	**8**

Instructional Method and Pedagogy: (Max. 100 words)

Lecture/cases/Presentation/ Assignment/ role playing.

Course Objectives:	**Blooms' Taxonomy Domain**

After successful completion of the above course, students will be able to: CO1: **Understand** the ideas of Statistics in decision making CO2: **Show** the concepts studied in class to the real world, and understand the political and economic jargon in everyday news CO3: **Examine** critical thinking skills by challenging the existing statistics paradigm CO4: **Learn** to get familiar with major statistical models CO5: **Evaluate** the effect of Statistics principles on the business decisions.	CO1: Understand CO2: Show CO3: Examine CO4: Learns CO5: Evaluate

Learning Resources	
1.	. Textbooks: Business Statistics by S.P. Gupta & M.P. Gupta Introduction to Statistics by C.B. Gupta
2.	Reference Books: 1. Business Statistics by Mr. R.S> Bharadwaj, Excel Book Publication 2. Business Statistics by Richard Levin 3. Business Statistics by Ken Black, Tata Mcgraw Hiil Publication 4. Mathematical statistics by Ray, Sharma and Choudhary 5. Business Sttaatistics by V.K. Kapoor, Sultan Chand Publication
3.	Journals & Periodicals: 1. Journals of Applied Statistics 2. Journal of the American Statistical Association 3. Journal of the Royal Statistical Society 4. Statistical Science byInstitute of Mathematical Statistics

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks

Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	1	0	0	0	0	0	1
CO2	1	2	1	1	1	0	1	2
CO3	1	1	1	2	1	0	1	1
CO4	3	2	1	1	2	1	2	2
CO5	2	1	2	1	0	2	1	2

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	2	3	2	1

CO2	2	1	0	3	2
CO3	2	3	1	1	3
CO4	1	1	1	2	2
CO5	0	1	3	1	0

COURSE CODE	COURSE NAME	SEMESTER
BA203	Organizational Behaviour	II

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**
Course Category	Basic Core Courses
Course focus	Employability/Skills/Analytical Ability
Rationale	At its core, organizational behavior analyzes the effect of social and environmental factors that affect the way employees or teams work. The way people interact, communicate, and collaborate is key to an organization's success.

Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1. To develop cognizance of the importance of human behaviour. 2. To describe how people behave under different conditions and understand why people behave as they do. 3. To analyse specific strategic human resources demands for future action. 4. To be able to predict and control human behaviour

Course Content (Theory)	Weightage	Contact hours
Unit 1: Introduction Meaning and importance of the study of OB Behaviour and its causation. Characteristics and limitations of OB, Challenges and Opportunities of OB, Models of OB Personality: Definition, Features, Big five model, MBTI, Johari Window, Managerial Implications of Personality	**15%**	**9**
Unit 2: Perceptions and Attributions Definition, Features, factors affecting perception, Process. Attribution, perceptual and attribution errors, Managerial Implications of Perception. Learning: Definition, Features, Classical and operant conditioning, social learning theory, Behavioral modification. Attitude: Definition, Features, ABC model of Attitude, Managerial Implications of Attitude	**25%**	**10**
Unit 3: Motivation Concept, Definition, Features, Types of Motivation, Process, Managerial Implications of Motivation. Leadership: Concept, Definition, Leadership Styles, Transactional and Transformational Leadership, Leadership development.	**15%**	**9**
Unit 4: Groups and Teams Definition, Features, Group development stages, Group vs. Teams, Managing and developing effective teams. Conflict Management: Definition, Features, Types of Conflict, Conflict Resolution Strategies, Relationship between Conflict and Performance.	**20%**	**9**
Unit 5: Organizational Culture Elements and dimensions of organizational culture, Importance of organizational culture in shaping the behavior of people. Organizational Change: Understanding the issues and managing change, Approaches to organizational change	**25%**	**8**

Instructional Method and Pedagogy: (Max. 100 words)

Lecture/cases/Presentation/ Assignment/ role playing.

Course Objectives:	Blooms' Taxonomy Domain
After successful completion of the above course, students will be able to: CO1: **Understand** the ideas of Organizational Behaviour CO2: **Show** the concepts studied in class to the real world, and understand the behavioural jargons CO3: **Examine** critical thinking skills CO4: **Learn** to predict human behavior in organizations CO5: **Evaluate** how people behave under different conditions and understand why people behave as they do.	CO1: Understand CO2: Show CO3: Examine CO4: Learns CO5: Evaluate

Learning Resources	
1.	Textbook: Stephen Robbins & SeemaSanghi; Organisation Behaviour; Pearson Education
2.	References Margie Parikh, Rajen Gupta; Organisational Behaviour; McGraw Hill Udai Pareek & Sushama Khanna; Understanding Organizational Behaviour; Oxford University Press
3.	Journal & Periodicals: Journal of Organizational Behavior Journal of Management Academy of Management Journal Academy of Management Review Research in Organizational Behavior

Evaluation Scheme	Total Marks
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks

Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	2	1	0	0	0	0	0	1
CO2	1	2	1	1	1	0	1	2
CO3	1	1	1	2	1	0	1	1
CO4	3	2	1	1	2	1	2	2
CO5	2	1	2	1	0	2	1	2

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	2	3	2	1

CO2	2	1	0	3	1
CO3	2	3	1	1	0
CO4	1	1	1	2	3
CO5	0	1	3	1	3

COURSE CODE BA204	COURSE NAME Management Accounting	SEMESTER II

Teaching Scheme (Hours)				Teaching Credit			
Lecture	Practical	Tutorial	Total Hours	Lecture	Practical	Tutorial	Total Credit
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Finance and Account Terminology
Course Category	Accounting & Finance Electives
Course focus	Skills
Rationale	Management Accounting, is a method of accounting that creates statements, reports, and documents that help management in making

	better decisions related to their business performance. Managerial accounting is primarily used for internal purposes.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	1. To Apply the financial tools in the evaluation of the various targets achievable in future 2. To make the students employable as Finance Managers in the field of Accounting and Finance 3. To learn about various methods of costing 4. To decision techniques of marginal costing 5. To prepare a fixed and flexible budget.

Course Content (Theory)	Weightage	Contact hours
Unit 1 Concept and measurement of Cost of Capital: Importance and concept - Measurement of Specific Costs - Computation of Overall Cost of Capital	20%	**9**
Unit 2: Capital Structure Theories - Net Income Approach - Net Operating Income Approach - Modigliani-Miller Approach Designing Capital Structure	20%	**9**
Unit 3: Leverage- Operating Leverage - Financial Leverage - Combined Leverage	20%	**9**
Unit 4: Capital Budgeting: Non-Discounted methods -Payback Period-Accounting Rate of Return	20%	**9**
Unit 5 Capital Budgeting: Discounted methods Net Present Value method - Internal Rate of Return - Profitability index	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Discussion on concepts and issues on insurance use in an organization, case discussion on the claim of insurance products, Projects/ Assignments/ Quizzes/ Class participation.

Course Objectives:	Bloom's Taxonomy Domain

After successful completion of the above course, students will be able to: CO1: Apply the financial tools in the evaluation of the various targets achievable in the future. CO2: The course will make the students employable as Finance Managers in the field of Accounting and Finance. CO3: To learn about various methods of costing. CO4: To decision techniques of marginal costing CO5: To prepare a fixed and flexible budget.	CO1: Apply CO2: Employable CO3: Learn CO4: Decisions CO5: Prepare

Learning Resources	
1.	Reference Books: 1. Jawahar Lal and Seema Srivastava; *Cost Accounting*, McGraw Hill Education (India Private Limited) 2. M. N. Arora A Textbook on Cost and Management Accounting Vikas Publication. 10 th Edition 3. Charles T. Horngren Cost Accounting- A Managerial Emphasis Pearson – 14th Edition 4. Ravi Kishore Cost Management Accounting Taxman – Latest Edition 5. Hilton & Maher Cost Management : Strategies for Business TMH – Latest Edition 6. Dr. S N Maheshwari, CA Sharad K. Maheshwari, *Principles of Management Accounting*, Sultan Chand & Sons. 7. Paresh Shah, *Management Accounting*, Oxford University Press
2.	Journals, Periodicals, Reference 1. Journal of Accounting Research 2. Contemporary Accounting Research 3. Accounting, Organisations and Society
3.	Other Electronic Resources: www.onllinelibrary.wiley.com • https://accountinginfocus.com/managerial-accounting-2/introduction-managerial-accounting-2/what-is-managerial-accounting/ • https://www.coursera.org/lecture/accounting-for-managers/learning-objectives-and-what-is-managerial-accounting-CIrg0 • https://www.edx.org/course/management-accounting • https://courses.lumenlearning.com/wm-accountingformanagers/chapter/key-components-of-managerial-accounting/

Evaluation Scheme	**Total Marks**

Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	3	0	0	0	0	0	0	0
CO2	3	0	2	2	2	0	0	0
CO3	0	0	2	3	3	0	0	0
CO4	0	0	3	2	3	0	3	0
CO5	0	1	0	0	0	0	0	1

Mapping of POs & COs

	PSO1	PSO2	PSO3	PSO4

CO1	0	0	1	0
CO2	0	1	0	0
CO3	2	3	2	2
CO4	2	1	3	1
CO5	1	0	2	2

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE **BA205**	**COURSE NAME** **COMPUTER PROGRAMMING C**	**SEMESTER** II

Teaching Scheme (Hours)				**Teaching Credit**			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Information Terminology
Course Category	Business Analytics

Course focus	Skills
Rationale	By learning C, Students can be able to understand and visualize the inner workings of computer systems. This can include aspects like allocation and memory management along with their architecture and the overall concepts that drive programming.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	1. To Apply fundamental knowledge of computer hardware and number systems. 2. To create employable as ability to write, compile and debug programs in C language 3. To learn basic terminology used in computer programming. 4. To decision the dynamics of memory by the use of pointers. 5. To prepare decision structures, loops and functions.

Course Content (Theory)	Weightage	Contact hours
Unit 1Introduction to Computers: Computer Systems, Computing Environments, Computer Languages, Creating and running programs, Program Development. Introduction to the C Language: Background, C Programs, Identifiers, Types, Variables, Constants, Input / Output, Operators, Expressions, Precedence and Associativity, Expression Evaluation, Type conversions, Statements- Selection Statements(making decisions) – if and switch statements, Repetition statements (loops)-while, for, do-while statements, Loop examples, other statements related to looping – break, continue,Simple C Program examples.	20%	**9**
Unit 2: Functions-Designing Structured Programs, Functions, user defined functions, inter function communication,Standard functions, Scope, Storage classes-auto, register, static, extern, scope rules, type qualifiers, recursion- recursive functions, Limitations of recursion, example C programs, Preprocessor commands. Arrays – Concepts, using arrays in C, inter function communication, array applications, two – dimensional arrays, multidimensional arrays, C program examples.	20%	**9**
Unit 3: Pointers – Introduction (Basic Concepts), Pointers for inter function communication, pointers to pointers, compatibility, Pointer Applications-Arrays and Pointers, Pointer Arithmetic and arrays, Passing an array to a function, memory allocation functions,	20%	**9**

array of pointers, programming applications, pointers to void, pointers to functions. Strings – Concepts, C Strings, String Input / Output functions, arrays of strings, string manipulation functions, string / data conversion, C program examples.		
Unit 4: Function: Function definition and function prototype. Function call by value and call by reference. Pointer to a function,	20%	**9**
Unit 5 Bubble sort,selectionsort,linder search,and binary search. Scope rules storage classes- Bit wise operations Data Files: Formatted, Unformatted and text files , Command line arguments	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Projects/ Assignments/ Quizzes/ Class participation, Various Practicals

Course Outcomes:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: Apply fundamental knowledge of computer hardware and number systems CO2: Employable as ability to write, compile and debug programs in C language CO3: To learn basic terminology used in computer programming. CO4: To decision the dynamics of memory by the use of pointers. CO5: To prepare decision structures, loops and functions.	CO1: Apply CO2: Employable CO3: Learn CO4: Decisions CO5: Prepare

Learning Resources

1.	Reference Books: 1. C programming By Ritchie & Kernighan 2. Byron S Gottfried, "Programming with C", Schaum"s Outlines, Second Edition, Tata McGraw-Hill, 2006. 3. Dromey R.G., "How to Solve it by Computer", Pearson Education, Fourth Reprint,2007. 4. Kernighan,B.W and Ritchie,D.M, "The C Programming language", Second Edition,PearsonEducation, 2006. 5. C& Data structures – P. Padmanabham, Third Edition, B.S. Publications.
2.	Journals, Periodicals, Reference 1. Journal of Computer and System Sciences 2. International Journal of Computers and Applications 3. Indian Journal of computer science and engineering,
3.	Other Electronic Resources: www.onllinelibrary.wiley.com

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	3	0	2	2	2	0	0	0
CO3	0	0	2	3	3	0	0	0
CO4	0	0	3	2	3	0	3	0
CO5	0	1	0	0	0	0	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	2	0	3
CO2	0	1	0	0	0
CO3	1	0	3	0	3
CO4	0	0	1	3	0
CO5	1	0	1	0	1

COURSE CODE	**COURSE NAME**	**SEMESTER**
BA206	Data Visualization – Microsoft Excel	II

Teaching Scheme (Hours)				**Teaching Credit**			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Information Terminology
Course Category	Business Analytics
Course focus	Skills

Rationale	Microsoft Excel enables users to format, organize and calculate data in a spreadsheet. By organizing data using software like Excel, data analysts and other users can make information easier to view as data is added or changed.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	1. To Apply the chart function of excel to represent the numeric data in multiple formats 2. To Employe to manage and analyze the data 3. To learn different functions and components of Excel Spreadsheet. 4. To decision ability to use Pivot Tables and Charts 5. To prepare formulas to manipulate numeric data in excel spreadsheet

Course Content (Theory)	Weightage	Contact hours
Unit 1Introductions Interface, Tabs & Ribbons, Cell Styles,Paste Special, Document Windows, Formatting numbers, custom and specialformat, modifying rows and columns	20%	**9**
Unit 2: Formulas and Formatting Using Operations, Common Formulas,Using relative and absolute references,Autofill a series, Creating custom lists, series formatting, custom formatting rule,data tools, data validations, goal seek,name ranges, formulas with cell names	20%	**9**
Unit 3: Looksups & Conditional Logic Vlookup, Hlookup, If Statements, nestedIF, AND, OR, NOT, SUMIF, AVERAGEIF, COUNTIF, COUNTIFS,Case formulas,	20%	**9**
Unit 4: Charts Chart Types, Update Chart, Line Chart, Scatter Chart, legenda, Data labels, adding graphic to charts, Chart layouts	20%	**9**
Unit 5 Filter and Pivot Tables Group and ungroup, Sort Data, Filter Data, Advance Filter, Conditional Sorting and Filtering, Creating Pvito Tables, Choosing fields, Pivottable layout, filtering pivottables, Pivot charts	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Projects/ Assignments/ Quizzes/ Class participation, Various Practicals

Course Outcomes:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: Apply the chart function of excel to represent the numeric data in multiple formats CO2: Employable to manage and analyze the data CO3: learn different functions and components of Excel Spreadsheet. CO4: decision ability to use Pivot Tables and Charts CO5: prepare formulas to manipulate numeric data in excel spreadsheet	CO1: Apply CO2: Employable CO3: Learn CO4: Decisions CO5: Prepare

Learning Resources	
1.	Reference Books: 1. Microsoft Excel 2016 Bible: The Comprehensive Tutorial Resource, John Walkenbach, Wiley Publications 2. Reference books : 1. Microsoft Excel 2019, Data Analysis and Business Modelling, Wayne Winston, 6th Edition, Microsoft
2.	Journals, Periodicals, Reference 1. Journal of Computer and System Sciences 2. International Journal of Computers and Application
3.	Other Electronic Resources: www.onllinelibrary.wiley.com

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	3	0	2	2	2	0	0	0
CO3	0	2	2	3	1	0	0	0
CO4	0	0	3	2	1	0	3	0
CO5	0	1	0	0	0	0	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	2	0	3
CO2	0	1	0	0	0
CO3	1	0	3	0	3
CO4	0	0	1	3	0
CO5	1	0	1	0	1

COURSE CODE	COURSE NAME	SEMESTER
BA301	Business Statistics	III

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	

Course Category	Core -
Course focus	Employability & Skills
Rationale	
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Bloom's Taxonomy)**	1. To able to understand frequency distribution and its variance 2. To examine applications of quantitative methods to management decisions. 3. To frame and formulate management decision problems. 4. To able to minimize the sample errors.

Course Content (Theory)	Weightage	Contact hours
Introduction to Business Statistics: Introduction to Statistics, Statistics in Business, Types of data – Nominal, Ordinal, Interval, Ratio. • Types of variables – Dependent, independent, moderating, intervening, extraneous. Discrete/continuous. • Charts and Graphs. Descriptive Statistics: • Measure of central tendency – mean, median, quartile, mode (for Group and ungrouped data) • Measure of variability – Range, interquartile range, standard deviation, variance, coefficient of variation, (for Group and ungrouped data) • Measures of shape – kurtosis, skewness, the boxplot.	**25%**	**9**
Unit: 2 Probability Distribution: Discrete distribution – Binomial, Poisson. • Continuous distribution – Uniform, normal. Hypothesis testing: • Types of hypothesis – research, statistical, substantive. • Null and alternative hypotheses. • One-tailed & Two-tailed test. • Types of Error – Type I & Type II. • Level of significance. • Steps of hypothesis testing	**20%**	**9**
Unit: 3 Parametric Tests Uni-variate tests: • z-test, T-test, Levene's F-test Bi-variate tests: • T-test – Paired and independent, Pearson's Correlation, Simple Linear Regression, One Way ANOVA	**20%**	**9**
Unit: 4 Non-Parametric Tests Uni-variate tests: • Chi-square goodness of fit for uniform distribution Bi-variate tests: • Spearman's Rank Correlation, Mann-Whitney U test, Wilcoxon Sign Paired Rank Test, Chi-square test of independence Multivariate: • Kruskal-Wallis, Friedman's test	**20%**	**9**
Unit: 5 Normal Distribution & Multiple Regression Overview of Multiple Regression, Factor Analysis, Multidimensional scaling, and Discriminant analysis. – Application	**15%**	**9**

of Excel and SPSS		

Instructional Method and Pedagogy: (Max. 100 words)

Discussion on concepts and issues on insurance use in an organization, case discussion on the claim of insurance products, Projects/ Assignments/ Quizzes/ Class participation.

Course Objectives:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: **Understand** basic statistical concepts such as statistical collection, species characteristics, statistical series, tabular and graphical representation of data CO2: **Assess** the applicability of statistical tools and techniques for solving business problems. CO3**: Identify** relevant test techniques for business issues. CO4: **Analyse data** and information with the use of globally accepted basic tools/techniques. CO5: **Interpret** the results of quantitative analysis and report writing & **Appraise** the ethicality of the inferences drawn from the results of the statistical tools or techniques.	CO1: Understand CO2: Assess CO3: Identify CO4: Analyse CO5: Interpret

Learning Resources	
1.	Reference books 1. Business Statistics, Sanjiv Jaggia, Alison Kelly, McGraw Hill 2. M. S. Excel: Statistical Tools for Managers, D. P. Apte, Exce 3. Statistics for Management, Richard I. Levin and David S. Rubin, Pearson 4. Statistics Methods, SP Gupta, Sultanchand
2.	Journals, Periodicals, Reference 1. Journal of Indian Business Research 2. International Journal of Statistics and Analysis 3. Sankhya – Indian Journal of Statistics 4. Economic Times 5. Financial Express 6. Business Standard

3.	Other Electronic Resources: www.onllinelibrary.wiley.com

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PSO1	PSO2	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1	1	2	0	0	0	0	0	0	0
CO2	1	3	1	0	0	0	1	2	2
CO3	0	3	1	0	0	0	1	2	2
CO4	1	2	0	0	0	0	0	0	2
CO5	0	2	1	0	0	0	0	1	1

Mapping of POs & COs

	PSO1	PSO2	PSO3	PSO4
CO1	0	0	2	0
CO2	2	3	0	0
CO3	2	3	2	3
CO4	1	1	2	1
CO5	1	0	1	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA302	**Business Strategy**	**III**

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	
Course Category	Core Subject
Course focus	Employability & Skills
Rationale	Statistics is a course in the methods for gathering, analyzing, and interpreting data. Students will also explore basic probability concepts, including measuring and modeling uncertainty, and

	students will use various data distributions, along with the Linear Regression Model, to analyze and inform business decisions.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Bloom's Taxonomy)**	CO1: Identify the basic concepts of hypothesis testing; distinguish between Type I and Type II errors; conduct hypothesis testing for population means. C02: Interpret the relevance of statistical findings for business problem-solving and decision-making. CO3: Construct and interpret confidence intervals. CO4: Calculate the mean and variance of a discrete distribution. CO5: Identify methods of obtaining data and identify the advantages and disadvantages of each as applied to solving problems

Course Content (Theory)	Weightage	Contact hours
Unit 1 Definition, nature, scope, and importance of strategy and strategic management (Business policy). Strategic decision-making. Process of strategic management and levels at which strategy operates. Role of strategists. Defining strategic intent: Vision, Mission, Business definition, Goals, and Objectives.	**25%**	**9**
Unit 2: Environmental Appraisal—Concept of environment, components of the environment (Economic, legal, social, political, and technological). Environmental scanning techniques- ETOP, QUEST and SWOT (TOWS).	**20%**	**9**
Unit:3 Internal Appraisal – The internal environment, organizational capabilities in various functional areas and Strategic Advantage Profile. Methods and techniques used for an organizational appraisal (Value chain analysis, Financial and non-financial analysis, historical analysis, Industry standards and benchmarking, Balanced scorecard and key factor rating). Identification of Critical Success Factors (CSF).	**20%**	**9**
Unit 4 Corporate level strategies- Stability, Expansion, Retrenchment and Combination strategies. Corporate restructuring. Concept of Synergy. Mergers & Acquisitions., Corporate Restructuring. Business level strategies—Porter's framework of competitive strategies; Conditions, risks and benefits of Cost leadership, Differentiation, and Focus strategies.	**20%**	**9**
Unit 5 Strategic Analysis and Choice—Corporate level analysis (BCG, GE Nine-cell, Hofer's product market evolution, and Shell	**15%**	**9**

Directional policy Matrix). Industry level analysis; Porter's five forces model. Qualitative factors in the strategic choice.		

Instructional Method and Pedagogy: (Max. 100 words)

Discussion on concepts and issues on insurance use in an organization, case discussion on the claim of insurance products, Projects/ Assignments/ Quizzes/ Class participation.

Course Objectives:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: **Determine** and interpret statistical significance, including p-values. CO2: **Identify** the basic concepts of hypothesis testing; distinguish between Type I and Type II errors; conduct hypothesis testing for population mean. CO3: **Construct** and interpret confidence intervals. CO4: **Calculate** the mean and variance of a discrete distribution. CO5: **Identify** methods of obtaining data and identify the advantages and disadvantages of each as applied to solving problems	CO1: Determine CO2: Identify CO3: Construct CO4: Calculate CO5: Identify

Learning Resources	
1.	**Reference books:**
2.	**Journals, Periodicals, Reference:**
3.	Other Electronic Resources: www.onllinelibrary.wiley.com

Evaluation Scheme	**Total Marks**
Theory: mid-semester Marks	20 marks
Theory: End Semester Marks	40 marks

Theory: Continuous Evaluation Component Marks	Attendance	05 marks
	MCQs	10 marks
	Open Book Assignment	15 marks
	Article Review	10 marks
	Total	**40 Marks**

Mapping of POs & COs

	PSO1	PSO2	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1		2							
CO2	2	2				2	1		
CO3		2			1	2			
CO4		2				2			
CO5		1				3			2

Mapping of POs & COs

	PSO1	PSO2	PSO3	PSO4
CO1	0	0	1	0
CO2	0	1	0	0
CO3	2	1	2	3
CO4	1	1	3	1
CO5	1	0	2	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA303	Consumer Behaviour	III

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**
Course Category	Marketing Elective
Course focus	Employability/ Marketing Skills
Rationale	The subject focuses on understanding consumer behaviour and its impact on marketing decisions. It explores various models, group influences, perception, motivation, attitudes, and consumer rights. This knowledge is essential for effective marketing strategies and meeting consumer needs in a dynamic marketplace.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1. To understand the nature and relevance of consumer behaviour studies in marketing decisions. (Remembering)

	2. To examine the factors influencing consumer behaviour and the consumer buying decision process. (Understanding) 3To analyse the impact of group influences on consumer behaviour, including reference groups and social class. (Applying) 4. To explore the role of perception, motivation, values, and attitudes in consumer behaviour. (Analysing) 5. To comprehend the concept of consumer rights, consumer protection, and recent trends in consumer rights protection. (Evaluating)

Course Content (Theory)	Weightage	Contact hours
Unit 1:Introduction to Consumer Behaviour Consumer Behaviour – Nature & Relevance of Consumer Behaviour studies in marketing decisions. Factors influencing consumer behaviour – Consumer buying decision process with illustration – Buyer roles assumed by consumers – Levels of consumer decision making. models of consumer behaviour- Economic model, learning model, sociological model, Howard Sheth model of buying.	**20%**	**9**
Unit 2:Group Influences on Consumer Behaviour Introduction, of groups , advantages and disadvantage of groups, Factors affecting Group Influence ,reference group, types of reference group, social class and consumer behaviour- Introduction social class categorization, social class life style and buying behaviour, social class and market segmentation, social factor.	**20%**	**9**
Unit 3: Perception and consumer behaviour: - Introduction, meaning, nature, Importance and limitation of perception, Barriers to accurate perception, perception of process **Motivation and consumer behaviour:** - Introduction, motives and motivation, positive or negative motivation, Consumer motives - personal, social motives, Involvement:-types of involvement, measuring involvement, values, values and attitudes, means and end chain model.	**20%**	**9**
Unit 4: Attitude and consumer behaviour:- Meaning of attitude, nature and characteristics of attitude, types of attitude, learning of attitude, sources of influence on attitude formation, Model of attitude- Tricomponent attitude model, multiattribute attitude model	**20%**	**9**

Unit 5:Consumer Rights & Protection Consumerism: Concept & Evolution – Consumer Rights in India – Consumer Protection – Provisions Recent Trends in Consumer Rights Protection**.**	**20%**	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Lectures provide the theoretical foundations, covering key concepts and theories. Case studies offer real-world applications, bridging the gap between theory and practice. Presentations enhance communication skills and engagement. Assignments promote critical thinking by applying knowledge to analyze real-life scenarios. Role-playing activities encourage experiential learning and practical insights. Discussions foster collaboration, knowledge sharing, and broadening perspectives. This multifaceted approach equips students with the necessary skills to analyze consumer behavior, make informed marketing decisions, and navigate practical challenges they may encounter in the field.

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: **Understand** models of consumer behavior and their marketing significance. (Understanding) CO2: **Apply** knowledge of group influences on consumer behavior in real-world scenarios. (Applying) CO3: **Analyse** perception, motivation, values, and attitudes in shaping consumer behaviour. (Analysing) CO4**: Evaluate** attitude models to make informed judgments about consumer attitudes. (Evaluating) CO5: **Demonstrate** knowledge of consumer rights, laws, and emerging trends. (Remembering)	CO1: Understand CO2: Applying CO3: Analysing CO4: Evaluating) CO5: Remembering

Learning Resources	
1.	Textbook: Marketing Management, 13 Edition: A South Asian Perspective, Abraham *Koshy* and Mithileshwar *Jha*, Philip *Kotler* and Kevin Keller

2.	Journals, Periodicals, Reference 1. Schiffman L.G. and Kanuk L.L. (2006), Consumer Behaviour, Latest Edition, Pearson Education, New Delhi. 2. Ramanuj Majumdar, Consumer Behaviour, Prentice Hall of India, New Delhi, 2011 3. Jay D. Lindquist, M. Joseph Sirgy (2009), Consumer Behaviour, Latest Indian Edition, Cengage Learning 4. Loudon and Della Bitta, Consumer Behaviour: Concepts and Applications, Tata McGrawHill. New Delhi 5. Assael, H. Consumer Behaviour and Marketing Action, Ohio, South Western
3.	Other Electronic Resources:

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	0	3	0	0	0	0	0	0
CO3	0	0	3	0	0	0	0	0
CO4	0	0	0	3	0	0	0	0

CO5	0	0	0	0	3	0	0	0

Program outcome

PO1: Understanding of business concepts and principles relevant to analytics
PO2: Ability to apply data analytics techniques and tools to real-world business situations
PO3: Proficiency in statistical analysis and data visualization
PO4: Ability to develop predictive models using machine learning algorithms
PO6: Critical thinking and problem-solving abilities with a focus on data-driven decision makin5
PO6: Ethical decision-making skills with respect to the use of data and analytics
PO7: Entrepreneurial mind-set and innovation skills with respect to the development and implementation of data-driven business strategies
PO8: Leadership and teamwork skills to effectively collaborate with diverse teams in a data-driven environment

Mapping of POs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	0	0	0
CO2	0	2	0	0	0
CO3	0	0	3	0	0
CO4	0	0	0	3	0
CO5	0	0	0	0	3

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA304	Managerial Finance	III

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	This course introduces corporate finance, with an emphasis on project valuation. We review important ideas from modern finance theory and develop financial tools needed for valuing investment projects. Topics covered include the time value of money, estimating cash flows, accounting for risk, performing sensitivity analysis, developing appropriate selection criteria, and valuing projects as real options.
Course Category	Core - Finance
Course focus	Employability & Skills

Rationale	Managerial finance ensures that the revenue generated is used profitably. Financial management professionals need to ensure that the revenue generated flows through operations efficiently and is readily available to buy raw materials, assist sales strategies and fulfill financial commitments.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Bloom's Taxonomy)**	1. The purpose of the course is to offer the students relevant, systematic, efficient, and actualknowledge of financial management that can be applied in practice with making finances. 2. To apply future value and present value concepts to single sums, mixed streams, and annuities. 3. To apply time value, risk, and return concepts. 4. To apply valuation techniques to bonds 5. To apply time value, risk, and return concepts to constant and variable growth models. To apply valuation techniques to stocks.

Course Content (Theory)	Weightage	Contact hours
Unit 1: Financial Management: An Overview - Financial Decisions in a Firm - Goal of Financial Management – Th Fundamental Principle of Finance -Building Blocks of Modern Finance - Risk-Return Tradeoff - Agency Problem-Business Ethics and Social Responsibility - Organization of the Finance Function -Relationship of Finance to Economics and Accounting Emerging Role of the Financial Manager in India	**25%**	**9**
Unit 2: The Time Value of Money Rationale –Techniques -Practical Applications of Compounding and Present Value Techniques	**20%**	**9**
Unit 3: Risk and Return Risk and Return of a Single Asset -Average rate of return-variability of rates of return-Expected return and risk	**20%**	**9**
Unit 4: Valuation of Bonds and Stocks Bond Valuation-Bond Yields-Bond Market – Valuation of Preference Stock Equity Valuation: Dividend Discount Model The P/E Ratio Approach - The Relationship between Earnings-Price Ratio - Expected Return, and Growth - StockMarket	**20%**	**9**
Unit 5: Dividend Policy	**15%**	**9**

Factors influencing dividend policy-PracticalConsiderations-Stability-forms of dividend		

Instructional Method and Pedagogy: (Max. 100 words)

Discussion on concepts and issues on insurance use in an organization, case discussion on the claim of insurance products, Projects/ Assignments/ Quizzes/ Class participation.

Course Objectives:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: **Understand** the time value of money concept to single sums, mixed streams, and annuities with reference to investments. CO2: **Analysis** of risk-return trade-off variable growth models in valuation techniques for stocks. CO3: **Calculate** bond valuation and equity valuation. CO4: **Understand** the role of financial regulators. CO5: **Evaluate** the role of finance operation.	CO1: Understand CO2: Demonstrate CO3: Calculate CO4: Understand CO5: Evaluate

Learning Resources

1.	Reference books 5. Khan M Y: Indian Financial System, Tata Macgraw Hill, New Delhi 2000 6. Bhole, L M : Financial Institutions and Markets : Structure Growth and Innovations. 2nd edition: New Delhi : Tata McGraw Hill, 7. Srivastava, R M: Financial Institutions in Indian Financial Institutions
2.	Journals, Periodicals, Reference Journals & Periodicals Journal of Finance. Published by Wiley. The Review of Financial Studies. Journal of Financial Economics. Journal of Accounting and Economics. Journal of Financial and Quantitative Analysis. Journal of Money, Credit and Banking. Journal of International Money and Finance.
3.	Other Electronic Resources: www.onllinelibrary.wiley.com https://www.investopedia.com/ask/answers/030315/what-financial-services-sector.asp https://www.ibef.org/industry/financial-services-india.aspx https://financialservices.gov.in/

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PSO1	PSO2	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1		2							
CO2	2	2				2	1		
CO3		2			1	2			

CO4		2				2			
CO5		1				3			2

Mapping of POs & COs

	PSO1	PSO2	PSO3	PSO4
CO1	0	0	1	0
CO2	0	1	0	0
CO3	2	1	2	3
CO4	1	1	3	1
CO5	1	0	2	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	**COURSE NAME**	**SEMESTER**
BA 305	Basics of DBMS	III

Teaching Scheme (Hours)				**Teaching Credit**			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**
Course Category	Core course
Course focus	Employability
Rationale	The subject "Database Management Systems" aims to equip students with a comprehensive understanding of database concepts, design principles, and data organization techniques. It emphasizes the significance of structured data management in various applications

	and introduces students to relational and entity-relationship models. The subject prepares students for efficient and effective data handling in modern business and technological environments.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1. To Understand the fundamental concepts of Database Management Systems (DBMS) and their significance in modern data-driven applications. (Understanding) 2. To Analyze and apply the Relational Model and ER Model for data organization, constraints, and integrity in database design. (Analyzing) 3.To Demonstrate proficiency in normalizing relational databases to eliminate redundancy and ensure data integrity. (Applying) 4. To Evaluate different file organization techniques in DBMS for efficient data storage and access. (Evaluating) 5. To Apply the theoretical knowledge and practical skills acquired to design and develop a real-world application using a Database Management System. (Applying and Creating)

Course Content (Theory)	Weightage	Contact hours
Unit 1: The Basic Concepts Need for a Database Management System, The file based system, Limitations of file based system, The Database Approach, The Logical DBMS Architecture, Three level architecture of DBMS or logical DBMS architecture, Mappings between levels and data independence, The need for three level architecture, Physical DBMS Architecture, DML Precompiler, DDL Compiler, File Manager, Database Manager, Query Processor,Database Administrator, Data files indices and Data Dictionary, Commercial Database Architecture, Data Models	**20%**	**9**
Unit 2: Relational and ER Models The Relational Model, Domains, Attributes, Tuple and Relation, Super keys Candidate keys and Primary keys for the Relations, Relational Constraints, Domain Constraint,	**20%**	**9**

Key Constraint, Integrity Constraint, Update Operations and Dealing with Constraint Violations, Relational Algebra, Basic Set Operation, Cartesian Product, Relational Operations, Entity Relationship (ER) Model, Entities, Attributes, Relationships, More about Entities and Relationships, Defining Relationship for College Database, E-R Diagram, Conversion of E-R Diagram to Relational Database		
UNIT:3 Database Integrity and Normalisation Relational Database Integrity, The Keys, Referential Integrity, Entity Integrity, Redundancy and Associated Problems, Single-Valued Dependencies, Single-Valued Normalisation, The First Normal Form, The Second Normal Form, The Third Normal Form, , Dependency Preservation, Lack of redundancy, Rules of Data Normalisation, Eliminate Repeating Groups, Eliminate Redundant Data, Eliminate Columns Not Dependent on K	**20%**	**9**
Unit 4: File Organisation in DBMS Physical Database Design Issues, Storage of Database on Hard Disks, File Organisation and Its Types, Heap files (Unordered files), Sequential File Organisation, Indexed (Indexed Sequential) File Organisation, Hashed File Organisation, Types of Indexes, Index and Tree Structure, Multi-key File Organisation, Need for Multiple Access Paths, Multi-list File Organisation, Inverted File Organisation, Importance of File Organisation in Databases	**20%**	**9**
Unit 5: Practical Work Designing E-R models of given system - Normalization of given relational schemas**Application Development:** Development of a Hospital Management System Need to Develop the Hospital Management System (An HMS), Creating a Databasefor HMS, Developing Front End Forms, Reports, Using Queries and Record set	**20%**	**9**

Instructional Method and Pedagogy: (Max. 100 words)

The instructional methods for the subject will include lectures, interactive discussions, and hands-on practical sessions. Lectures will cover the theoretical concepts and principles of Database Management Systems, while interactive discussions will encourage critical thinking and problem-solving. Practical sessions will provide students with the opportunity to apply their knowledge in real-world scenarios, such as designing E-R models, normalizing databases, and developing a Hospital Management System. Students will also engage in group projects and case studies to enhance their teamwork and analytical skills.

Course Outcomes:	Blooms' Taxonomy Domain
After successful completion of the above course, students will be able to: **CO1**: Recall and explain the basic concepts of Database Management Systems and their importance in managing data. (Remembering) **CO2**: Analyze and compare the Relational Model and ER Model, and transform an ER diagram into a relational database schema. (Analyzing) **CO3**: Apply normalization rules to eliminate redundancy and improve data integrity in a given relational database. (Applying) **CO4**: Evaluate and compare different file organization techniques for efficient data storage and retrieval. (Evaluating) **CO5:** Create a fully functional Hospital Management System using a Database Management System, including database design, front-end development, and query implementation. (Creating)	CO1: Remembering CO2: Analyzing CO3: Applying CO4: Evaluating CO5: Creating

Learning Resources	
1.	Textbooks: Database Systems - Design, Implementation and Management 4th Edition :Rob & Coronel (Course Technology-Thomson Learnin g
2.	Reference Books: 1. Database Management System : Vipin Desai (Galgotia Pub.) 2.Modern Database Management 7th Edition : Hoffer, Prescott and McFadden, Pearson Education. Database Management System : Korth (Tata McGraw Hill) 1. Journal of Computer and System Sciences 2. International Journal of Computers and Applications 3.Indian Journal of computer science and engineering,
3.	Other Electronic Resources: www.onllinelibrary.wiley.com

Evaluation Scheme	Total Marks
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks

Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	1	0	0	0	0	0	0	0
CO2	0	2	0	0	0	0	0	0
CO3	0	0	3	0	0	0	0	0
CO4	0	0	0	3	0	0	0	0
CO5	0	0	0	0	3	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	0	0	0	0
CO2	0	2	0	0	0
CO3	0	0	2	0	0
CO4	0	0	0	1	0
CO5	0	0	0	0	3

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE BA306	COURSE NAME Data Visualization Tools - MS Power BI	SEMESTER III

Teaching Scheme (Hours)				Teaching Credit			
Lecture	Practical	Tutorial	Total Hours	Lecture	Practical	Tutorial	Total Credit
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic Computer Knowledge**
Course Category	Basic Core Courses
Course focus	Employability/ Data visualization Skills
Rationale	Power BI has emerged as a crucial tool in the field of data analysis and reporting, enabling organizations to extract valuable insights from complex data sets. This subject aims to equip students with the knowledge and skills to effectively utilize Power BI in their professional careers. By learning Power BI, students will be able to

	transform raw data into meaningful visualizations, make data-driven decisions, and communicate insights to stakeholders. The subject's rationale lies in the increasing demand for professionals who can harness the power of Power BI to drive business success
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1. To Understand the need, importance, and advantages of Power BI. 2. To Gain knowledge of Power BI's architecture, data access options, and installation process. 3. To Learn how to design reports using different data sources and filters in Power BI. 4. To Acquire skills in visualizing data effectively using various chart types and customization options. 5. To Develop proficiency in managing data hierarchies, drill-down functionalities, and report parameters in Power BI

Course Content (Theory)	Weightage	Contact hours
Unit – 1 Introduction Introduction To Power BI – Need, Importance Power BI – Advantages And Scalable Options History – Power View, Power Query, Power Pivot Power BI Data Source Library And DW Files Cloud Collaboration And Usage Scope Business Analyst Tools, MS Cloud Tools Power BI Installation And Cloud Account Power BI Cloud And Power BI Service Power BI Architecture And Data Access On Premise Data Access And Microsoft On Drive Power BI Desktop – Installation	**20%**	**9**
Unit – 2 Reports & Auto filters Report Design With Legacy & .DAT Files Report Design With Databse Tables Understanding Power BI Report DesignerReport Canvas, Report Pages: Creation, Renames Report Visuals, Fields And UI Options Experimenting Visual Interactions, Advantages Reports With Multiple Pages And Advantages Pages With Multiple Visualizations. Data Access PUBLISH Options And Report Verification In Cloud "GET DATA" Options And Report Fields, Filters Report View Options: Full, Fit Page, Width Scale Report Design Using Databases & Queries Query Settings And Data Preloads Navigation Options And Report Refresh Stacked Bar Chart, Stacked Column Chart Clustered Bar Chart, Clustered Column Chart Adding Report Titles. Report Format Options Focus Mode, Explore And Export Settings	**20%**	**9**

Unit–3 Visualization Power BI Design: Canvas, Visualizations And Fileds Import Data Options With Power BI Model, Advantages Direct Query Options And Real-Time (LIVE) Data Access Data Fields And Filters With Visualizations Visualization Filters, Page Filters, Report Filters Conditional Filters And Clearing. Testing Sets Creating Customised Tables With Power BI Editor .General Properties, Sizing, Dimensions, And Positions Alternate Text And Tiles. Header (Column, Row) Properties Grid Properties (Vertical, Horizontal) And Styles Table Styles & Alternate Row Colors – Static, Dynamic Sparse, Flashy Rows, Condensed Table Reports. Focus Mode Totals Computations, Background	**20%**	**9**
Unit–4 Advance Visualization tools CHART Report Types And Properties stacked bar chart, stacked column chart clustered bar chart, clustered column chart 100% stacked bar chart, 100% stacked column chart line charts, area charts, stacked area charts line and stacked row charts line and stacked column charts waterfall chart, scatter chart, pie chart Field Properties: Axis, Legend, Value, Tooltip Field Properties: Color Saturation, Filters Types Formats: Legend, Axis, Data Labels, Plot Area Data Labels: Visibility, Color And Display Units Data Labels: Precision, Position, Text Options Analytics: Constant Line, Position, Labels Working With Waterfall Charts And Default Values Modifying Legends And Visual Filters – Options Map Reports: Working With Map Reports Hierarchies: Grouping Multiple Report Fields Hierarchy Levels And Usages In Visualizations Preordered Attribute Collection – Advantages Using Field Hierarchies With Chart Reports Advanced Query Mode @ Connection Settings – Options Direct Import And In-Memory Loads, Advantages	**20%**	**9**
Unit–5 Data Management with hierarchies & drill down Hierarchies And Drilldown Options Hierarchy Levels And Drill Modes – Usage Drill-Thru Options With Tree Map And Pie Chart Higher Levels And Next Level Navigation Options Aggregates With Bottom/Up Navigations. Rules Multi Field Aggregations And Hierarchies In Power BI DRILLDOWN, SHOWNEXTLEVEL, EXPANDTONEXTLEVEL, SEE DATA And SEE RECORDS Options. Differences Toggle Options With Tabular Data. Filters Drilldown Buttons And Mouse Hover Options @ Visuals Dependant Aggregations, Independent Aggregations Automated Records Selection With Tabular Data Report Parameters : Creation And Data Type Available Values And Default Values. Member Values Parameters For Column Data And Table / Query Filters Parameters	**20%**	**9**

Creation – Query Mode, UI Option Linking Parameters To Query Columns – Options Edit Query Options And Parameter Manage Entries Connection Parameters And Dynamic Data Sources Synonyms – Creation And Usage Options		

Instructional Method and Pedagogy: (Max. 100 words)

The instructional method for Power BI will encompass a combination of lecture sessions, real-life case studies, interactive presentations, assignments, tutorials, and hands-on projects. The lectures will provide a comprehensive understanding of the theoretical concepts and practical applications of Power BI. Real-life case studies will demonstrate how Power BI is used in various industries and problem-solving scenarios. Interactive presentations will engage students in discussions and encourage critical thinking. Assignments and tutorials will offer opportunities for practical application and skill development, while hands-on projects will allow students to work on real-world data analysis tasks using Power BI.

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: Evaluate the significance of Power BI in the context of data analysis and reporting. (Remembering) CO2: Analyse the components and features of Power BI, including its architecture and installation process. (Understanding) CO3: Create reports in Power BI by utilizing different data sources and applying various filters. (Applying) CO4: Design visually appealing and informative visualizations using different chart types and customization options in Power BI. (Analyzing) CO5: Manage data hierarchies, implement drill-down functionalities, and utilize report parameters effectively in Power BI. (Creating)	CO1: Remembering CO2: Understanding CO3: Applying CO4: Analysing CO5: Creating

Learning Resources	
1.	Textbooks: 1. Microsoft Power BI Dashboards Step by Step, First Edition, By pearson

	2. Analyzing Data with Microsoft Power BI and Power Pivot for Excel. by Ferrari Alberto , Russo Marco, PHI LEARNING PVT. LTD. | MICROSOFT PRESS
2.	Journals, Periodicals, Reference 1. Mastering Microsoft Power BI: Expert techniques for effective data analytics and business intelligence, brett powell , Packt Publishing 2. Microsoft Power BI Complete Reference: Bring your data to life with the powerful features of Microsoft Power BI, by Devin Knight , Brian Knight , Mitchell Pearson , Manuel Quintana , Brett Powell , Packt Publishing Limited.
3.	Other Electronic Resources:

Evaluation Scheme	**Total Marks**	
Theory: Mid semester Marks	20 marks	
Theory: End Semester Marks	40 marks	
Theory: Continuous Evaluation Component Marks		
	Attendance	05 marks
	MCQs	10 marks
	Open Book Assignment	15 marks
	Article Review	10 marks
	Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	0	3	0	0	0	0	0	0
CO3	0	0	3	0	0	0	0	0
CO4	0	0	0	3	0	0	0	0
CO5	0	0	0	0	3	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	0	0	0	0

CO2	2	0	0	0	0
CO3	0	2	0	0	0
CO4	0	2	0	0	0
CO5	0	0	2	0	0

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	**COURSE NAME**	**SEMESTER**
BA401	Introduction to AI and Machine Learning	IV

Teaching Scheme (Hours)				**Teaching Credit**			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**
Course Category	Basic Core Courses
Course focus	Employability/ Machine learning Skills/ Entrepreneurship
Rationale	This subject on Machine Learning and Artificial Intelligence equips students with the knowledge and skills to understand and apply machine learning algorithms and techniques in real-world scenarios. It covers a wide range of topics, including supervised and unsupervised learning, discriminative models, Gaussian models, logic and knowledge representation, automated reasoning, and decision theory. The subject aims to develop students' analytical and problem-solving abilities, preparing them for the evolving field of AI. Instructional methods include lectures, hands-on programming

	exercises, case studies, and discussions to enhance understanding and practical application of the concepts.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1. Define and describe the fundamental concepts and terminologies in machine learning, including supervised, unsupervised, and semi-supervised learning. (Remembering) 2. Apply discriminative models such as least square regression, gradient descent algorithm, linear regression, logistic regression, and support vector machines to solve prediction and classification problems. (Applying) 3.Evaluate and improve machine learning models through techniques like model evaluation, regularization, bias-variance tradeoff, hyper-parameter tuning, and computational learning theory. (Evaluating) 4. Understand the principles and techniques of Gaussian models, including multivariate Gaussian distributions, maximum likelihood estimation, mixture models, and the EM algorithm for clustering. (Analyzing) 5.Explore logic and knowledge representation methods, automated reasoning techniques, strategic reasoning in AI, and decision theory for intelligent decision-making and problem-solving. (Analyzing)

Course Content (Theory)	Weightage	Contact hours
Introduction: Machine learning, Terminologies in machine learning, Types of machine learning: supervised, unsupervised, semi-supervised learning. Discriminative Models: Least Square Regression, 28 Gradient Descent Algorithm, Univariate and Multivariate Linear Regression, Prediction Model, probabilistic interpretation, Regularization, Logistic regression, multi-class classification, Support Vector Machines- Large margin classifiers, Nonlinear SVM, kernel functions, SMO algorithm	**20%**	**9**
Model evaluation and improvement, Regularization, Bias Variance, Hyper- parameter Tuning. Computational Learning theory- Sample complexity, exhausted version space, PAC Learning, agnostic learner, VC dimensions, Sample complexity - Mistake bounds. Gaussian models: Multivariate Gaussian distributions, Maximum Likelihood Estimate, Inferring parameters, Mixture models, EM algorithm for clustering and learning with latent variables	**20%**	**9**
Logic and Knowledge Representation - Knowledge base - Ontology - Commonsense Knowledge Representation of Commonsense	**20%**	**9**

knowledge – Graphical models – Belief networks - State space representation – Vector representation - Propositional logic and predicate logic - Propositional and predicate logic - Syntax - Informal and formal semantics - Validity, satisfiability - Semantic entailment - Equivalence - De Morgan's laws - Decidable problems - Many-sorted logic - first-order, aspects of higher-order logic		
Automated Reasoning– Formal program techniques: specification by pre- and post-conditions, derivation and verification of programs, invariants. Strategic Reasoning in AI - Agents, strategic behaviours of agents in multiagent systems (MAS) by using the language of alternating-time temporal logic (ATL), an extension of the temporal logics CTL and LTL which allows to express game-theoretical notions such as the existence of a winning strategy for a group of agents - Expert system-based reasoning - Production system, semantic network, and frame - Soft computing based reasoning – Fuzzy logic	**20%**	**9**
Decision Theory Decision-Making: basics of utility theory, decision theory, sequential decision problems, decision networks, elementary game theory, sample applications; Problem-solving through Search: forward and backward, state-space, blind, heuristic, hill climbing, best-first, A, A*, AO*, minimax, constraint propagation, intelligent search, meta-heuristics, problem-reduction, neural and stochastic; Intelligent agents - reactive, deliberative, goal-driven, utility-driven, and learning agents artificial Intelligence programming techniques; Planning: planning as search, partial order planning, construction and use of planning graph	**20%**	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Interactive presentations will engage students in discussions and encourage critical thinking. Assignments and tutorials will offer opportunities for practical application and skill development

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: **CO1**:Recall and explain the core concepts, terminologies, and types of machine learning. (Remembering) **CO2:**Apply discriminative models to solve prediction and classification problems using appropriate algorithms and techniques. (Applying)	CO1: Understand CO2: Show CO3: Examine CO4: Learns

CO3: Evaluate and improve machine learning models through model evaluation, regularization, bias-variance analysis, and hyper-parameter tuning. (Evaluating) **CO4:** Analyze and apply Gaussian models for statistical inference, clustering, and learning with latent variables. (Analyzing) **CO5**: Analyze and apply logic and knowledge representation techniques, automated reasoning methods, strategic reasoning in AI, and decision theory for intelligent decision-making and problem-solving. (Analyzing	CO5: Evaluate

Learning Resources	
1.	Reference Books: *Aswathapa K, " Essentials of Business Environment" , Himalaya Publishing House*
2.	Journals, Periodicals, Reference 1. A.C. Fernando, Business Environment, Pearson Publication 2. Shaikh Salim, Business Environment, Pearson Publication 3. Francis Cherunillam, Business Environment, Himalaya Publishing House. 4. Ian Worthington & Chris Britton, The Business Environment, Pearson Publicatio 5. International journal of Business Environment, Inderscience Publishers 6. Business Strategy and the Envrionment, wiley library 7. International Journal of Business environment, SCImago
3.	Other Electronic Resources: www.onllinelibrary.wiley.com

Evaluation Scheme	**Total Marks**	
Theory: Mid semester Marks	20 marks	
Theory: End Semester Marks	40 marks	
Theory: Continuous Evaluation Component Marks		
	Attendance	05 marks
	MCQs	10 marks
	Open Book Assignment	15 marks
	Article Review	10 marks
	Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8

CO1	2	0	0	0	0	0	0	0
CO2	0	2	0	0	0	0	0	0
CO3	0	0	3	0	0	0	0	0
CO4	0	0	0	2	0	0	0	0
CO5	0	0	0	0	2	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	0	0	0	0
CO2	0	2	0	0	0
CO3	0	0	3	0	0
CO4	0	0	0	3	0
CO5	0	0	0	0	3

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	**COURSE NAME**	**SEMESTER**
BA402	HR Analytics	IV

Teaching Scheme (Hours)				**Teaching Credit**			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of HR** Domain
Course Category	Basic Core Courses
Course focus	Employability/ HR Skills/
Rationale	HR analytics is an essential subject as it equips students with the knowledge and skills to leverage data-driven insights for effective human resource management. HR analytics enables professionals to extract meaningful patterns and trends from HR data, leading to evidence-based decision-making. By understanding HR analytics, students can contribute to organizational success by aligning HR strategies with business objectives, optimizing HR processes, and driving a high-performing and engaged workforce.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)

Course Objectives **(As per Blooms' Taxonomy)**	1: Understand the fundamentals of HR analytics: Students will comprehend HR analytics principles and the process of designing HR analytics projects. (Knowledge/Comprehension) 2: Apply descriptive analytics techniques: Students will analyze relevant HR data, implement data cleaning processes, and develop customized metrics for their organization. (Application/Analysis) 3: Utilize predictive analytics tools: Students will make predictions using analytical tools, select appropriate models, and interpret results for future meetings. (Analysis/Evaluation) 4: Apply prescriptive analytics for HR challenges: Students will address HR challenges through prescriptive analytics, including promoting ideas, ensuring engagement, and driving cultural changes. (Evaluation/Synthesis) 5: Demonstrate optimization through prescriptive analytics: Students will optimize HR solutions by influencing stakeholders, proposing contextualized prescriptions, and enhancing organizational performance. (Evaluation/Synthesis)

Course Content (Theory)	Weightage	Contact hours
Unit 1 Introduction to People Analytics This module will help students understand the domain of HR analytics and the process of implementing HR analytics in the context of evolving HR technologies. For example, how will you identify the concerns related to scheduled meetings in your organization (duration, effectiveness, challenges etc.) and make an evidence-based decision through a people analytics process? This module will also help you learn the basics of designing an appropriate HR analytics project for your experience and exposure. Evidence-based Approach HR Analytics Continuum HR Analytic Process: Designing a Project	**20%**	**9**
Unit: 2 Descriptive Analytics This module focuses on the process of capturing relevant data for HR analytics. We will focus on questions such as, the existing and potential sources of relevant data, data cleaning processes, types of metrics, and the process of developing customized proprietary metric for your organization. For illustrations, you will consider the availability of existing data, pertaining to scheduled meetings in your organization	**20%**	**9**

and its reliability, segmentation of the available data and modification of the same, for making business sense in your organizational context. Analytical Foundations of HR Measurement Bringing HR and Finance together Types of HR Metrics Developing Proprietary Metrics for your organization/Issues faced		
Unit 3 – Predictive Analytics By utilizing basic analytical tools, in this module, you will learn to make predictions about the challenges and outcome of future scheduled meetings in your organization. This module will help you make predictions such as – meetings that may not commence on time, relative contribution of current talent management practices to the delay in closing the meeting, types of meetings that are difficult to manage etc., based on different types of analysis. Discussions will also include qualitative analytical tools – Natural Language Processing. Introduction to Predictive Analytics Tools Choosing Predictive Analytic Models for Quantitative Data Working with Qualitative Data Interpreting Predictive Analytics Results	**20%**	**9**
Unit: 4 Prescriptive Analytics Prescriptive analytics in this context will also focus on modifications required in associated HR initiatives to ensure: (a) free flow of value-adding ideas (b) high engagement levels irrespective of hierarchical levels and (c) changes in the culture of the organization, to a high-performing professional one. Furthermore, the module will also briefly discuss ONA – Organizational Network Analysis. Responding to HR Challenges through Prescriptive Analytics Prescriptive Analytics as a Process to Influence Stakeholders Contextualized Prescriptions Optimization through Prescriptive Analytics	**20%**	**9**
Unit:5 Project Illustrations of People Analytics from Staffing, Training, Performance Management, Leadership, Organizational Culture, OD interventions, Organizational Structure etc., are covered and discussed across the four modules discussed above	**20%**	**9**

Instructional Method and Pedagogy: (Max. 100 words)

The instructional method and pedagogy for HR analytics will include a combination of lectures, case studies, presentations, assignments, and tutorials. Lectures will provide a theoretical foundation and conceptual understanding of HR analytics principles. Case studies will enable students to apply their knowledge to real-world scenarios and develop analytical skills. Presentations will foster effective communication and presentation abilities. Assignments will promote critical thinking and problem-solving through data analysis and metric development. Tutorials will provide hands-on guidance and practical application of analytics tools. This comprehensive approach ensures a well-rounded learning experience, catering to different learning styles and preparing students for the challenges of HR analytics in the industry.

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: **Understand** the fundamentals of HR analytics: Students will comprehend HR analytics principles and project design. (Knowledge/Comprehension) CO2**: Apply** descriptive analytics techniques: Students will analyze HR data, clean data, and develop customized metrics. (Application/Analysis) CO3: **Utilize** predictive analytics tools: Students will make predictions, select models, and interpret results for future meetings. (Analysis/Evaluation) CO4: **Apply** prescriptive analytics for HR challenges: Students will address HR challenges through prescriptive analytics, promoting ideas, ensuring engagement, and driving cultural changes. (Evaluation/Synthesis) CO5: **Demonstrate** optimization through prescriptive analytics: Students will optimize HR solutions, influence stakeholders, propose contextualized prescriptions, and enhance organizational performance. (Evaluation/Synthesis)	CO1:Knowledge/Comprehension CO2: Application/Analysis CO3: Analysis/Evaluation CO4: Evaluation/Synthesis CO5: Evaluation/Synthesis

Learning Resources

1.	Text Book: A Fundamental of HR Analytics: A Manual to Becoming HR by Analytics: Fermin Diez, Mark Bussin, and Venessa Lee
2.	Journals, Periodicals, Reference Reference Books: 1. HR Analytics: Understanding HR Theories by Dipak Kumar Bhattacharyya Introduction to HR Analytics A practical guide to Data driven HR by Dave Millner and Nadeem Khan
3.	Other Electronic Resources:

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	Attendance: 05 marks MCQs: 10 marks Open Book Assignment: 15 marks Article Review: 10 marks **Total: 40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	0	3		0	0	0	0	0
CO3	0		3	0	0	0	0	0
CO4	0	0	0	3	0	0	0	0
CO5	0	0	0	0	0	3	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	2	0	0
CO2	3	3	2	0	0

CO3	3	3	2	0	0
CO4	3	3	0	0	0
CO5	3	0	0	0	0

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE **BA 403**	**COURSE NAME** **WEB & SOCIAL MEDIA ANALYTICS**	**SEMESTER** IV

Teaching Scheme (Hours)				**Teaching Credit**			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**
Course Category	Basic Core Courses
Course focus	Employability/ Marketing Skills/ Entrepreneurship
Rationale	This subject provides a comprehensive understanding of Social Media Analytics (SMA) and its applications in small and large organizations. Students explore web metrics, web analytics, Facebook Analytics, and gain practical skills in data analysis using Python programming. They learn to leverage social media analytics for organizational success.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1.Understand the concept and importance of Social Media Analytics (SMA) in different organizational contexts. (Remembering)

	2. Explore various web metrics and web analytics techniques for data gathering and analysis. (Understanding) 3.Gain proficiency in using Facebook Analytics for audience analysis, campaign evaluation, and network analysis. (Applying) 4.Familiarize with data analysis languages and tools, particularly Python programming for social media data collection and visualization. (Applying) 5.Develop practical skills in usability testing, data analysis using software tools, and presenting findings from social media campaigns. (Creating)

Course Content (Theory)	**Weightage**	**Contact hours**
Unit 1: Introduction to Social Media Analytics (SMA): Web and social media (Web sites, web apps, mobile apps and social media). Social media landscape, Need for SMA; SMA in Small organizations; SMA in large organizations; Application of SMA in different areasSocial media analytics (what and why) ,Social media KPIs (reach and engagement) ,Performing social media analytics (business goal, KPIs, data gathering, analysis, measure and feedback)	20 %	9
Unit 2: Web metrics and web analytics Click stream analysis, A/B testing, online surveys, Use of Google Analytics; Web crawling and Indexing; Natural Language Processing Techniques for Micro-text AnalysisPULSE metrics (Page views, Uptime, Latency, Seven-day active users) on business and technical issues; HEART metrics (Happiness, Engagement, Adoption, Retention, and Task success) on user behaviour issues; On-site web analytics, off-site web analytics, the goal-signal-metric process	20 %	9

Unit 3: Facebook Analytics: Introduction, parameters, demographics. Analyzing page audience. Reach and Engagement analysis. Postperformance on FB, Use of Facebook Business Manager; Social campaigns. Measuring and Analyzing social campaigns, defining goals and evaluating outcomes, Network Analysis. (LinkedIn, Instagram, YouTube Twitter etc	20 %	9
Unit 4: Data analysis language and tools Ready-made tools for Web and social media analytics (Key Google Analytics metrics, dashboard, social reports)Introduction to Python Programming, Collecting and analyzing social media data; visualization and exploration.	20 %	9
Unit 5:Practical Usability study planning and testing; and data analysis using software tools (Google Analytics, Google Sites, R and Deducer), User experience measurement cases Web analytics cases. Students should analyze the social media of any ongoing campaigns and present the findings.	20 %	9

Instructional Method and Pedagogy: (Max. 100 words)

Lectures will provide theoretical knowledge, while case studies and practical exercises offer opportunities to apply Social Media Analytics (SMA) techniques in real-world scenarios. Group discussions and guest speakers bring industry perspectives, and practical projects allow students to develop SMA strategies. Assessments and feedback ensure understanding and improvement, and online resources keep students up-to-date. Practical demonstrations reinforce skills in using tools like Google Analytics and Python programming for SMA.

Course Objectives:	**Blooms' Taxonomy Domain**

After successful completion of the above course, students will be able to: CO1:Recall the fundamental concepts and significance of Social Media Analytics in both small and large organisations. (Remembering) CO2:Explain different web metrics and web analytics techniques, including click stream analysis, A/B testing, and online surveys. (Understanding) CO 3:Analyse audience demographics, reach, engagement, and post-performance on Facebook using Facebook Analytics. (Applying) CO4 :Utilise Python programming and other tools to collect and analyse social media data, visualise results, and explore insights. (Applying) CO 5:Plan and conduct usability studies, apply data analysis tools such as Google Analytics and R, and effectively communicate findings from social media campaigns. (Creating)	CO1: Remembering CO2: Understanding CO3: Applying CO4: Applying CO5: Creating

Learning Resources	
1.	1. Mathew Ganis, Avinash Koihrkar-Social Media Analytics-IBM Press-2015 / 1s Wherever the standard books are not available for the topic appropriate print and online resources, journals and books published by different authors may be prescribed.
2.	Journals, Periodicals, Reference 1. Jim Sterne-Social Media Metrics-Wiley-Latest 2. Marshall Sponder, Gorah F. Khan-Digital Analytics for Marketing-Routledge-2017 / 1st 3. Gohar F. Khan-Creating Value With Social Media Analytics-CreateSpace Independent Publishing-2018 / 1st
3.	Other Electronic Resources: ndian Journal of Marketing 2. The Journal of Social Media in Society 3. Journal of Digital and Social Media Marketing 4. Social Media Marketing (Magazine) 5. Brand Equity – Economic Times 6. https://searchbusinessanalytics.techtarget.com/definition/social-media-analytics 7. https://analytics.facebook.com 8. https://gameanalytics.com/blog/best-tools-for-mobile-game-developers.html

Evaluation Scheme	**Total Marks**	
Theory: Mid semester Marks	20 marks	
Theory: End Semester Marks	40 marks	
Theory: Continuous Evaluation Component Marks		
	Attendance	05 marks
	MCQs	10 marks
	Open Book Assignment	15 marks
	Article Review	10 marks
	Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	0	2	0	0	0	0	0	0
CO3	0	0	2	0	0	0	0	0
CO4	0	0	0	2	0	0	0	0
CO5	0	0	0	0	3	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	0	0	3	0
CO2	2	3	0	0	0
CO3	0	3	2	0	0
CO4	0	3	2	0	0
CO5	0	3	3	0	0

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	**COURSE NAME**	**SEMESTER**
BA404	DBMS - SQL	IV

Teaching Scheme (Hours)				**Teaching Credit**			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**
Course Category	Core course
Course focus	Employability
Rationale	The subject introduces students to the fundamentals of SQL data retrieval and manipulation, providing them with essential skills for effective database management and analysis. Understanding SQL is crucial in various industries to extract, manipulate, and analyze data efficiently. The course aims to equip students with knowledge and expertise in writing SQL queries, utilizing joins and subqueries, and employing logical operators to manipulate data, empowering them to make data-driven decisions and excel in data-related roles.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1.To describe the basics of data retrieval, including SELECT queries, DISTINCT, ALIAS, ORDER BY, and wildcard usage in the SELECT list.(Knowledge) 2. To demonstrate an understanding of different types of joins, including JOIN operator, multi-table joins, and outer joins. 3. To write subqueries and apply special functions to manipulate data effectively using SQL(Application) 4. To analyse and evaluate SQL data manipulation and data definition statements in interactive SQL environments. (Analysis) 5. To able to create complex SQL queries involving multiple tables, subqueries, and logical operators for advanced data retrieval and manipulation tasks.

Course Content (Theory)	Weightage	Contact hours
Unit 1 Data Retrieval Overview ,Select Query Introduction Distinct ,Alias Order By Wildcard In Select List Computed Column Where Clause Introduction	**20%**	**9**

Where Clause Comparison Operator Like Operator		
Unit: 2 Join Queries Join Operator Multi-Table Joins Outer Joins Grouping Grouping Having Clause	**20%**	**9**
Unit 3 Subqueries Subqueries In Clauses Correlated Subqueries Special Functions Union Intersect Minus	**20%**	**9**
Unit: 4 Where Clause Introduction Where Clause Comparison Op Like Operator Between Operators Propositional logic Where Clause Logical OPI	**20%**	**9**
Unit:5 SQL Data manipulation statements - *interactive SQL* SQL Data definition statements- *interactive SQL*	**20%**	**9**

Instructional Method and Pedagogy: (Max. 100 words)

The course will employ a combination of lectures, hands-on practical sessions, and real-world case studies to engage students in learning SQL concepts. Interactive SQL environments will be used to provide practical experience in executing queries and solving database-related challenges. Additionally, group discussions and quizzes will reinforce learning and foster collaboration

among students.

Course Outcomes:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1 (Knowledge): Describe the basics of data retrieval, including SELECT queries, DISTINCT, ALIAS, ORDER BY, and wildcard usage in the SELECT list. CO2 (Comprehension): Demonstrate an understanding of different types of joins, including JOIN operator, multi-table joins, and outer joins. CO3 (Application): Write subqueries and apply special functions to manipulate data effectively using SQL. CO4 (Analysis): Analyse and evaluate SQL data manipulation and data definition statements in interactive SQL environments. CO5 (Synthesis): Create complex SQL queries involving multiple tables, subqueries, and logical operators for advanced data retrieval and manipulation tasks.	CO1: Knowledge CO2: Comprehension CO3: Application CO4: Analysis CO5: Synthesis

Learning Resources	
1.	Reference Books: Text Book: SQL in 10 Minutes, Sams Teach Yourself Book by Ben Forta
2.	Reference Books: 1.SQL Practice Problems: 57 Beginning, Book by Sylvia Moestl Vasilik 2. SQL Queries for Mere Mortals: A Hands-on Guide to Data Manipulation in SQL Book by John Viescas and Michael J. Hernande
3.	Other Electronic Resources: www.onllinelibrary.wiley.com

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks

Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	0	3	0	0	0	0	0	0
CO3	0	0	3	0	0	0	0	0
CO4	0	0	0	3	0	0	0	0
CO5	0	0	0	0	3	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	0	1	1
CO2	1	2	0	0	0
CO3	0	0	3	0	0
CO4	0	0	0	2	0
CO5	0	0	0	0	3

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER

BA405	Programming in Python	IV

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of computer**
Course Category	Basic Core Courses
Course focus	Employability/ Computer language Skills/ Entrepreneurship
Rationale	Python is a versatile and widely-used programming language. Understanding its core concepts and advanced features is essential for effective software development and problem-solving.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1.Understand the fundamentals of Python programming, including syntax, data types, and control flow. (Remembering) 2.Gain proficiency in using Python libraries and modules for enhanced programming capabilities. (Applying) 3.Apply advanced Python concepts such as exceptions, testing, and comprehensions to write efficient and robust code. (Applying) 4.Develop an understanding of object-oriented programming in Python, including classes, methods, and inheritance. (Understanding) 5.Demonstrate the ability to emulate built-in types and use special methods for customized behavior in Python. (Creating)

Course Content (Theory)	Weightage	Contact hours
Unit 1 • General Introduction to Python and the class. Using the command interpreter and development environment. • Kick-off tutorial • Finding and using the documentation. Getting help.	**20%**	**9**

Python 2/3 differences.		
Unit: 2 • Introduction to git and GitHub • Basic data types. • Functions: definition and use, arguments, block structure, scope, recursion • Modules and import Conditionals and Boolean expressions	**20%**	**9**
Unit 3 • Sequences: Strings, Tuples, Lists • Iteration, looping and control flow. • String methods and formatting • Dictionaries, Sets and Mutability. Files and Text Processing	**20%**	**9**
Unit 4 • Exceptions • Testing • List and Dict Comprehensions • Advanced Argument passing • Lambda Functions as Objects	**20%**	**9**
Unit:5 • Class instances • Methods • Multiple inheritances • Properties • Special methods Emulating built-in type	**20%**	**9**

Instructional Method and Pedagogy: (Max. 100 words)

The course will employ a blended learning approach. It will include interactive lectures, hands-on programming exercises, coding assignments, and collaborative projects. Students will have access to comprehensive documentation and online resources for self-learning. Regular assessments and code reviews will provide feedback on students' understanding and proficiency in Python programming. Practical examples and real-world applications will be incorporated to enhance the learning experience and encourage critical thinking.

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: **CO1:** Recall and explain the basic syntax and structure of the Python programming language. (Remembering) **CO2**: Utilize Python libraries and modules effectively to solve programming problems. (Applying) **CO3**: Develop error-handling mechanisms using exceptions and perform unit testing for code reliability. (Applying) **CO4**: Analyze and implement object-oriented programming concepts in Python, including classes, methods, and inheritance. (Analyzing) **CO5:** Create custom behaviors in Python by emulating built-in types and using special methods. (Creating)	CO1: Remembering CO2: Applying CO3: Applying CO4: Analyzing CO5: Creating

Learning Resources	
1.	Reference Books: Textbook: **A Python Book: Beginning Python, Advanced Python, and Python**
2.	Journals, Periodicals, Reference • **ython Essential Reference** (http://www.dabeaz.com/per.html): The definitive reference for both Python and much of the standard library. • **Hitchhikers Guide to Python** (http://docs.python-guide.org/en/latest): Under active development, and still somewhat incomplete, but there is good stuff. • **Writing Idiomatic Python** (https://www.jeffknupp.com/writing-idiomatic-python-ebook): Focused on not just getting the code to work, but how to write it in a really "Pythonic" way. • **Fluent Python** (http://shop.oreilly.com/product/0636920032519.do): All python3, and focused on getting the advanced details right. Good place to go once you've got the basics down
3.	Other Electronic Resources:

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks

Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	0	3	0	0	0	0	0	0
CO3	0	0	0	0	0	3	0	0
CO4	0	0	0	3	0	0	0	0
CO5	0	0	0	0	3	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	0	0	0
CO2	2	2	0	0	0
CO3	2	0	0	0	0
CO4	2	0	0	0	0
CO5	2	0	0	0	0

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	**COURSE NAME**	**SEMESTER**
BA406	Data Visualization Tools – Tableau	IV

Teaching Scheme (Hours)				**Teaching Credit**			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**

Course Category	Basic Core Courses
Course focus	Employability/ Analytical Skills/ Entrepreneurship
Rationale	This subject is designed to equip students with essential skills in Tableau, enabling them to analyze data effectively, create meaningful visualizations, and generate actionable insights for decision-making in diverse professional contexts.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives **(As per Blooms' Taxonomy)**	1.Understand the basic functionalities of Tableau and learn how to connect to different data sources such as excel files, text files, and Microsoft Analysis Services. 2.Develop skills in creating and removing hierarchies, using parameters, grouping data, and applying sorting techniques in Tableau. 3.Explore a wide range of charts and visualizations available in Tableau, including area, bar, pie, scatter, and heatmaps, among others. 4.Gain proficiency in creating advanced reports in Tableau, such as dual-axis reports, blended axis reports, and adding reference lines and distributions. 5.Learn to utilize calculations and filters in Tableau, including calculated fields, ranking, top and bottom filters, context filters, and data source filters.

Course Content (Theory)	Weightage	Contact hours
Unit 1 Learn Tableau Basic Reports Connecting to excel files , Connecting to text files Connecting to Microsoft Analysis services , Creating and removing hierarchies	**20%**	**9**
Unit: 2 Tableaus Basic Reports Parameters, Grouping Examples – 1,Grouping Examples – 2 Combined sets ,Creating a first report Data Labels ,Create Folders ,Sorting Data	**20%**	**9**
Unit 3 Tableaus Charts	**20%**	**9**

Area, Bar , Box, Bubble, Bump, Bullet, Circle, Gantt, Line, Lollipop, Line, Pareto, Pie, Scatter, Stacked, Tree, World Cloud, Waterfall. Filled, Crosstab, Combines, Motion, Heatmap		
Unit 4 Tableaus Advanced Reports Dual Axis Reports Blended Axis Individual Axis ,Add reference Lines , Reference Distribution Basic Map ,Mapbox maps as background map	**20%**	**9**
Unit:5 Tableaus Calculations & Filters Calculated Fields Basic Approach to calculate rank Filter's introduction Top and Bottom filters Context filter Slicing Filters Data Sources Filters Extract Filters	**20%**	**9**

Instructional Method and Pedagogy: (Max. 100 words)

This course will employ a combination of lectures, hands-on exercises, and guided practice sessions. Instructors will provide step-by-step demonstrations of connecting Tableau to different data sources, creating and removing hierarchies, and utilizing various features like parameters, grouping, and data labels. Students will actively engage in practical exercises to reinforce their understanding and gain proficiency in creating basic reports, visualizations, and advanced reports.

Course Objectives:	**Blooms' Taxonomy Domain**

After successful completion of the above course, students will be able to: **CO1**: Recall and describe the process of connecting to various data sources in Tableau, including excel files, text files, and Microsoft Analysis Services. (Remembering) **CO2:** Apply Tableau features like parameters, grouping, and sorting to organize and analyze data effectively. (Applying) **CO3**: Differentiate and select appropriate charts and visualizations in Tableau to represent different types of data accurately. (Analyzing) **CO4:** Develop advanced reports using Tableau, incorporating dual-axis charts, blended axis reports, and reference lines for enhanced visual representation. (Creating) **CO5**: Utilize calculations and filters in Tableau to perform data manipulations, rankings, and filtering techniques for targeted analysis and data exploration. (Applying)	CO1: Remembering CO2: Applying CO3: Analyzing CO4: Creating CO5: Applying

Learning Resources	
1.	Text Book: Visual Analytics with Tableau Book by Alexander Loth
2.	Journals, Periodicals, Reference Reference Books: 1. Tableau Your Data! Fast and Easy Visual Analysis with Tableau Software Book by Daniel G. Murray
3.	1. Other Electronic Resources: http://www.nptel.ac.in

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	0	3	0	0	0	0	0	0
CO3	0	0	3	0	0	0	0	0
CO4	0	0	0	3	0	0	0	0
CO5	0	3	0	0	0	0	0	0

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	0	0	0	0
CO2	0	2	0	0	0
CO3	0	0	3	0	0
CO4	0	0	0	3	0
CO5	0	2	0	0	0

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA501	**Project Management**	V

Teaching Scheme (Hours)	**Teaching Credit**

Lecture	Practical	Tutorial	Total Hours	Lecture	Practical	Tutorial	Total Credit
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Management
Course Category	Core
Course focus	Skills
Rationale	Project management is important because it ensures there's a proper plan for executing on strategic goals. Where project management is left to the team to work out by themselves, you'll find teams work without proper briefs and without a defined project management methodology.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	1. To Apply risk, and uncertainty on project appraisal techniques 2. To understand feasibility studies, risk, and uncertainty, project appraisal techniques 3. To Learn project management techniques, project crashing, and project control activities. 4. To decision techniques of the perspective of project characteristics, dimensions, and project life cycle 5. To prepare students with an overview of the Microsoft Project Office suite.

Course Content (Theory)	Weightage	Contact hours
Unit 1 Introduction to Project Management: Project Definition, Project Characteristics, Performance Dimensions, Project Life Cycle, Project Classification, Project Management	20%	**9**
Unit 2: Project Identification and Formulation: Feasibility studies: Market, Technical and Financial, Risk and Uncertainty, Project Appraisal, Detailed Project Report	20%	**9**
Unit 3: Project Management Techniques: Bar Charts, Networks, PERT, Network Analysis, Critical	20%	**9**

Path and Project Management, Activity Scheduling,		
Unit 4: Project Crashing and Project Control: Time-Cost Relationship of an Activity, Project Crashing, Project Control,	20%	**9**
Unit 5 Overview of Microsoft Project: OfficeAssistant, MS Project: Menus	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Discussion on concepts and issues in projects in an organization, case discussion , Projects/ Assignments/ Quizzes/ Class participation.

Course Objectives:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: Apply risk, and uncertainty on project appraisal techniques CO2: Understand feasibility studies, risk, and uncertainty, project appraisal techniques CO3: Learn project management techniques, project crashing, and project control activities. CO4: To decision techniques of the perspective of project characteristics, dimensions, and project life cycle CO5: To prepare students with an overview of the Microsoft Project Office suite.	CO1: Apply CO2: Understand CO3: Learn CO4: Decisions CO5: Prepare

Learning Resources	
1.	Reference Books: 5. Prasanna Chandra, Projects – Planning, Selection, Financing, Implementation, and Review, Sixth Edition, Tata McGraw HillParesh Shah, *Management Accounting*, Oxford University Press 6. A Guide to Project Management Body of Knowledge (PMBOK) Project Management Institute (PMI) 7. Harlod Kerzner and Van Nostr A systems approach to planning scheduling and controlling, John Wiley& Sons

2.	Journals, Periodicals, Reference 1. Financial Express, 2. Economics Times, 3. Business Standard
3.	Other Electronic Resources: www.onllinelibrary.wiley.com

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	1	3	2	2	2	0	0	0
CO3	3	0	2	3	3	0	0	0
CO4	0	0	3	1	3	0	3	0
CO5	0	1	0	3	0	0	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	2	0	3
CO2	0	1	0	0	0
CO3	0	0	3	0	3
CO4	0	0	1	3	3
CO5	1	0	1	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA502	**Digital Transformation of Business**	V

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Management
Course Category	Core
Course focus	Skills
Rationale	Digital transformation puts technology at the core of business strategy. This approach can reduce operating expenses and inefficiency. It could even change the course of your business. With a unified model across business and technology, it's easier to achieve future ambitions.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	1. To Apply technology-related issues 2. To Understand of the reasons and directions digital business initiatives 3. To Learn basic knowledge and skills to recognize the contributions of technology to business needs situations/scenarios. 4. To Decide techniques ability to communicate and co-operate with technology managers and specialists. 5. To prepare students to discuss technology-related issues with both professionals and business.

Course Content (Theory)	Weightage	Contact hours
Unit 1 Digital Strategy Understand the characteristics of digital innovation Distinguish the nature of digital innovation vs. traditional/conventional innovation. introduction of Technology Management and Innovation. High level introduction of Digital Transformation. "Homo informaticus", What has changed in the last decade?	20%	**9**
Unit 2: Managing IT Trends & Emerging Technologies We will present the future of Technology evolution, learn how to get advantage of Cloud, Big Data, Internet of Things and the new technological developments, how organizations can effectively and efficiently anticipate, assess, introduce, and leverage them. What is	20%	**9**

Big Data, how can we use it in our everyday life? What is the big buzz around cloud? What is it with simple words? Are there any real risks? What exactly is the Internet of Things (Apply concept on business situation)		
Unit 3: 3:Digital disruption and a strategies for a digital transformation. Understand the underlying patterns of successful digital disruptors. Learn how disruptive technologies such as Artificial Intelligence can transform the business landscape. Understand the underlying patterns of successful digital disruptors. Learn how disruptive technologies such as Artificial Intelligence can transform the business landscape.	20%	**9**
Unit 4: Future of Technology Innovation What will influence our future in the following five years? What are those inventions that will change the world within five or ten years from now; similar to what has changed it during the last 10 years	20%	**9**
Unit 5 Best Practices for Digital Transformation: Business Case studies McKinsey's five keys to success:What are the best practices as identified by McKinsey research for instituting successful digital transformation? What are the difficulties in following these prescriptions? What does a leader of digital transformation have to do to optimize for success? What is the role in equipping and deploying new technologies across a business in creating a successful transformation? How do managers need to transform communication channels? How can transforming organizational design aid digital transformation?	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Discussion on concepts and issues in projects in an organization, case discussion , Projects/ Assignments/ Quizzes/ Class participation.

Course Objectives:	**Bloom's Taxonomy Domain**

After successful completion of the above course, students will be able to: CO1: Apply technology-related issues CO2: Understand of the reasons and directions digital business initiatives CO3: Learn basic knowledge and skills to recognize the contributions of technology to business needs situations/scenarios. CO4: Decision techniques ability to communicate and co-operate with technology managers and specialists. CO5: To prepare students Enabling students to discuss technology-related issues with both professionals and business.	CO1: Apply CO2: Understand CO3: Learn CO4: Decisions CO5: Prepare

Learning Resources	
1.	Reference Books: 1. Galliers, R.D., Leidner, D.E. (Eds): Strategic Information Management: Challenges and Strategies in Managing Information Systems. Fourth Edition. Routledge, New York, 2009. 2. Parker, G.P.; Alstyne, Van, M.W; Choudary, S.P. (2016): Platform Revolution. Norton & Company, New York London.
2.	Journals, Periodicals, Reference 2. Financial Express, 2. Economics Times, 3. Business Standard
3.	Other Electronic Resources: https://www.coursera.org/learn/bcg-uva-darden-digital-transformation#syllabus

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks

Theory: Continuous Evaluation Component Marks	Attendance	05 marks
	MCQs	10 marks
	Open Book Assignment	15 marks
	Article Review	10 marks
	Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	3	2	2	2	2	0	0	0
CO3	3	0	2	3	3	0	0	0
CO4	0	0	3	1	3	0	3	0
CO5	0	1	0	3	0	0	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	2	0	3
CO2	0	1	0	1	0
CO3	0	0	3	0	3
CO4	0	0	1	3	3
CO5	1	0	1	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA503	Marketing & Retail Analytics	V

Teaching Scheme (Hours)				Teaching Credit			
Lecture	Practical	Tutorial	Total Hours	Lecture	Practical	Tutorial	Total Credit
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Management
Course Category	Core
Course focus	Skills
Rationale	Marketing and Retail Analytics is the process of measuring, managing, and analyzing marketing performance to maximize effectiveness and optimize investment return. This supports the business to improve its operations and customer experience by providing a 360-degree view of the customer's needs.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	To Apply technology-related issues To Understand the Marketing Process with Analytics. To Learn basic knowledge and skills the Marketing Process with Analytics To Analyse the right price and promotion in presence of competitors. To prepare students in the age of artificial intelligence and big data.

Course Content (Theory)	Weightage	Contact hours
Unit 1The Marketing Process □ Why Marketing Analytics □ Introduction to the Marketing Process □ Marketing Strategy with Data □ Utilizing Data to Improve Marketing Strategy	20%	9

□ Improving the Marketing Process with Analytics		
Unit 2: Overview of retailing □ Understanding modern Retailing Marketplace & Technological aspects □ Data visualization □ Descriptive analysis	20%	**9**
Unit 3: 3:Pricing tactics □ Value pricing Rationality and net-benefit principle □ Demand curve and maximum WTP □ Competitive advantage □ Linear models: Simple regressions	20%	**9**
Unit 4: Measuring price and promotion response □ Pricing new products □ Price theory: elasticities, profit and revenue maximization □ Log-log models □ Multivariate regressions □ Promotion strategy □ Game theory: simultaneous and sequential-move games	20%	**9**
Unit 5 Retailers' location decision □ Applying machine learning in retailing □ Huff model and regression model □ Economies of scale/scope □ Repeated games, tacit collusion □ Classification tree and random forest	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Discussion on concepts and issues in projects in an organization, case discussion , Projects/ Assignments/ Quizzes/ Class participation.

Course Objectives:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: Apply technology-related issues CO2: Understand the Marketing Process with Analytics. CO3: Learn basic knowledge and skills the Marketing Process with Analytics CO4: Analyse the right price and promotion in presence of competitors CO5: Prepare students in the age of artificial intelligence and big data.	CO1: Apply CO2: Understand CO3: Learn CO4: Analyse CO5: Prepare

Learning Resources	
1.	Reference Books: 1. "Retailing Management," by Levy, M., Weitz, B. & Grewal, D., 10th edition, McGraw-Hill, 2019 2. "R for Marketing Research and Analytics," by Chapman, C. and Feit, E. Springer, 2015
2.	Journals, Periodicals, Reference 3. Financial Express, 2. Economics Times, 3. Business Standard
3.	Other Electronic Resources: http://www.nptel.ac.in Lynda.com https://www.lynda.com/R-training-tutorials/1570-0.html

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks

Theory: Continuous Evaluation Component Marks	Attendance	05 marks
	MCQs	10 marks
	Open Book Assignment	15 marks
	Article Review	10 marks
	Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	3	0	0	0	0	0	0	0
CO2	3	0	2	2	2	0	0	0
CO3	0	0	2	3	3	0	0	0
CO4	0	0	3	2	3	0	3	0
CO5	0	1	0	0	0	0	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	2	0	3
CO2	0	1	0	0	0
CO3	1	0	3	0	3
CO4	0	0	1	3	0
CO5	1	0	1	0	1

COURSE CODE	COURSE NAME	SEMESTER
BA504	**Financial Analytics**	V

Teaching Scheme (Hours)				**Teaching Credit**			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Management
Course Category	Core
Course focus	Skills
Rationale	Financial Analytics offers in-depth insights into your financial status that'll improve financial visibility, profitability, and the value for the business and stakeholders. Being able to measure and manage assets like cash and equipment will be crucial in financial management and accounting efforts.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	To Apply technology-related issues To Understand the Marketing Process with Analytics. To Learn basic knowledge and skills the Marketing Process with Analytics To Analyse the right price and promotion in presence of competitors. To prepare students in the age of artificial intelligence and big data.

Course Content (Theory)	**Weightage**	**Contact hours**
Unit 1Introduction to Financial Analytics Jose Rodriguez: Forecasting in Practice Subjective Forecasting Business Forecasting and Time Series Introduction to Financial Analytics Forecasting Performance Measurements: Distance Forecasting Performance Measurements:	20%	**9**

Unit 2: Performance Measures and Holt-Winters Model Introduction to Forecasting: Average Method Introduction to Forecasting: Naive Method Introduction to Forecasting: Linear Regression Introduction to Forecasting: R Example Moving Averages Introduction to Exponential Smoothing Simple Exponential Smoothing Simple Exponential Smoothing: R Example Holt's Exponential Smoothing Holt-Winter's Forecasting Model Holt-Winter's Model: R Example Auto-regression Auto-regression: R	20%	**9**
Unit 3: Stationarity and ARIMA Model Stationarity: Introduction Stationarity: Differencing ARIMA: Introduction ARIMA: Components ARIMA: Model and R Example Part ARIMA: Model and R Example Part	20%	**9**
Unit 4: Modern Portfolio Theory Portfolio Theory: Introduction Portfolio Theory: Expected Returns Portfolio Theory: Risk of a Security Portfolio Theory: Efficient Frontier Portfolio Theory: Portfolio Weights Portfolio Theory: Capital Allocation Line Portfolio Theory: Diversification	20%	**9**
Unit 5 Introduction to Algorithmic Trading Introduction to Algorithmic Trading Introduction to Algorithmic Trading: Trend Following Strategy Introduction to Algorithmic Trading: Back-testing Introduction to Algorithmic Trading: Conclusion Course Summary: Applying Data Analytics in Finance	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Discussion on concepts and issues in projects in an organization, case discussion , Projects/ Assignments/ Quizzes/ Class participation.

Course Objectives:	**Bloom's Taxonomy Domain**

After successful completion of the above course, students will be able to:	
CO1: Apply Finance Models with interpretation	CO1: Apply
CO2: Understand the Financial Modeling	CO2: Understand
CO3: Learn basic knowledge and skills related to Finance	CO3: Learn
CO4: Analyse the capital market behavior and future trend	CO4: Analyse
CO5: Prepare students in the age of artificial intelligence and big data.	CO5: Prepare

Learning Resources	
1.	Reference Books: 3. Financial Analytics with R: Building a Laptop Laboratory for Data Science Book by Dirk L. Hugen and Mark Joseph Bennet 4. Financial Modeling and Valuation: A Practical Guide to Investment Banking and Private Equity Book by Paul Pignataro
2.	Journals, Periodicals, Reference 4. Financial Express, 2. Economics Times, 3. Business Standard
3.	Other Electronic Resources: http://www.nptel.ac.in http://www.ocw.mit.edu

Evaluation Scheme	**Total Marks**	
Theory: Mid semester Marks	20 marks	
Theory: End Semester Marks	40 marks	
Theory: Continuous Evaluation Component Marks	Attendance	05 marks
	MCQs	10 marks
	Open Book Assignment	15 marks
	Article Review	10 marks
	Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	0	3	3	3	3	0	0	0
CO2	3	1	2	2	2	0	0	0
CO3	3	0	2	3	3	0	0	0
CO4	0	3	3	3	3	0	3	0
CO5	0	1	0	3	0	0	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	2	0	3
CO2	0	1	0	0	3
CO3	0	0	3	0	3
CO4	0	0	1	3	3
CO5	1	0	1	0	0

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

COURSE CODE	COURSE NAME	SEMESTER
BA505	**Programming in R**	V

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Management
Course Category	Core
Course focus	Skills
Rationale	R offers a wide variety of statistics-related libraries and provides a favorable environment for statistical computing and design. In addition, the R programming language gets used by many quantitative analysts as a programming tool since it's useful for data importing and cleaning
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	To apply an R script and execute it To understand Design application with database connectivity for data analysis To Learn Visualize and summarize the data To Analyse Design application with database connectivity for data analysis To Prepare students to Install, load and deploy the required packages, and build new packages for sharing and reusability

Course Content (Theory)	Weightage	Contact hours
Unit 1 : Introduction R interpreter, Introduction to major R data structures like vectors, matrices, arrays, list and data frames, Control Structures, vectorized if and multiple selection, functions.	20%	**9**
Unit 2: Installing, loading and using packages: Read/write data from/in files, extracting data from web-sites, Clean data, Transform data by sorting, adding/removing new/existing	20%	**9**

columns, centring, scaling and normalizing the data values, converting types of values, using string in-built functions, Statistical analysis of data for summarizing and understanding data, Visualizing data using scatter plot, line plot, bar chart, histogram and box plot		
Unit 3: Designing GUI: Building interactive application and connecting it with database	20%	**9**
Unit 4: R-Function : function definition, Built in functions: R-Strings – Manipulating Text in Data: R Vectors – Sequence vector, rep function, vector access, vector names, vector math, vector recycling, vector element sorting - R List - Creating a List, R Matrices – Accessing Elements of a Matrix, Matrix Computations: Addition, subtraction, Multiplication and Division- R Arrays: R Factors	20%	**9**
Unit 5 Descriptive Statistics: Data Range, Frequencies, Mode, Mean and Median: Mean Applying Trim Option, Applying NA Option, Median - Mode - Standard Deviation – Correlation - Spotting Problems in Data with Visualization: visually Checking Distributions for a single Variable - R –Pie Charts: Pie Chart title and Colors – Slice Percentages and Chart Legend, 3D Pie Chart – R Histograms – Density Plot - R – Bar Charts: Bar Chart Labels, Title and Colors.	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Use of ICT tools in conjunction with traditional class room teaching methods

Interactive sessions

Class discussions

Course Objectives:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: Apply an R script and execute it CO2: Understand Design application with database connectivity for data analysis CO3: Learn Visualize and summarize the data CO4: Analyse Design application with database connectivity for data analysis CO5: Prepare students to Install, load and deploy the required packages, and build new packages for sharing and reusability	CO1: Apply CO2: Understand CO3: Learn CO4: Analyse CO5: Prepare

Learning Resources	
1.	Reference Books: 5. Cotton, R., Learning R: a step by step function guide to data analysis. 1st edition. O'reilly Media Inc. 6. Gardener, M.(2017). Beginning R: The statistical programming language, WILEY 7. Lawrence, M., & Verzani, J. (2016). Programming Graphical User Interfaces in R. CRC press. (ebook)
2.	Journals, Periodicals, Reference 5. Financial Express, 2. Economics Times, 3. Business Standard
3.	Other Electronic Resources: https://jrnold.github.io/r4ds-exercise-solutions/index.html https://www.r-project.org/ https://cran.r-project.org/

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: **Continuous Evaluation Component Marks**	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8

CO1	0	3	3	3	3	0	0	0
CO2	3	1	2	2	2	0	0	0
CO3	3	0	2	3	3	0	0	0
CO4	0	3	3	3	3	0	3	0
CO5	0	1	0	3	0	0	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	2	0	3
CO2	1	1	0	0	3
CO3	0	0	3	0	3
CO4	0	0	1	3	3
CO5	1	0	1	0	0

COURSE CODE	COURSE NAME	SEMESTER
BA506	Data Visualisation Tools - Google Data Studio	V

Teaching Scheme (Hours)				Teaching Credit			
Lecture	**Practical**	**Tutorial**	**Total Hours**	**Lecture**	**Practical**	**Tutorial**	**Total Credit**
45	0	0	45	3	0	0	3

Course Pre-requisites	Basic Information about Management
Course Category	Core
Course focus	Skills
Rationale	Google Data Studio allows users to create custom reports with a wide range of designs, styles, graphs, and formatting. If you're new to Data Studio, then there are plenty of pre-templated reports to choose from. Otherwise, you can start from scratch and create one entirely unique to your reporting style.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives	To apply an Google Studio and execute it To understand Design application with database connectivity for data analysis To Learn Visualize and summarize the data To analyse Design application with database connectivity for data analysis To prepare students to Install, load and deploy the required packages, and build new packages for sharing and reusability

Course Content (Theory)	Weightage	Contact hours

Unit 1 : Introductionto Data Studio • Data Studio overview • How Data Studio works • Access controls	20%	**9**
Unit 2: Navigate Data Studio • Data Studio Home page • Data source overview	20%	**9**
• Report overview • Report edit mode overview		
Unit 3: Build your first report • Connect Data • Create a new report and add charts • Add and configure report controls • Share reports with others	20%	**9**
Unit 4: Format and Design Reports • data visualization basics • Create and use report templates	20%	**9**
Unit 5 Putting It All Together • Resources and Strategy Refresh • Dissecting our Completed Dashboard • Putting Everything Together to Deliver a Complete Analysis	20%	**9**

Instructional Method and Pedagogy: (Max. 100 words)

Use of ICT tools in conjunction with traditional class room teaching methods

Interactive sessions

Class discussions

Course Objectives:	**Bloom's Taxonomy Domain**
After successful completion of the above course, students will be able to: CO1: Apply an Google Studio and execute it CO2: Understand Design application with database connectivity for data analysis CO3: Learn Visualize and summarize the data CO4: Analyse Design application with database connectivity for data analysis CO5: Prepare students to Install, load and deploy the required packages, and build new packages for sharing and reusability	CO1: Apply CO2: Understand CO3: Learn CO4: Analyse CO5: Prepare

Learning Resources	
1.	Reference Books: Google Data Studio for Beginners: Start Making Your Data Actionable by Grant Kemp, Gerry WhiteDecember 2020 **Hands On With Google Data Studio: A Data Citizen's Survival Guide by Wiley**
2.	Journals, Periodicals, Reference 6. Financial Express, 2. Economics Times, 3. Business Standard
3.	Other Electronic Resources: hhttps://www.oreilly.com/library/view/google-data-studio/9781484251560/

Evaluation Scheme	**Total Marks**		
Theory: Mid semester Marks	20 marks		
Theory: End Semester Marks	40 marks		
Theory: Continuous Evaluation Component Marks	Attendance	05 marks	
	MCQs	10 marks	
	Open Book Assignment	15 marks	

Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
CO1	0	3	3	3	3	0	0	0
CO2	3	1	2	2	2	0	0	0
CO3	3	0	2	3	3	0	0	0
CO4	0	3	3	3	3	0	3	0
CO5	0	1	0	3	0	0	0	1

1: Slight (low); 2: Moderate (Medium); 3: Substantial (High); 0 None

Mapping of PSOs & COs

	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	0	0	2	0	3
CO2	1	1	0	0	3
CO3	0	0	3	0	3
CO4	0	0	1	3	3
CO5	1	0	1	0	0

COURSE CODE	COURSE NAME	SEMESTER
BA601	Research Methodology	VI

Teaching Scheme (Hours)				Teaching Credit			
Lecture	Practical	Tutorial	Total Hours	Lecture	Practical	Tutorial	Total Credit
45	0	0	45	3	0	0	3

Course Pre-requisites	**Basic knowledge of Business**
Course Category	Basic Core Courses
Course focus	Skills
Rationale	It helps identify research problems and using this information, wise decisions can be made to tackle the issue appropriately. It helps to understand customers better and hence can be useful to communicate better with the customers or stakeholders.
Course Revision/ Approval Date:	23rd February 2022 (6th BoS)
Course Objectives (As per Blooms' Taxonomy)	1. To familiarize participants with the basics of research and the research process. 2. To enable the participants in conducting research work and formulating research synopsis and report 3. To impart knowledge for enabling students to develop data analytics skills and meaningful interpretation to the data sets so as to solve the business/Research problem 4. To acquire skills of presenting arguments and results of ethical inquires.

Course Content (Theory)	Weightage	Contact hours
Unit 1: Introduction: Objective, Types, and Methods & Process. Research Problem, Concept of Research and Its Application in Various Functions of Management, Defining Research Problem and Framing Hypothesis, Preparing a Research Plan	**20%**	**8**
Unit 2: Research Designs: Understanding Research Designs: Qualitative and Quantitative Research, Primary and Secondary Methods of Data Collection - Surveys, Observation and Experimentation	**20%**	**8**

Unit 3: Scaling Techniques: Attitude Measurement and Scaling Techniques Measurement in Research, Types of Measurement Scales, Scaling Techniques - Likert, Thurstone, Semantic Differential scales Sampling Design: Characteristics of a good Sample design, Types of Sample design. Sample size determination, Questionnaire format and Designs	**20%**	**10**
Unit 4 : : Test of Hypothesis for one population & two population, Type I and Type II Errors, One Tailed and Two Tailed Test. Statistical Inference: Estimation for Single Populations – Mean & Proportion (Numerical); Hypothesis Testing for Single Populations- Mean & Proportion (Numerical)	**20%**	**11**
Unit 5: Report Preparation & Research Ethics Types and Layout of Research Report, Precautions in Preparing the Research Report. Bibliography and Annexure in the Report Their Significance, Drawing Conclusions, Suggestions and Recommendations. Introduction to ethics and Research Ethics.	**20%**	**8**

Instructional Method and Pedagogy: (Max. 100 words) Lecture/cases/Presentation/ Assignment/ field survey/ Research Problem and Analysis.

Course Objectives:	**Blooms' Taxonomy Domain**
After successful completion of the above course, students will be able to: **Blooms' Taxonomy word** should be highlighted CO1: **Understand** research methods and report writing. CO2: **Show** basic knowledge of qualitative research techniques CO3: **Examine** adequate knowledge of measurement & scaling techniques as well as the quantitative data analysis CO4: **Learns** various kinds of research, objectives of doing research, research process, research designs, and sampling CO5: **Evaluate** data analysis by hypothesis testing procedures. .	CO1: Understand CO2: Show CO3: Examine CO4: Learns CO5: Evaluate

Learning Resources	
1.	Reference Books: Malhothra Naresh; Marketing Research; PHI Ken Black; Business Statistics for Contemporary Decision Making, Wiley –Student Donald R Cooper and Pamela S Schindler; Business Research Methods, TMG Zikmund Willium; Business Research Methods; Thomson

2.	Journals, Periodicals, Reference International Journal of Research Methodology International Journal of Social Research Methodology Journal of Business Research
3.	Other Electronic Resources: https://research-methodology.net/research-methodology/

Evaluation Scheme	**Total Marks**
Theory: Mid semester Marks	20 marks
Theory: End Semester Marks	40 marks
Theory: Continuous Evaluation Component Marks	

Attendance	05 marks
MCQs	10 marks
Open Book Assignment	15 marks
Article Review	10 marks
Total	**40 Marks**

Mapping of POs & COs

	PSO1	PSO2	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	PSO8
CO1				3					
CO2			3						
CO3			3						
CO4			3						
CO5			3						