DEPARTMENTOFBUSINESSADMINISTRATION

Session: 2023 - 2026

Autonomy Syllabus
Course – BBA
Stream – BBA BA
Full Syllabus

Preamble

The Bachelor of Business Administration (BBA) is a three year degree Program including Summer Internship Program. These courses are spread over six semesters. The students are also holistically taught and trained through the concept of Integrated Learning Programme, involving class room sessions, Group Discussions, Mock tests, Interviews designed and executed by Academicians and Industry experts. Domain knowledge and soft skills are rigorously included in the learning sessions comprises of courses related to Economics, Entrepreneurship, Communication, Statistics, Psychology, Operation research, Law as general subjects to learn. Apart from learning these subjects in first 2 years (4 semesters), students shall learn the specialization subjects with respect to Marketing, Human Resource, Finance in final year(5th and 6th semester). An aspirant can acquire knowledge in connection with business issues and can equip themselves to solve business problems. The course can also prepare them better for efficient and effective decisions. The course is aimed to create better leader for future.

Program Objectives

Broader objective of Bachelor of Business Administration Programme are

1. Students will gain in-depth knowledge about changing business environment across different industries.
2. Students will be able to handle different tools of decision making and problem solving methods in the context of commercial organization.
3. Students will be industry ready by using different techniques of problem solving approach of commercial organization.
4. Students will be able to assess the relevance of investment in several domain areas of business.
5. Students will be able to connect different concepts of marketing, human resource and finance in business.
6. Students will be able to understand optimum value of utilizing non-monetary resources to achieve prosperity of an organization.
7. Students will be able to assess the role and value of several functional areas of an organization for enhancing efficiency.

Students will be able to understand qualitative perspectives of coordination and cooperation to build an effective team.

Program Outcomes

Name of the Program Outcome	Program Outcome	Competencies	Performance Indicator
PO1: Assessment of Choices	Students will develop the capability to assess alternate managerial choices and come up with optimal solutions.	1.1. Demonstrate competencies in Business Construction Model & Decision- Making Model	1.1.1. Ability to take up analytical approach for problem solving,
			1.1.2. Ability to take into consideration minute details and factors that influences a business.
		1.2. Demonstrate competencies in evaluation of each of the alternatives	1.2.1 Ability to weigh the pros and cons of each of the alternatives or options available to a functional area of a business.
PO2: Identification of the Nature of a Problem Area	Students will be able to apply their conceptual understanding of marketing, finance	2.1. Demonstrate an ability to identify an area that requires problem solving.	2.1.1. Ability to contribute towards problem solving methods.

	and human resources in the real world.		2.1.2. Understanding a problem or issues belong to which of the specialized areas- Finance, HR or marketing.
		2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.2.1. To be able to identify the different factors that influence the business.
PO3: Decision Making Skills	Students will develop decision making skills with the help of analytical and critical thinking ability.	3.1. To be able to demonstrate the different aspects that can get influenced by the decision taken within the business.	3.1.1. Capability of implementation of a decision after proper assessment.
			3.1.2. Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use)
		3.2. To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem.	3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented)
PO4: Communication Skills	Communication skills will be enhanced in Synchronization with the functioning of the business analytics algorithms.	4.1. To Demonstrate the ability to make effective business communication.	4.1.1. Ability to choose appropriate words when making verbal communication,
			4.1.2. To be able to select proper language and words when making written communication.
		4.2. To Demonstrate the ability to pursue stakeholders and enhancing the convincing skills.	4.2.1. Ability to present oneself groomed properly and uses formal gestures with appropriate body language.
PO5: Team Work	Students will develop the capability of functioning efficiently within	5.1. To understand Group Formation and Group Cohesiveness	5.1.1. Ability to understand the objective of the group and deciding a common goal.

		the teams.	5.2. To be able to demonstrate the importance of adjustment and the importance of concentrating other group members' opinion.	5.2.1. The ability to apply the behavioral science when functioning within the group.
PO6: Integration of Functions	Students will be able to integrate functional areas of management for planning, implementation and control of business decisions.	6.1. Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps.	6.1.1. Continuation of Professional development and observation skills,
			6.1.2. Using rational approach towards an issue.
		6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.2.1. Ability to study the changes in preferences of customers and
			6.2.2. Study in the changes in political & technological environment.
PO7: Deployable Skill set	Students will develop deployable skills parallel to the chosen functional/ specialized area.	7.1. Demonstrating the ability to identify the nature of a problem appearing during the course of business.	7.1.1. Acknowledgement of the existence of a problem.
			7.1.2. Deciding the overall nature of the problem and its minor details.
		7.2. Demonstrating the ability to apply the learned skill set as when required.	7.2.1. Ability to implement the required knowhow as when necessity arises.
PO8: Moral Sensitivity	Students will develop the capability to demonstrate increased level of	8.1. To Demonstrate the ability to identify that there is a moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence.

	sensitivity towards areas that require ethical and moral addressing during the course of business.	8.2. Demonstration of the ability to solve the moral dilemma.	8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society.

Sem 1 (2023-27 session):

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	CC	BBABB101	Principles of Management	3	1	0	4
2.	CC	BBABB102	Micro Economics	5	1	0	6
3.	CC	BBABB103	Business Mathematics	3	1	0	4
4	CC	BBABB104	Business Statistics	3	1	0	4
5	AE	BBABB105	Business Communication	3	1	0	4
6	SE	BBABB106	Fundamental of Computer Applications	2	0	0	4
7	AE	BBAESP101	General Studies & Current Affairs - I	2	0	1	2
8	SE	BBASDP181	Competitive Aptitude Training - I	2	0	0	1
	Total Credit						29

Sl.	Subject Type	Code	Subject Name	Credit/Point/Number
1.	Pr.	IFC	Industry & Foreign Certification (IFC)	At least 3 certificates need to be earned in each semester. Total min 15 certificates required in 3 years program. For 4 years min 20 certificates are required.
2.	Pr.	MAR	Mandatory Additional Requirements (MAR)	As per University norms. 75 points for 3 years and 100 points for 4 years program.
3.	Pr.	MOOCs	At least 1 MOOCs course from Swayam Platform	15 credits need to be earned in 3 years program. 20 credits need to be earned in 3 years program

Sem 3 (2022-2025 sessions)

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	CC	BBABB301	Business Research Methods	3	1	0	4
2.	CC	BBABB302	Financial Accounting	3	1	0	4
3.	CC	BBABB303	Marketing Management	5	1	0	6
4	CC	BBABB304	Employability and Practitioners Skill	3	1	0	4
5	CC	BBABB305	Business Ethics	3	1	0	4
6	CC	BBABB306	Fundamental of Cost Accounting	3	1	0	4
7	CC	BBABB387	Project on Entrepreneurship	0	0	1	1
8	AE	BBA(GS)301	General Studies & Current Affairs - III	2	0	1	2
9	SE	BBA(GS)381	Competitive Aptitude Training – III	2	0	0	1
Total Credit							30

Sl.	Subject Type	Code	Subject Name	Credit/Point/Number
1.	Pr.	IFC	Industry & Foreign Certification (IFC)	At least 3 certificates need to be earned in each semester. Total min 15 certificates required in 3 years program
2.	Pr.	MAR	Mandatory Additional Requirements (MAR)	As per University (MAKAUT) norms
3.	Pr.	MOOCs	At least 1 MOOCs course from Swayam Platform	15 credits need to be earned in 3 years program

Sem5 (2021-2024 session):

Sl.	Subject Type	Code	Subject Name	Credits			Total Credits
				L	T	P	
1.	CC	BBABB501	Strategic Management	3	1	0	4
2.		BBABB502	Data Analytics Skills for Managers	3	1	0	4
3.		BBABB503	Business Laws	2	0	0	2
4.	Major	BBABA504 BBABA591	Programming in Python Programming in Python-Practical	3 0	1 0	0 2	4 2
5.	Major	BBABA505 BBABA592	Data Visualisation Data Visualisation-Practical	3 0	1 0	0 2	4 2

6.	Major	BBABA506	Business Forecasting Techniques	5	0	1	6
5.	**IVAMNCC**	BBA(GS)501	General Studies & Current Affairs - V	2	0	0	2
6	**IVAMNCC**	BBA(GS)581	Competitive Aptitude Training - V	2	0	0	1
7	**IVAMNCC**	BBABA581	Project V	0	0	2	1
Total Credit							32

SI.	Subject Type	Code	Subject Name	Credit/Point/Number
1.		IFC	Industry & Foreign Certification (IFC)	At least 3 certificates need to be earned in each semester. Total min 15 certificates required in 3 years program
2.		MAR	Mandatory Additional Requirements (MAR)	As per University (MAKAUT) norms
3.	**MOOCs 5**	MOOCs	At least 1 MOOCs course from Swayam Platform	15 credits need to be earned in 3 years program

DETAILED SYLLABUS

Subject code	BBABB101					
Subject title	**Principles of Management**					
Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	Semester-
	5	1	0		**6**	I
Pre-requisite (if any)	Nil					

Course Objectives:
1. To enable the students to study the evolution of Management,
2. To study the functions and principles of management.
3. To learn the application of the principles in an organization.
4. To enable the effective and barriers communication in the organization

Course Outcome:

1. Students will be able to understand the fundamental concept of Management and its importance in the practical world
2. Students will be able to identify, define and solve Management related problems
3. Students will understand the contemporary issues and will get some wider exposure with respect to the global perspective

Course content:

Modules	Serial of Modules	Text Book as per Syllabus	BL
Management : Science and Theory, Management : Process	Definition of Management : Its Nature & Purpose , Managing : Science or Art , The Evolution of Management Thought The Functions of Management, Managerial Functions at Different Organizational	1. Essentials of Management An International and Leadership Perspective : Harold Koontz and Heinz Weihrich , Edition-	BL1, BL2

	Levels, Managerial Skills The Managerial Roles Approach – Interpersonal Roles, Informational Roles , Decisional Roles	ninth, McGraw Hill 2. V.S.P Rao&HariKrishna : Management-Text &Cases,Excel Books 3. Robbins, SP : Management, Prentice Hal	
Essentials of Planning and Management by Objectives, Strategies, Decision Making	Concept, Types of Plans, Steps in Planning , Objectives – The nature of objectives, how to set objectives, The Strategic Planning Process, The Portfolio Matrix: A Tool For Allocating Resources, The Importance and Limitations of Rational Decision Making , Development of Alternatives and Limiting Factor, Evaluation of Alternatives , Selecting an Alternative	1. Essentials of Management An International and Leadership Perspective : Harold Koontz and Heinz Weihrich , Edition-ninth, McGraw Hill 2. Ramaswami T; Principles of Mgmt., Himalaya Publishing Chandan, JS : Management – Concepts and Strategies, Vikas Publishing	BL2, BL3, BL4
The Nature of Organizing and Reengineering, Line/ Staff	Formal and Informal Organization Organizational Division : The Department, Organizational Level and Span of Management, Brief concept	1. Essentials of Management An International and Leadership Perspective : Harold	BL3, BL4, BL5

Authority and Decentralization	of Reengineering Line/ Staff Concepts And Functional Authority , Concept of Centralization and Decentralization	Koontz and Heinz Weihrich , Edition-ninth, McGraw Hill	
Motivation, Leadership,The System and Process of Controlling,Managing Change	An Early Behavioural Model: Mc.Gregor's Theory X and Y, Maslow's Hierarchy of Needs Theory , Herzberg's Motivation-Hygiene Theory, The Expectancy Theory of Motivation – The Vroom Theory and Practice,Defining Leadership, Approaches – Trait Approaches to Leadership, Situation or Contingency Approaches to Leadership – Fedler's Contingency Approach to Leadership, Transactional and Transformational Leadership The Basic Control Process, Benchmarking, Control as a Feedback System, Real Time Information and Control Feed-forward and Preventive Control, The Balanced Scorecard, Concept of Gantt Chart, PERT Techniques for Initiating Change, Resistance to Change,	1. Essentials of Management An International and Leadership Perspective : Harold Koontz and Heinz Weihrich , Edition-ninth, McGraw Hill 2. Robbins, SP : Management, Prentice Hal	BL2, BL3, BL4, BL5

	Lewin's Change Management Model		

Recommended Books:

1. Essentials of Management An International and Leadership Perspective : Harold Koontz and Heinz Weihrich , Edition- ninth, McGraw Hill.
2. V.S.P Rao&Hari Krishna : Management-Text &Cases,Excel Books
3. Ramaswami T; Principles of Mgmt., Himalaya Publishing Chandan, JS : Management – Concepts and Strategies, Vikas Publishing
4. Robbins, SP : Management, Prentice Hal

CO-PO Mapping:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB101- CO1			2		**2**	**3**		**3**
BBABB101- CO2			3		2	2		3
BBABB101-CO3			2		3	2		3
BBABB101-CO4			2		3	2		3

3= Strong   2=Average   1=Weak (Kindly mention the Number only)

Subject code	BBABB102					
Subject title	**Micro Economics**					
Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	Semester-
	5	1	0		**6**	I
Pre-requisite (if any)	Basic knowledge of mathematical function, differentiation					

Course Objectives:
1. To enable the students to understand fundamental concepts, terms and terminologies involved in micro economics
2. Through the incorporation of case lets/case studies, familiarize the students with real economic scenarios.
3. To make students understand the different types of markets and its equilibrium level of price and quantity determination process.

Course Outcome:

CO 1: Students would be able to understand the fundamental problems of a business economics and it's solutions techniques. They also able to understand the driving force behind the change in market price of commodity and its elasticity of demand.

CO 2: Students would be able to understand the economies and diseconomies of scale in production and the different types of costs associated with the production process.

CO 3: Students would be able to understand the different types of markets and its equilibrium level of price and quantity determination process under perfect competition, monopoly, monopolistic competition and oligopolymarket.

CO 4: Students would be able to understand the different types of factors of productions and their prices.

Course content:

Modules	Topic	Text Books Per Syllabus	Total hours of teaching	Blooms Level
M-1:	**The Economic Problem: Scarcity and Choice –** Introduction- The Problem Of Scarcity And Choice- Scarcity Of Resources And The Problem Of Choice- Kinds Of Resources-Types Of Output-Basic Questions And Central Problems Of An Economy- What To Produce-How To Produce :Choice Of Technique Of Production-For Whom To Produce: How To Distribute	Advanced Economic Theory: Microeconomic Analysis by Dr H. L. Ahuja, S.ChandPu		BL1 BL2 BL3 BL4 BL5

	Output?-What Provision Should Be Made For Economic Growth? What, How, And For Whom: Subject Matter Of Microeconomics-=Choice And Opportunity Cost- Production Possibility Frontier Or Curve- The Law Of Increasing Opportunity Cost-Scarcity, Choice, And Production Possibility Curve- Unemployment And PPF- Productive Inefficiency-Allocative Efficiency: Right – Mix Of Goods- Economic Growth And Production Possibility Curve-Capital Formation And Economic Growth. **Basic Mathematical Concepts:** Introduction. Functions. Slopes of Functions. Concept of Derivatives. Rules of Differentiation. **Demand and Supply:** Introduction-Market And Competition –Utility And Demand-The Meaning Of Demand And Quantity Demanded-The Law Of Demand- Demand Schedule And Demand Curve- CetericPeribus Assumption-Derivation Of Market Demand-Market Demand Curve-Reasons For The Law Of Demand-Why Does Demand Curve Generally Slopes Downward?- Exceptions To The Law Of Demand-Factors Determining Demand- Movement Along A Demand Curve And Shifts In Demand Curve- Movement Along The Demand Curve: Extension And Contraction Of Demand- Shifts In The Demand Curve: Increase And Decrease In Demand- Conclusion-Demand Function And Demand Curve – Deriving Market Demand Function-Supply And Supply Function-The Meaning Of Supply-Supply Function-The Relationship Between Price And Quantity Supplied: Law Of Supply-Explanation Of The Law Of Supply. **Elasticities Of Demand**: Various Concepts Of Demand Elasticity-Price Elasticity Of Demand-Price Elasticity Of Demand For Different Goods Varies A Good Deal- Measurement Of Price Elasticity- Mid- Point Method- Calculating Percentage Changes – Arc Elasticity Of Demand - Cross And Income Elasticity Of Demand- Some Numerical Problems Of Elasticity Of Demand. **Consumer's Behaviour:**Introduction. The Budget Constraints. The Concept of Utility: Total and Marginal Utility. Law of Diminishing Marginal Utility. Consumer's Equilibrium: Principle of Equi-marginal Utility. Derivation of Downward Sloping Demand Curve with Marginal Utility Analysis. Consumer Surplus (Concepts Only).	blication(**For Basic Mathematical Concepts**) Ch- 5 Principles of Micro Economics by H L Ahuja. S. Chand Publications. Ch- 1,5,7,9,1 1		

	Indifference Curve Analysis of Demand: Assumptions about Consumer Preferences: Indifference Curve Approach. What are Indifference Curves? Marginal Rate of Substitution. Principle of Diminishing Marginal Rate of Substitution. Properties of Indifference Curves. Budget Line or Budget Constraint. Shifts in Budget Line. Consumer's Equilibrium: Maximising Satisfaction. Consumer's Equilibrium. Income Effect: Income Consumption Curve.			
M-2:	**Production Function**: Introduction. Production Function. Law of Variable Proportions: Three Stages of Production. Causes of Diminishing Returns to a factor. Isoquants. Marginal Rate of Technical Substitution. Returns to Scale: Increasing Returns to Scale; Constant Returns to Scale; Decreasing Returns to Scale. Expansion Path (Concepts Only). **Theory of Costs**: The Concepts of Cost: Accounting Costs and Economic Costs; Opportunity Cost; Sunk Costs. Short Run and Long Run Defined. Short Run and Long Run. Total, Fixed and Variable Costs in the Short Run. The Short-Run Average and Marginal Cost Curves. Theory of Long-Run Costs: Long-Run Average Cost Curve. Why Long-Run Average Cost Curve is of U-Shape? Economies of Scale. Internal Diseconomies of Scale.	Principles of Micro Economics by H. L.Ahuja. S. Chand Publications. Ch-17, 18, 20		BL1 BL2 BL3 BL4 BL5
M-3	**Market Structures** **The Theory Of Firm And Pricing In Perfect Competition**: i) Market Structure And Concepts Of Revenue- Meaning Of Market-Classification Of Market Structures: Perfect Competition, Monopoly, Monopolistic, Oligopoly-Concepts Of Average Revenue (AR) And Marginal Revenue (MR)-AR And MR Under Perfect Competition-Relationships Between AR And MR Curves. ii) **Equilibrium Of The Firm Under Perfect Competition**: Meaning And Conditions Of Perfect Competition-The Demand Curve Of A Product Facing A Perfect Competitive Firm-Meaning Of A Firm's Equilibrium- Firm's Equilibrium Under Perfect Competition: MR-MC Approach-Second Order Condition For Equilibrium Of The Firm-Short Run Equilibrium Of The Firm Under Perfect Competition : Maximizing Profits, Maximizing Losses, Deciding To Shut Down- Long Run Equilibrium Of The Firm Under Perfect Competition.	Principles of Micro Economics by H. L.Ahuja. S. Chand Publications. Ch-21, 23, 26, 27,29, 30.		BL1 BL2 BL3 BL4 BL5

	Monopoly: Monopoly: Its Meaning and Conditions. The Nature of Demand and Marginal Revenue Curves under Monopoly. Price-Output Equilibrium under Monopoly. **Price Discrimination:**Meaning of Price Discrimination. Degrees of Price Discrimination: Price Discrimination of the First Degree, Price Discrimination of the Second Degree, Price Discrimination of the Third Degree. **Monopolistic Competition**: Product Differentiation and Monopolistic Competition. Important Features of Monopolistic Competition. Price-Output Equilibrium under Monopolistic Competition. Excess Capacity under Monopolistic Competition (Concepts Only). **Oligopoly**: Characteristics. Indeterminate Pricing and Output. Price Leadership (Only Meaning and Characteristics). Collusive Oligopoly (Meaning and Characteristics Only). Kinked Demand Curve.			
M-4	**Concept of Rent:** Introduction. Ricardian Theory of Rent: Scarcity Rent: Rent as Surplus over Cost of Production - Differential Rent. **Theory of Interest:** Introduction. Classical Theory of Interest. Loanable Funds Theory of Interest. Keynes's Liquidity Preference Theory of Interest. **Theory of Profit:**Introduction. Innovations and Profits: Schumpeter's Theory of Profits. Risk, Uncertainty and Profits: Knight's Theory of Profits.	Principles of Micro Economics by H. L.Ahuja. S. Chand Publications. Ch-41, 42,43		BL1 BL2 BL3 BL4 BL5

BLOOM'S TAXONOMY		COURSE OUTCOME – Students will be able to		
LEVEL 1	REMEMBER	Recall facts andbasic concepts	CO 1	Learn the fundamental concepts of 'microeconomics' & 'macroeconomics'
LEVEL 2	UNDERSTAND	Explain ideas orconcepts	CO 2	Understand the basic concepts of demand-supply, cost, production and market from microeconomics and national income, public finance and international trade from macroeconomics.
LEVEL 3	APPLY	Use informationlearnt to solve aproblem	CO 3	Apply the concepts of elasticity of demand and supply in the business and

				how to take a managerial decision by the firm. Problem solving on theory of costs, production and national income
LEVEL 4	ANALYSE	Understandrelationships,causes and actions	CO 4	Analyze the relevance of change in demand and supply in the market. Nature of the market and its impact. Will be analysed the impact of business cycle, credit creation by the banks and causes of international trade.
LEVEL 5	EVALUATE	Evaluate thecorrectness ofdecision made	CO 5	Evaluate the impact of any strategic decision w.r.t profit of the firm, change in different phases of business cycle.
LEVEL 6	CREATE	Create somethingnew	CO 6	Prepare strategy pertaining to set the price of the product and quantity supply by the firm.

Recommended Study Material:

1. Principles of Micro Economics by H. L. Ahuja. S. Chand Publications.

CO-PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB102-CO1	3	2	3			2	1	
BBABB102-CO2	2	3	3			3	2	
BBABB102-CO3	2	3	2			3	2	
BBABB102-CO4	2	3	2			2	2	

3= Strong   2=Average   1= Weak

PO & PI Mapping:

PO1: Assessment of Choices Students will develop the capability to assess alternate managerial choices and come up with optimal solutions.	
Competency	**Indicators**
1.1 Demonstrate competencies in Business Construction Model & Decision- Making Model 1.2 Demonstrate competencies in evaluation of each of the alternatives	1.1.1. Ability to take up analytical approach for problem solving, 1.1.2. Ability to take into consideration minute details and factors that influences a business. 1.2.1 Ability to weigh the pros and cons of each of the alternatives or options available to a functional area of a business.

PO 2 : Identification of the Nature of a Problem Area
Students will be able to apply their conceptual understanding of marketing, finance and human resources in the real world.

Competency	Indicators
2.1. Demonstrate an ability to identify an area that requires problem solving. 2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.1 Ability to evaluate problem statement and contribute towards problem solving methods, 2.1.2 understanding a problem or issue belong to demand analysis. 2.2.1 To be able to identify the different types of demand elasticity which influence the decision-making process.

PO 3 : **Decision Making Skills**
Students will develop decision making skills with the help of analytical and critical thinking ability.

Competency	Indicators
3.1 To be able to demonstrate the different aspects that can get influenced by the decision taken within the business. 3.2 To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem.	3.1.1 Capability of identify the different types of costs and production, 3.1.2 Follow up the changes of market structures and its applications 3.2.1 Reaching to a solution and evaluating it after observing the changes

PO6: Integration of Functions:
Students will be able to integrate functional areas of management for planning, implementation and control of business decisions.

Competency	Indicators
6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.2.1. Ability to study the changes in preferences of customers 6.2.2. Study in the changes in political & technological environment

PO7: DeployableSkill set:
Studentswilldevelopdeployableskills parallel to thechosen functional/specialized area.

Competency	Indicators
7.1 Demonstratingthe ability toidentify the natureof a problemappearingduringthe course ofbusiness. 7.2 Demonstratingthe ability to applythelearnedskillset as whenrequired.	7.1.1Acknowledgementofthe existence of aproblem, 7.1.2 Deciding theoverall nature of theproblem and its minordetails. 7.2.1. Ability toimplementtherequiredknowhow as whennecessityarises.

Submitted by:Prof.(Dr.) Rabin Mazumder

_____   _____
(Name)   (Signature & Date)

Received by :   NA_____   _____
(HOD)   (Signature & Date)

Subject code	BBABB103					
Subject title	Business Mathematics					
Scheme and Credits	L	T	P	S	Credits	Semester-
	4				4	1st
Pre-requisite (if any)	Basic Mathematical Knowledge					

Course Objectives:

1.The course is designed to provide a basic applied knowledge of Mathematics.

2. The students will be able to apply the number system & basic algebra, set theory

3. The course will provide concept of combinatorics & its application.

4. The course will give introductory knowledge of calculus required for business

Course Outcome:

CO	Details
1	Ability to understand and apply basic concept of number theory to solve problems on functions & combinatorics.
2	Ability to understand & apply basic algebra & to solve business related problem
3	Ability to understand basic matrix algebra and solve simple problems
4	Ability to understand basic calculus and solve simple problems

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	Blooms Level
M-I:	**1. The Number System** – Positive and Negative Integers, Fractions, Rational and Irrational Numbers, Real Numbers, Problems Involving the Concept of Real Numbers. **2. Functions** – Elementary idea of functions; Domain of a Function; Composition Functions; Classification of Functions: Related problems. **3. Permutations and Combinations** – Fundamental principle of counting; Factorial notation. Permutation: Permutation of n	**1. BBA Mathematics Vol 1** Pal & Das, U.N.Dhur& Sons Pvt. Ltd	10	BL1, BL2, BL3, BL4

	different things; of things not all different; restricted permutations;			
M-II:	**1. Basic Algebra** – Algebraic Identities, Factorizations; Linear equations; Surds; Indices; Logarithms. **2. Quadratic Equation**– Solution of the Quadratic Equation $ax^2 + bx + c = 0, a \neq 0$; Nature of the Roots of a Quadratic Equation; Relation between Roots and Coefficients. Forming quadratic equation with given roots. **3. Set Theory**-Introduction; Representation of sets; Types of Sets; Basic operations on sets; Venn Diagrams; Application of set theory to the solution of problem.	**BBA Mathematics Vol 1** - Pal & Das, U.N.Dhur& Sons Pvt. Ltd	10	BL1, BL2, BL3, BL4
M-III:	**1.Determinants**- Determinants of order 2 and 3; minors and cofactors; expansion of determinants; properties of determinants; Cramer's rule for solving simultaneous equations in two or three variables **2**. **Matrices**- Different types of matrices; Matrix Algebra – addition, subtraction and multiplication of matrices; Singular and non-singular matrices; adjoint and inverse of a matrix.	**BBA Mathematics Vol 2** - Pal & Das, U.N.Dhur& Sons Pvt. Ltd	10	BL1, BL2, BL3, BL4
M-IV:	**1. Limits & Continuity** – Basic concepts of Limits; Simple problems; Concept of Continuity. **2. Differentiation**- Meaning & geometrical interpretation of differentiation; standard derivatives (excluding trigonometric functions); rules for calculating derivatives; logarithmic differentiation.	**BBA Mathematics Vol 2** - Pal & Das, U.N.Dhur& Sons Pvt. Ltd	10	BL1, BL2, BL3, BL4

RecommendedStudy Material:
1. **BBA Mathematics Vol 1** - Pal & Das, U.N.Dhur& Sons Pvt. Ltd
2. **BBA Mathematics Vol 2** - Pal & Das, U.N.Dhur& Sons Pvt. Ltd
3. **Mathematics by S.N De class XI & Class XII -** ChhayaPrakashani Limited

CO & PO Mapping:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB103.1		3	3			3	2	
BBABB103.2		3	3			3	2	
BBABB103.3		3	3			3	2	
BBABB103.4		3	3			3	2	

*3= Strong   2=Average   1=Weak
PO & PI Mapping:

PO2: Identification of the Nature of a Problem Area	
Competency	**Indicators**
2.1. Demonstrate an ability to identify an area that requires problem solving.	2.1.1. Ability to contribute towards problem solving methods.
2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.2. Understanding a problem or issues belong to which of the specialized areas- Finance, HR or marketing
	2.2.1. To be able to identify the different factors that influence the business.
PO3: Decision Making Skills	
Competency	**Indicators**
3.1 To be able to demonstrate the different aspects that can get influenced by the decision taken within the business.	3.1.1 Capability of implementation of a decision after proper assessment, 3.1.2 Follow up the changes that are occurring due to the implementation
PO6: Integration of Functions	
Competency	**Indicators**
6.1 Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps.	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue.
6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.2.1. Ability to study the changes in preferences of customers and
PO7: Deployable Skill set	
Competency	**Indicators**
7.1. Demonstrating the ability to identify the	7.1.1. Acknowledgement of the existence of a

nature of a problem appearing during the course of business.	problem.
7.2. Demonstrating the ability to apply the learned skill set as when required.	7.1.2. Deciding the overall nature of the problem and its minor details.
	7.2.1. Ability to implement the required knowhow as when necessity arises.

Submitted by: Dr. Bidushi ChakrabortyProf Sreeparna Guha

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(Signature & Date)(Signature & Date)

Received by:

     _____   _____
(HOD)   (Signature & Date)

Subject code	BBABB104					
Subject title	Business Statistics					
Scheme and Credits	L	T	P	S	Credits	Semester-
	4	0	0		4	1st
Pre-requisite (if any)	None					

Course Objectives:

1.The course aims to enable the students to have a proper understanding of Statistical applications.

2. The course will help students to understand the use of statistical, graphical and algebraic techniques in Economics and Management.

3. The course is designed to give basic concept of descriptive statistics.

4. The course is designed to give basic concept Correlational & regression analysis.

Course Outcome:

CO	Details
1	Ability to understand the concept of Statistics & its use.
2	Ability to solve and understand simple central tendency & dispersion problems
3	Ability to deduce Different moment & correlational analysis
4	Ability to understand basic regression & its application

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	Blooms Level
M-I:	**1. Introduction to Statistics; Collection, Editing and Presentation of Data**: Primary Data and Secondary Data, Methods of Collection, Presentation of Data: Construction of a Table and the Different Components of a Table. **2. Frequency Distributions**- Attribute and variable; Frequency distribution of an attribute; Discrete and continuous variables; Frequency distributions of discrete and continuous variables. Different diagrammatic	**Managerial Statistics –** Roychowdhury& Bhattacharya U.N.Dhur& Sons Pvt. Ltd.	10	

	representation of a frequency distribution:			
M-II:	**Measures of Central Tendency-** Introduction, Definition and utility; Different measures of average; Arithmetic Mean; Results on Arithmetic Mean; Merits and Demerits of Arithmetic Mean; Median; Mode; Other positional measures.	**Managerial Statistics –** Roychowdhury& Bhattacharya U.N.Dhur& Sons Pvt. Ltd.	12	
M-III:	**Measures of Dispersion-** Introduction; Meaning and objective of dispersion; Different measures of dispersion – Range, Quartile deviation, Mean deviation, Mean Absolute deviation, Standard deviation.	**Managerial Statistics –** Roychowdhury& Bhattacharya U.N.Dhur& Sons Pvt. Ltd.	10	
M-IV:	**Moments, Skewness and Kurtosis**: Moments: Different Ways to Calculate Moments. Skewness: Measures of Skewness, Kurtosis and its Measures. **Correlation Analysis:** Analysis of Bivariate data. Correlation Analysis – Meaning of Correlation: Scatter Diagram, Karl Pearson's Coefficient of Linear Correlation, Idea of Rank Correlation; Spearman's Rank Correlation Coefficient(without tie)	**Managerial Statistics –** Roychowdhury& Bhattacharya U.N.Dhur& Sons Pvt. Ltd.	10	

RecommendedStudy Material:
1. **Managerial Statistics**– Roychowdhury&Bhattacharya, U.N.Dhur& Sons Pvt. Ltd.
2. **Business Mathematics and Statistics**– RanajitDhar, DishariPrakashani.

CO & PO Mapping:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB104.1		3	3			3	2	
BBABB104.2		3	3			3	2	
BBABB104.3		3	3			3	2	
BBABB104.4		3	3			3	2	

PO & PI Mapping:

PO2: Identification of the Nature of a Problem Area	
Competency	**Indicators**
2.1. Demonstrate an ability to identify an area that requires problem solving. 2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.1. Ability to contribute towards problem solving methods. 2.1.2. Understanding a problem or issues belong to which of the specialized areas- Finance, HR or marketing 2.2.1. To be able to identify the different factors that influence the business.
PO3: Decision Making Skills	
Competency	**Indicators**
3.1 To be able to demonstrate the different aspects that can get influenced by the decision taken within the business.	3.1.1 Capability of implementation of a decision after proper assessment, 3.1.2 Follow up the changes that are occurring due to the implementation
PO6: Integration of Functions	
Competency	**Indicators**
6.1 Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps. 6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue. 6.2.1. Ability to study the changes in preferences of customers and
PO7: Deployable Skill set	
Competency	**Indicators**
7.1. Demonstrating the ability to identify the nature of a problem appearing during the course of business. 7.2. Demonstrating the ability to apply the learned skill set as when required.	7.1.1. Acknowledgement of the existence of a problem. 7.1.2. Deciding the overall nature of the problem and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.

Submitted by: Dr. Bidushi ChakrabortyProf Sreeparna Guha

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(Signature & Date)(Signature & Date)

Received by:

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(HOD)   (Signature & Date)

Subject Code	BBABB105					
Subject Title	**Business Communication**					
Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	**Semester**
	3	1	0	0	**4**	I
Pre-requisite (if any)	Basic knowledge of communication					

Course Objectives:

1. Students will learn to apply business communication theory to solve workplace communication issues.

2. Students will learn to demonstrate the communication skills required in the workplace.

3. Students will learn to manage resources effectively and efficiently in a professional context.

4. Students will learn to impart the correct practices of the strategies of effective business interactions.

Course Outcome: Student will be able

CO1	Students will learn to distinguish among various levels of organizational communication and communication barriers while developing an understanding of Communication as a process in an organization.
CO2	Students will learn to stimulate their Critical thinking by designing and developing clean and lucid interpersonal skills.
CO3	Students will learn to understand and apply basic principles of critical thinking, problem solving, and technical proficiency in the development of exposition and argument.
CO4	Students will gain information-seeking skills and strategies necessary for sustaining in professional/ corporate workplace.

Modules	Serial of Modules	Text Book as per Syllabus	Total hour	Blooms

			s of teaching	Level
M-I: Basics of Communication	• Role of Communication • Defining Communication, • Classification of Communication • Purpose of Communication • Elements of Communication, • Major Difficulties of Communication • Common problems in Two-way communication • Barriers to Communication • Conditions for Successful Communication, • Characteristics of Successful Communication, • Universal Elements in Communication	• **The Art and Science of Business Communication: Skills, Concepts, Cases, and Application Fourth Edition by PD ChaturvediMukeshChaturvedi PEARSON**	10	BL1 BL2 BL3 BL4 BL5 BL6
M-II: Communication in Business Environment	• The process of communication: Linear concept, The Shannon-Weaver Model • The two way communication process • Conditions for successful communication • The seven C's of communication • Universal elements in communication	• **The Art and Science of Business Communication: Skills, Concepts, Cases, and Application Fourth Edition by PD ChaturvediMukeshChaturvedi PEARSON**	10	BL1 BL2 BL3 BL4 BL5 BL6
M-III: Writing Skills	• Applying for Jobs • Writing a CV • The relationship between a Resume and an Application Letter • The Resume of a Recent Graduate • Guidelines for preparing a good CV • Drafting an Application Letter • Business letter • Memo • Notice • Business Report	• **The Art and Science of Business Communication: Skills, Concepts, Cases, and Application Fourth Edition by PD ChaturvediMukeshChaturvedi PEARSON**	10	BL1 BL2 BL3 BL4 BL5 BL6
M-IV: Communications for Effective Marketing	• Objectives of Marketing Communication, • Tools of Marketing Communication, • Some new Tools of Marketing Communication • Consumer, Industrial and Trade Marketing Communication,	• **The Art and Science of Business Communication: Skills, Concepts, Cases, and Application Fourth Edition by PD ChaturvediMukes**	5	BL3, BL4, BL5, BL6

	• Institutional and Corporate Marketing Communication, • Marketing Communication Continuum, • Integrated Marketing Communications	**hChaturvedi PEARSON**		
M-V:	• Reading techniques & engaging effectively	• **The Art and Science of Business Communication: Skills, Concepts, Cases, and Application Fourth Edition by PD ChaturvediMukes hChaturvedi PEARSON**	5	BL1 BL 2

Recommended Study Material:

- The Art and Science of Business Communication: Skills, Concepts, Cases, and Application Fourth Edition by PD ChaturvediMukeshChaturvedi PEARSON
- Effective Technical Communication, Md. Ashraf Rizvi
- Technical Communication, 3E: Principles and Practice by Meenakshi Raman (Author), Sangeeta Sharma (Author)

CO & PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB105–CO1	3	3	1	3				
BBABB105–CO2	3			3		3		2
BBABB105- CO3	3	2	3	3				
BBABB105- CO4	3		3	3		2		2

*3= Strong   2=Average   1=Weak

Minimum 4 PO to be mapped for each CO
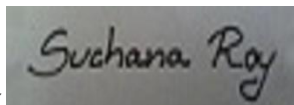
PO & PI Mapping:

PO 1: Assessment of Choices	
Competency	**Indicators**
1.1Demonstrate competencies in Business Construction Model & Decision- Making Model 1.2Demonstrate competencies in evaluation	1.1.1Ability to take up analytical approach for problem solving 1.2.1Ability to take into consideration minute details and factors that influences a business

of each of the alternatives	1.2.2 Ability to weigh the pros and cons of each of the alternatives or options available to a functional area of a business

PO 2: Identification of the Nature of a Problem Area

Competency	Indicators
2.1. Demonstrate an ability to identify an area that requires problem solving. 2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.1 Ability to contribute towards problem solving methods. 2.2.1 Understanding a problem or issues belong to which of the specialized areas- Finance, HR or marketing. 2.2.2 To be able to identify the different factors that influences the business.

PO 3: Decision Making Skills

Competency	Indicators
3.1. To be able to demonstrate the different aspects that can get influenced by the decision taken within the business. 3.2. To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem.	3.1.1. Capability of implementation of a decision after proper assessment. 3.1.2. Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use) 3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented)

PO 4: Deployable Skill set

Competency	Indicators
4.1. To Demonstrate the ability to make effective business communication. 4.2. To Demonstrate the ability to pursue stakeholders and enhancing the convincing skills.	4.1.1. Ability to choose appropriate words when making verbal communication 4.1.2. To be able to select proper language and words when making written communication. 4.2.1. Ability to present oneself groomed properly and uses formal gestures with appropriate body language.

PO 6: Moral Sensitivity

Competency	Indicators
6.1. Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps. 6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue. 6.2.1. Ability to study the changes in preferences of customers 6.2.2. Study in the changes in political & technological environment

PO 8: **Moral Sensitivity**	
Competency	**Indicators**
8.1. To Demonstrate the ability to identify that there is a moral dilemma. 8.2. Demonstration of the ability to solve the moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence. 8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society.

Submitted by: Suchana Roy

_____ _____

(Name) (Signature & Date)

Received by:

_____ _____

(HOD) (Signature & Date)

Subject Code	BBABB106					
Subject Title	**Fundamental of Computer Applications**					
Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	**Semester**
	4	0	0	0	**4**	I
Pre-requisite(if any)	Basic knowledge of Computer and its application software					

Course Outcome: Students will

CO1:   Recallthe concepts of computer structure and the concepts of basic computer organization

CO2:   Be able to evaluate the impact of Processor and memory in a computer

CO3:   Understand the value of secondary storage devices in a computer.

CO4:   Analyze the concepts ofa computer software

CO5: Evaluate the concepts of MS Excel

CO6: Be able to create MS office documents with MS Word and MS Power point

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	Blooms Level
M-I: Computer Concepts	• Computer and Its Characteristics • Evolution of Computers • First Generation, Second Generation, Third Generation, Fourth Generation, Fifth Generation • Input Unit, Output Unit, Storage unit • The System Concept	P.K.Sinha - Computer Fundamentals, BPB Publication	8	BL1, BL2, BL3, BL4, BL5, BL6

M-II: Process or and memory and i/o devices	• CPU
	• Main Memory
	• ALU, Control Unit
	• Input devices
	  1. Keyboard
	  2. Data scanning devices
	  3. Electronic Card reader
	• Output devices
	  1. Monitors
	  2. Printers
	  3. Screen image projector
		P.K.Sinha - Computer Fundamentals, BPB Publication	8	BL1, BL2, BL3, BL4, BL5, BL^

M-III: Secondary Storage devices and	• Sequential and Direct Access Devices • Magnetic tapes • Magnetic disks • Optical disks • Memory stage devices • Mass storage devices • Data back up	P.K.Sinha - Computer Fundamentals, BPB Publication	8	BL1, BL2, BL3 BL4, BL5, BL6

M-IV:
 	
Computer Software and : Microsoft Excel 2007
	• Introduction to software
	• Relationship between hardware and software
	• Types of Software
	  1. System Software
	  2. Application Software
	• Logical System Architecture
	• Firmware and Middleware
	• Creating a New Spreadsheet Document, Editing an Existing Document, Saving Spreadsheet in DifferentFormats, Validation of data in Fields, Different Tools Available in MS Excel 2007 Ribbon Tabs
		P.K.Sinha - Computer Fundamentals, BPB Publication	8	BL1,BL2,BL3,BL4, BL5,BL6

M-V: Software: Microsoft PowerPoint 2007	• The Different Functionalities of Microsoft PowerPoint 2007, Creating a PowerPoint Presentation, Creating and Inserting a New Slide, Creating a Title Slide; Applying a Design Template. Creating a Hierarchy, Using a Two-Column Text, Slide Sorter View, Running the Slide Show, Printing the Slides, Slide Transition and Custom Animation. • Microsoft Word 2007:The different functionalities in the Microsoft Word Software 2007, Creation of a New Document, Editing an Existing Document, Saving and Printing a File, Use of the Different Ribbon Tab and Tools, Handling Tables in MS Word 2007, Mail Merge, Macro.	P.K.Sinha - Computer Fundamentals, BPB Publication	8	BL1,BL2,BL3,BL4, BL5,BL6

BLOOM'S TAXONOMY		COURSE OUTCOME – Students will be able to		
LEVEL 1	REMEMBER	Recall facts and basic concepts	CO 1	Recall the concepts of computer structure and the concepts of basic computer organization
LEVEL 2	UNDERSTAND	Explain ideas or concepts	CO 2	Be able to understand the impact of Processor and memory in a computer

LEVEL 3	APPLY	Use information learnt to solve a problem	CO 3	Understand the value of secondary storage devices in a computer and its application
LEVEL 4	ANALYSE	Understand relationships, causes and actions	CO 4	Analyze the concepts of a computer software and MS Excel
LEVEL 5	EVALUATE	Evaluate the correctness of decision made	CO 5	Analyze the concepts of a computer software and MS Excel
LEVEL 6	CREATE	Create something new	CO 6	Be able to create documents of Excel, Word and Power point presentations

RecommendedStudy Material:
- P.K.Sinha - Computer Fundamentals, BPB Publication
- Step by Step (Microsoft Office System) 2007 Edition, Prentice -Hall of India

CO & PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB106–CO1								2
BBABB106–CO2								2
BBABB106- CO3			3					
BBABB106- CO4			3	1			3	3
BBABB106–CO5			3	3			3	3

*3= Strong   2=Average   1=Weak
PO & PI Mapping:

PO 3: Students will be able to handle different tools of decision making and problem solving methods in the context of commercial organization		
Competency	**Indicators**	
. 3.1 To be able to demonstrate the different aspects that can get influenced by the decision taken within the business.	3.1.1. Capability of implementation of a decision after proper assessment.	3.1.2. Follow up the changes that are occurring due to the implementation.
. 3.2. To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem .	3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented)	

PO 4: Communication skills will be enhanced in Synchronization with the functioning of the business analytics algorithms	
Competency	**Indicators**
4.1. To Demonstrate the ability to make	4.1.1. Ability to choose appropriate words

effective business communication.	when making verbal communication.
	4.1.2. To be able to select proper language and words when making written communication.

PO 7: **Students will develop deployable skills parallel to the chosen functional/ specialized area.**

Competency	Indicators
7.1. Demonstrating the ability to identify the nature of a problem appearing during the course of business.	7.1.1. Acknowledgement of the existence of a problem. 7.1.2. Deciding the overall nature of the problem and its minor details.
7.2. Demonstrating the ability to apply the learned skill set as when required	7.2.1. Ability to implement the required knowhow as when necessity arises.

PO 8: Students will develop the capability to demonstrate increased level of sensitivity towards areas that require ethical and moral addressing during the course of business.

Competency	Indicators
8.1. To Demonstrate the ability to identify that there is a moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence.
8.2. Demonstration of the ability to solve the moral dilemma.	8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society.

Submitted by: Prof. Sayan Karmakar

_____   _____
               (Name)   (Signature & Date)

Received by:

_____   _____
               (HOD)   (Signature & Date)

Course code	BBABB301
Course title	Business Research Methods

Scheme and Credits	L	T	P	S	Credits	Semester-
	4	0	0		4	3rd
Pre-requisite (if any)	Descriptive statistics & probability					

Course Objectives:

1. To familiarize students with basic of research and the research process.
2. To help students in conducting research work and making research reports.
3. To identify various sources of information for literature review and data collection.
4. To write a research report and thesis & research proposal

Course Outcome: Student will

CO 1: Ability to understand root notion and significance of Research methods & literature

CO 2: Understand different approaches of research & ethics

CO 3: Ability to learn Different Sampling Techniques

CO 4: Ability to learn & apply analysis techniques in research.

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	Blooms Level
M-I:	• **Types of Research**: (a) Pure and Applied, (b) Exploratory, Descriptive, (c) Experimental • **Scientific Study of Social Phenomena**: (a) The Scientific Method, Logic in Social Science, (b) Objectivity and Subjectivity in Social Science, (c) Positivism and Empiricism. Methods of research: (a) Quantitative and Qualitative (Characteristics and Differences Sources of Data : Primary & Secondary. • **Literature Review**: Concept, necessity, research gap, reference,and plagiarism.	Research Methodology: Methods And Techniques – C.R.Kothari, New Age International Publishers	10	BL1, BL2, BL3
M-II:	• **Techniques of Data Collection**: (a) Survey, (b) Observation, (c) Questionnaire (d) Interview. • **Measures of Central Tendency & Dispersion**: Mean; Median; Mode; Range; Mean Deviation; Standard Deviation.	Research Methodology: Methods And Techniques – C.R.Kothari, New Age International Publisher	10	BL3, BL4, BL5, BL6

M-III:	• **Sampling Theory**: Concept; Need and Importance of Sampling; Types of Sampling Methods. • **Estimation** – Theory & Concepts; Point & Interval Estimation. • **Hypothesis Testing:** Definition, Concepts, Types of hypothesis, Test Statistics, Critical Value, Decision Rule, Procedure, Hypothesis testingfor mean.	Research Methodology: Methods And Techniques – C.R.Kothari, New Age International Publishers	10	
M-IV:	• **Introduction to Data Analysis Techniques:** Introductory concepts to Univariate, Bi-variate and Multi-variate techniques • Correlation & Regression Analysis • **Data Ethics**: Concept, business benefits, Principles, ethical use of algorithms	Managerial Statistics – S.Roychoudhury & D.Bhattacharya, U.N.Dhur PVT LTD	10	

Recommended Study Material:

4. Kothari, C.R.: Research Methodology – Methods and Techniques, New Age International Ltd.
5. Managerial Statistics – S.Roychoudhury & D.Bhattacharya, U.N.Dhur PVT LTD
6. Inferential Statistics - S.Roychoudhury & D.Bhattacharya, U.N.Dhur PVT LTD

CO & PO Mapping:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB301.1		3	3			3	3	
BBABB301.2		3	3			3	3	
BBABB301.3		3	3			3	3	
BBABB301.4		3	3			3	3	

PO2: Identification of the Nature of a Problem Area	
Competency	**Indicators**
2.1. Demonstrate an ability to identify an area that requires problem solving.	2.1.1. Ability to contribute towards problem solving methods.
2.2 Demonstrate an ability to assess the business environment and understand their impact on the	2.1.2. Understanding a problem or issues belong to which of the specialized areas- Finance, HR or

business.	marketing
	2.2.1. To be able to identify the different factors that influence the business.
PO3: Decision Making Skills	
Competency	**Indicators**
3.1 To be able to demonstrate the different aspects that can get influenced by the decision taken within the business.	3.1.1 Capability of implementation of a decision after proper assessment, 3.1.2 Follow up the changes that are occurring due to the implementation
PO6: Integration of Functions	
Competency	**Indicators**
6.1 Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps. 6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue. 6.2.1. Ability to study the changes in preferences of customers and
PO7: Deployable Skill set	
Competency	**Indicators**
7.1. Demonstrating the ability to identify the nature of a problem appearing during the course of business. 7.2. Demonstrating the ability to apply the learned skill set as when required.	7.1.1. Acknowledgement of the existence of a problem. 7.1.2. Deciding the overall nature of the problem and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.

Submitted by:

        Prof. Sreeparna Guha   Prof. Debarati Ghosh

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        (Signature & Date)   (Signature & Date)

Received by:

        _____   _____

               (HOD)   (Signature & Date)

Course Code	BBABB302					
Course Title	**Financial Accounting**					
Scheme and Credits	L	T	P	S	Credits	Semester
	0	4	0	0	**4**	III
Pre-requisite (if any)	Basic knowledge of Business Transactions					

Course Objectives:

1. To make the students understand the financial statements in accordance with appropriate National and International Standards. .
2. To help students understand the value of ledger accounts using double entry bookkeeping and record journal entries accordingly and to interpret the business implications of financial statement information.
3. To prepare the Final Statements of Financial Accounting To emphasize the need for a new strategic decision-making approach within a firm based.
4. To explain the process of Primary and Secondary issue of share in Capital market and elaborate the process of forfeiture.

Minimum 4 Course outcome to be prepared which may be extended upto 7

Course Outcome: Student will be able

CO 1: Students will recognize commonly used financial statements, their components and how information from business transactions flows into these statements.

CO 2: Students will be able to demonstrate knowledge of preparation of Financial Statements and or financial schedules in accordance with Generally Accepted Accounting Principles through analysis and synthesis of information as well.

CO 3: Students will be able to demonstrate knowledge of various advanced accounting issues related to Financial Accounting within a global and or ethical framework.

CO 4: Students will learn relevant financial accounting career skills, applying both quantitative and qualitative knowledge to their future careers in business.

CO5: Students will be able to understand the strategy of issue of shares in the primary and secondary market.

CO6: Students will be concerned about the different types of bank and personal transactions, and also understands about the various rules and regulations of the financial sectors.

Modules	Serial of Modules	Text Book as per Syllabus	Total hours	Blooms Level
M-I: Introduction to Financial Accounting & Accounting Standards:	• Meaning and Scope of Accounting; the users of financial accounting information and their needs; Accounting Principles: Accounting Concepts and Conventions, GAAP; Accounting Transactions: Accounting Equation, Journal, Rules of debit and credit, Ledger, Trial Balance. • Introduction, Objectives of Accounting Standards, Advantages of Accounting Standards, Accounting Standards in India and IFRS	• Prof. A. Basu: Financial Accounting I, Dey Book Concern. • Basu & Das, Selected Problems on Accounting, Rabindra Library.	10	BL1, BL2, BL3
M-II: Cash Book & Bank Reconciliation Statement	• Double Column Cash Book • Meaning of Bank Reconciliation Statement, Importance of Bank Reconciliation Statement, Reasons for Difference, Procedure for Reconciliation.	• Basu & Das, Selected Problems on Accounting, Rabindra Library.	5	BL1, BL2, BL3
M-III: Depreciation and Provisions	• Concept of depreciation; Causes of depreciation; depletion, amortization; Depreciation accounting; Methods of recording depreciation; Straight line and diminishing balance method (excluding change in method of depreciation). • Provisions and Reserves: Preparation of provision for doubtful debt account, provision for discount on Debtors account and provision for Discount on Creditors account.	• Prof. A. Basu: Financial Accounting I, Dey Book Concern. • Basu & Das, Selected Problems on Accounting, Rabindra Library.	15	BL1, BL2, BL3, BL4
M-IV: Final Accounts	• Introduction, Meaning, Objectives and Characteristics of Final Accounts; Final Statements of Sole Proprietorship, adjustments in Preparation of Final Statements.	• Prof. A. Basu: Financial Accounting I, Dey Book Concern. • Basu & Das, Selected Problems on Accounting, Rabindra Library.	5	BL1, BL2, BL3

Recommended Study Material:

Text Book:

1. Prof. Amitabha Basu: Financial Accounting I, Dey Book Concern.
2. Basu & Das, Selected Problems on Accounting, Rabindra Library.

References:

1. Maheshwari: Introduction to Accounting, Vikas Publishing.
2. Shukla, MC, Grewal TS, and Gupta, SC: Advanced Accounts; S. Chand & Co.

CO & PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB302 - CO1	3	3				2	2	
BBABB302 - CO2		3	2			3	3	
BBABB302 - CO3	2	2				3	3	
BBABB302- CO4	2	2	3			3		
BBABB302- CO5	2	3	2			2		
BBABB302 - CO6	3		3			2	3	

*3= Strong   2=Average   1=Weak   Minimum 4 PO to be mapped for each CO

PO & PI Mapping:

PO 1: Assessment of Choices	
Competency	**Indicators**
1.1 Demonstrate competencies in Business Construction Model & Decision Making Model 1.2 Demonstrate competencies in evaluation of each of the alternatives	1.1.1. Ability to take up analytical approach for problem solving, 1.1.2. Ability to take into consideration minute details and factors that influences a business. 1.2.1 Ability to weigh the pros and cons of each of the alternatives or options available to a functional area of a business.
PO 2: Identification of the Nature of a Problem Area	
Competency	**Indicators**
2.1. Demonstrate an ability to identify an area that requires problem solving. 2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.1 Ability to contribute towards problem solving methods, 2.1.2 Understanding a problem or issue belongs to which of the specialized areas- Finance, HR or marketing. 2.2.1 To be able to identify the different factors that influences the business.
PO 3: Decision Making Skills	
Competency	**Indicators**
3.1. To be able to demonstrate the different aspects that can get influenced by the decision	3.1.1. Capability of implementation of a decision after proper assessment.

taken within the business.	3.1.2. Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use)

PO 6: Integration of Functions	
Competency	**Indicators**
6.1 Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps. 6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue. 6.2.1. Ability to study the changes in preferences of customers and 6.2.2. Study in the changes in political & technological environment.

PO 7: Deployable Skill set	
Competency	**Indicators**
7.1 Demonstrating the ability to identify the nature of a problem appearing during the course of business. 7.2 Demonstrating the ability to apply the learned skill set as when required.	7.1.1 Acknowledgement of the existence of a problem, 7.1.2 Deciding the overall nature of the problem and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.

Submitted by: Arkaprava Chakrabarty

_____   _____
            (Name)   (Signature & Date)

Received by:

_____   _____
            (HOD)   (Signature & Date)

Course Code	BBABB303					
Course Title	Marketing_Management					
Scheme and Credits	T	L	P	S	Credits	Semester
	6	0	0	0	**6**	III
Pre-requisite (if any)	Nil					

Course Objectives:

1. To understand the relevance of marketing concepts and its impact on environmental change while designing marketing plans & strategies for practices.
2. To illustrate the functionality and application of elements of Marketing Mix and selling propositions for specific product offerings and pricing objectives.
3. To apply knowledge in creating strategies for integrated marketing communication and distribution network.
4. To develop marketing strategies based on segmentation, target marketing, positioning by examining consumer behavior and sustainability.

Course Outcome:

CO1: Students will learn the basic & fundamental concepts of Marketing and will also be able to outline key marketing concepts and its application to coordinate the various marketing environment variables and interpret them for designing marketing strategy for business firms.

CO2: Students will be able to understand the suitable product, pricing strategies for a firm to achieve the Marketing objective of the firm. and the importance of integrated marketing communication and distribution strategies to achieve organizational goal.

CO3: Students will be able to analyze & implement the appropriate segmentation, targeting and positioning strategy to achieve the business goals in emerging green consumer segments and how marketers are addressing those needs.

CO4: Students will be able to practice the relevant marketing skills for designing innovative marketing strategies for business firms.

Modules	Serial of Modules	Text book as per Syllabus	Total hours of teaching	Blooms Level
Module I: Fundamentals of Marketing & its Environment:	**Unit I: Introduction to Marketing** Nature and scope of marketing; Importance of marketing; Marketing concepts – traditional and modern; Selling vs. marketing; Functions and Evolution of Marketing; Marketing mix, customer value and satisfaction. **Unit II: Marketing environment:** Macro and Micro Environment and its significance to marketing; SWOT Analysis; PEST Analysis, corporate strategy concept, strategic business units.	• Saxena, Rajan: Marketing Management, Tata McGraw Hill	14	BL 1, BL 2,
Module II: Managing Marketing Mix	**Product mix** – Product Life Cycle – New product development & consumer adoption process – Branding & Packaging – **Pricing** – Meaning – Objectives of pricing – Factors influencing pricing decisions – Methods of pricing and pricing strategies. **Promotion** – Meaning – Promotion mix – Selection of media– Personal selling – Sales Promotion. Factors affecting choice of channel – Channel design decision – **Channel Management** – Channel Conflict.	• Saxena, Rajan: Marketing Management, Tata McGraw Hill	20	BL 1, BL 2, BL 4, BL 5
Module III: Market Segmentation, Targeting & Positioning (STP) for Sustainable Strategy	**Segmentation**: Meaning– Perquisites/ bases for sound segmentation – **Target** marketing strategies – Product **positioning**, meaning and steps involved. Meaning, Concept, Types, Importance, Benefits Difference in between Marketing & Green Marketing, Green Marketing Mix, Green Marketing Adoption Strategies.	• Saxena, Rajan: Marketing Management, Tata McGraw Hill	14	BL 1, BL 2, BL 3, BL 4, BL 5
Module IV: Building Customer value, Satisfaction and loyalty	Meaning of consumer behaviour – Factors influencing Consumer behaviour – Buying decision process and its stages. Customer Value- Customer satisfaction. Changing profile of consumers.	• Saxena, Rajan: Marketing Management, Tata McGraw Hill	12	BL 2, BL 4, BL 5

Textbook

- Saxena, Rajan: Marketing Management, McGraw Hill
- Philip Kotler, Gary Armstrong, Prafulla Agnihotri, Principles of Marketing; Pearson Education

Reference Book

- Ramaswamy and Namakumari -Marketing Management- Indian Context -Global Perspective, Sage Publications India Pvt Ltd; Sixth Edition 2018

Recommended Study Material:

- Introduction to Marketing, Theory & Practice, Adrian Palmer, OXFORD
- Basic Marketing: A Global Managerial Approach, Willam D Perrault & E Jerome Macarthy, McGraw-Hill
- Marketing Management: Text & Cases, K.S.Chandrasekar, McGraw-Hill
- Case Studies in Marketing Management, S. Ramesh Kumar, Pearson
- Gupta Prachi , Marketing Management (Indian Cases), Pearson

CO & PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB303_CO1	2	3	2	3	2	2	2	3
BBABB303_CO2	3	2	3	2	3	2	3	2
BBABB303_CO3	3	3	2	3	2	2	2	3
BBABB303_CO4	3	3	2	3	2	3	2	2

*3= Strong   2=Average   1=Weak

PO & PI Mapping:

PO 1: **Assessment of Choices**	
Competency	**Indicators**
1.1 Demonstrate competencies in Business Construction Model & Decision- Making Model	1.1.1. Ability to take up analytical approach for problem solving, 1.1.2. Ability to take into consideration minute details and factors that influences a business. 1.1.3 Ability to weigh the pros and cons of each of the alternatives or options available to a functional area of a business.
PO 2: **Identification of the Nature of a Problem Area**	
Competency	**Indicators**
2.1. Demonstrate an ability to identify an area that requires problem solving. 2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.1 Ability to contribute towards problem solving methods, 2.1.2 Understanding a problem or issue belongs to which of the specialized areas- Finance, HR or marketing. 2.2.1 To be able to identify the different factors that

	influences the business.
PO 3: Decision Making Skills	
Competency	**Indicators**
3.1. To be able to demonstrate the different aspects that can get influenced by the decision taken within the business.	3.1.1. Capability of implementation of a decision after proper assessment. 3.1.2. Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use)
PO4: Communication Skills	
Competency	**Indicators**
4.1 To Demonstrate the ability to make effective business communication.	4.1.1. Ability to choose appropriate words when making verbal communication, 4.1.2. To be able to select proper language and words when making written communication.
PO5: Team Work	
Competency	**Indicators**
5.1 Students will develop the capability of functioning efficiently within the teams.	5.1.1. Ability to understand the objective of the group and deciding a common goal. 5.1.2. The ability to apply the behavioral science when functioning within the group.
PO 6: Integration of Functions	
Competency	**Indicators**
6.1 Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps. 6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue. 6.2.1. Ability to study the changes in preferences of customers and 6.2.2. Study in the changes in political & technological environment.
PO 7: Deployable Skill set	
Competency	**Indicators**
7.1 Demonstrating the ability to identify the nature of a problem appearing during the course of business. 7.2 Demonstrating the ability to apply the learned skill set as when required.	7.1.1 Acknowledgement of the existence of a problem, 7.1.2 Deciding the overall nature of the problem and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.
PO 8: Moral Sensitivity	
Competency	**Indicators**
8.1 To Demonstrate the ability to identify that there is a moral dilemma. 8.2 Demonstration of the ability to solve the moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence 8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society

Course code	BBABB304
Course title	**Employability and Practitioners Skill**

Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	Semester-
	1	1	0		**2**	III

Pre-requisite (if any)	Basic knowledge of Organizational Behavior.

Course Objectives:

1. Students will learn to apply personality development theory to solve workplace communication issues.
2. Students will learn to demonstrate the interpersonal skills required in the workplace.
3. Students will learn to manage resources effectively and efficiently in a professional context.
4. Students will learn to impart the correct practices of the strategies of effective business interactions.

Course Outcomes:

1	Students will develop abilities as critical thinkers and dynamic managers.
2	Students will Improves communication and leadership skills.
3	Students will use critical thinking as it pertains to using these tools for effective attitude in a professional setting.
4	Students will gain information-seeking skills and strategies necessary for sustaining in professional/ corporate workplace.

Course content:

Modules	Serial of Module	Text Book as per Syllabus	CO

Understanding People at Work: Individual Differences and Perception	The interactionist perspective, individual differences (Values and Personality), Perception. The role of Ethics and National Culture, using science to match candidates to jobs. Case Study	**Organizational Behavior: Text and Cases** Avinash K. Chitale, Rajendra Prasad Mohanty, Nishith Rajaram Dubey PHI Learning Pvt Ltd	CO1
Individual Attitudes and Behaviours, Theories and Motivation	Work attitudes, work behaviours, rebounding from defeat, Need based theories of motivation, Process based theories, Motivation in action, Case Study	**Organizational Behavior: Text and Cases** Avinash K. Chitale, Rajendra Prasad Mohanty, Nishith Rajaram Dubey PHI Learning Pvt Ltd	CO4
Personality and Goal setting	Introduction, Nature, shaping of Personality, Personality Traits, Determinants of Personality, Measuring Personality, SWOT analysis & Goal setting, Case Study	**Organizational Behavior: Text and Cases** Avinash K. Chitale, Rajendra Prasad Mohanty, Nishith Rajaram Dubey PHI Learning Pvt Ltd	CO3
Learning and Learning Theories	Introduction, Nature, Principles, Adults learning theories, Shaping Behaviour, Reinforcement of strategies, schedules and theory, Case Study	**Organizational Behavior: Text and Cases** Avinash K. Chitale, Rajendra Prasad Mohanty, Nishith Rajaram Dubey PHI Learning Pvt Ltd	CO2
Managing Stress and Emotion	What is stress, avoiding and managing stress, what are emotions? Emotion at work, Getting Emotional: Case Study	**Organizational Behavior: Text and Cases** Avinash K. Chitale, Rajendra Prasad Mohanty, Nishith Rajaram Dubey PHI Learning Pvt Ltd	
Conflicts and Negotiations, Making Decisions	Understanding Conflict, Causes and outcomes of conflict, Conflict Management, Negotiations, Case Study.	**Organizational Behavior: Text and Cases** Avinash K. Chitale, Rajendra Prasad Mohanty,	

		Nishith Rajaram Dubey	
		PHI Learning Pvt Ltd	

Recommended Books:

Textbooks

Sl. No.	
1	**Organizational Behavior: Text and Cases** Avinash K. Chitale, Rajendra Prasad Mohanty, Nishith Rajaram Dubey PHI Learning Pvt Ltd

References

Sl. No.	
1	The Art and Science of Business Communication
2	Transformational Leadership by Edward J Shelton

CO-PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB304**.1**	3	3	3					2
BBABB304**.2**	2	3	3					3
BBABB304**.3**	3	3	2					2
BBABB304**.4**	3	3	2					3

3= Strong   2=Average   1=Weak (Kindly mention the Number only)

PO & PI Mapping:

PO 1 : Students will develop the capability to assess alternate managerial choices and come up with optimal solutions.

Competency	Indicators
1.1 Demonstrate an ability to plan/manage managerial activities	1.1.1 Identify the tasks required to complete the managerial aspects of a management activity, and the resources required to complete the tasks. 1.1.2 Ability to weigh the pros and cons of each of the alternatives or options available to a functional area of a business.

PO 2: Students will be able to apply their conceptual understanding of marketing, finance and

human resources in the real world.	

Competency	Indicators
2.1. Demonstrate an ability to identify an area that requires problem solving.	2.1.1 Ability to contribute towards problem solving methods
2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.2 Understanding a problem or issue belong to which of the specialized areas Finance, HR or marketing.
	2.2.1 To be able to identify the different factors that influence the business.

PO 3:: Students will develop decision making skills with the help of analytical and critical thinking ability.

Competency	Indicators
3.1 To be able to demonstrate the different aspects that can get influenced by the decision taken within the business.	3.1.1 Capability of implementation of a decision after proper assessment
3.2 To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem.	3.1.2 Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use)
	3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented)

PO 8 : Students will develop the capability to demonstrate increased level of sensitivity towards areas that require ethical and moral addressing during the course of business.

Competency	Indicators
8.1 To Demonstrate the ability to identify that there is a moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence
8.2 Demonstration of the ability to solve the moral dilemma.	8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society

Submitted by : Suchana Roy

_____   _____
(Name)   (Signature& Date)
                                                                      Rabin Mazumder
Received by : Dr. Rabin Mazumder

_____   _____
(HOD)   (Signature& Date)

Course code	BBABB305					
Course title	**Business Ethics**					
Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	Semester-
	4	..	..		**4**	3
Pre-requisite (if any)	Basic Concept of Management					

Course Objectives:

1. Students can distinguish between values and skills and understand the need, basic guidelines, content and process of value education.
2. Students can initiate a process of dialog with themselves to know what they "really want to be" in their life and profession.
3. Students can understand the meaning of happiness and prosperity for a human being.
4. To facilitate students in applying the understanding of harmony in existence in their profession and lead an ethical life.

Course Outcome:

CO 1: Students understand the significance of inputs in a classroom, distinguish between values and skills, understand the need, basic guidelines, content and prosperity and process of value education, explore the meaning of happiness and prosperity.

CO 2: Students can distinguish between the Self and Body, they can understand the meaning of Harmony in the Self and co-existence of Self and Body.

CO 3: Students can understand the value of harmonious relationship based on trust, respect and other naturally acceptable feelings in human-human relationships and explore their in ensuring a harmonious society.

CO 4: Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.

Course content:

Modules	Topic	Text Book as per Syllabus	CO
Module 1	Understanding the need basic guidelines, content and process for Value Education; Self-Exploration-its content and process; Happiness and Prosperity—A basic Human Aspirations.		CO1
Module 2	Co-existence of the sentient 'I' and the material 'Body', Understanding the needs of Self **(I)** and 'Body", Understanding the harmony of" **I**" with the Body.		CO2
Module 3	Understanding harmony in the family, Understanding values in human-human relationship, meaning of *Nyaya*, Trust(*Vishwas) and* Respect(*Samman)* as the foundational values, Understanding the harmony in the society**.**		CO3
Module 4	National acceptance of human values, Ethical Human Conduct, Humanistic Constitution and Humanistic Universal Order, Competence in Professional Ethics: a) Ability to utilize the professional competence for augmenting universal human order, b)Ability to identify the scope and characteristics of people-friendly and eco-friendly production systems technologies and management models, Socially and Ecologically responsible engineers, managers, technologists etc, Mutualiy enriching institutions and organizations.		CO4

Recommended Books:
Text Book:
     1.
     2.

References:

     1.
     2.

CO-PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB305_**CO1**		3				2	2	3
BBABB305_**CO2**		3				3	2	3
BBABB305_**CO3**		3				2	3	3
BBABB305_**CO4**		3				2	2	3

3= Strong   2=Average   1=Weak (Kindly mention the Number only)

PO & PI Mapping:

PO 2 : Students will be able to apply their conceptual understanding of marketing, finance and human resources in the real world	
Competency	**Indicators**
2.1. Demonstrate an ability to identify an area that requires problem solving	2.1.1 Ability to contribute towards problem solving methods 2.1.2 Understanding a problem or issue belong to which of the specialized areas Finance, HR or marketing
2.2 Demonstrate an ability to assess the business environment and understand their impact on the business	2.2.1 To be able to identify the different factors that influence the business
PO 6 : Students will be able to integrate functional areas of management for planning, implementation and control of business decisions.	
Competency	**Indicators**
6.1 Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps.	6.1.1. Continuation of Professional development and observation skills. 6.1.2. using rational approach towards an issue.
6.2 Demonstrate the identification of changing trends in a business and operation of	6.2.1. Ability to study the changes in

the functional areas accordingly.	preferences of customers.
	6.2.2. Study in the changes in political & technological environment.

PO 7 : Students will develop deployable skills parallel to the chosen functional/specialized area.

Competency	Indicators
7.1 Demonstrating the ability to identify the nature of a problem appearing during the course of business.	7.1.1 Acknowledgement of the existence of a problem 7.1.2 deciding the overall nature of the problem and its minor details.
7.2 Demonstrating the ability to apply the learned skill set as when required.	7.2.1. Ability to implement the required knowhow as when necessity arises.

PO8: Students will develop the capability to demonstrate increased level of sensitivity towards areas that require ethical and moral addressing during the course of business.

Competency	Indicators
8.1. To Demonstrate the ability to identify that there is a moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence.
8.2. Demonstration of the ability to solve the moral dilemma.	8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society.

Submitted by :

_____   _____

(Name)   (Signature& Date)

Received by :

_____   _____

(HOD)   (Signature& Date)

aCourse Code	BBABB306					
Course Title	**Fundamental of Cost Accounting**					
Scheme and Credits	L	T	P	S	Credits	Semester
	0	4	0	0	**4**	III
Pre-requisite (if any)	Basic knowledge of cost and revenue					

Course Objectives:

1. To make the students understand the basic cost concepts.   .
2. To help students understand the method of accounting for material, labour and overhead
3. To introduce the fundamentals of a cost sheet
4. To emphasize the need for cost ascertainment in process costing.

Course Outcome: Student will be able

CO1:   Learn the fundamental concepts of cost.

CO2:   Understand the value and importance of cost and revenue in a business

CO3:   Be able to apply the fundamentals of cost to understand how cost of material , labour and overheads are ascertained in a product.

CO4:   Be able to prepare, analyze and evaluate cost sheet and calculate the cost of a process.

CO5:   Be able to evaluate the impact of any STRATEGIC decision w.r.t cost.

CO6:   Be able to prepare strategy pertaining to a product and its cost.

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	Blooms Level
M-I: Introduction	• Nature and scope of cost accounting; • Cost concepts and classification: direct, indirect, Element wise, function wise, Behaviour wise. • Essentials of a good cost accounting system: Difference between cost and Management accounting: • Concept of Cost Audit. • Preparation of cost sheet & estimation.	• Basu & Das: Cost & Management Accounting, Rabindra Library	10	BL1, BL2, BL3
M-II: Accounting for Material	• Economic Order Quantity, • ABC analysis (selective inventory concept): • Various stock levels: JIT purchase: Selective methods of Material control; • pricing of material issues - FIFO, LIFO, Weighted average	• M. N Arora: Cost Accounting – Principles and Practice,	12	BL2, BL3 BL4,
M-III: Accounting for Labour	• Labour turnover; • Idle time and overtime; • Methods of wage payment-time and piece rates; Incentive schemes	• M. N Arora: Cost Accounting – Principles and Practice,	5	BL1, BL2, BL3, BL4, BL5
M-IV: Accounting for Overheads	• Absorption, Allocation and apportionment of Overheads: • Determination of overhead rates; Under and over absorption and its treatment, • Primary and secondary distribution of overhead.	• M. N Arora: Cost Accounting – Principles and Practice,	5	BL3, BL4, BL5, BL6
M-V: Cost Ascertainment	• Process costing	• M. N Arora: Cost Accounting – Principles and Practice,	8	BL5, BL6

Recommended Study Material:

- Basu & Das: Cost & Management Accounting, Rabindra Library.
- Dr. C.H Sengupta & B. G Chowdhury: Cost and Management Accounting, Dey Book Concern.
- Bhabatosh Banerjee: Cost Accounting- Theory & Practice, Prentice Hall of India Ltd. New Delhi.
- M. N Arora: Cost Accounting – Principles

CO & PO Mapping:

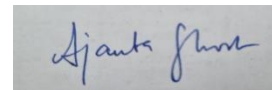| CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB306–CO1		3	2				2	2
BBABB306–CO2		2	3			3	2	
BBABB306- CO3		3				2	3	2
BBABB306- CO4		2	3			3	2	
BBABB306 –CO5			2			3	3	2
BBABB306–CO6		3	3				2	2

** *3= Strong   2=Average   1=Weak   Minimum 4 PO to be mapped for each CO**

PO & PI Mapping:

PO 2: Identification of the Nature of a Problem Area	
Competency	**Indicators**
2.1. Demonstrate an ability to identify an area that requires problem solving. 2.2. Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.1 Ability to contribute towards problem solving methods, 2.2.1To be able to identify the different factors that influence the business.

PO 3: Decision Making Skills	
Competency	**Indicators**
3.1. To be able to demonstrate the different aspects that can get influenced by the decision taken within the business. 3.2 To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem.	3.1.1. Capability of implementation of a decision after proper assessment. 3.1.2. Follow up the changes that are occurring due to the implementation. (situation analysis methods can be of use) 3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented).

PO 6: Integration of Functions	
Competency	**Indicators**
6.1 Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps. 6.2	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue. 6.2.1.

PO 7: Deployable Skill set	
Competency	**Indicators**
7.1 Demonstrating the ability to identify the nature of a problem appearing during the course of business. 7.2 Demonstrating the ability to apply the learned skill set as when required	7.1.1 Acknowledgement of the existence of a problem, 7.1.2 Deciding the overall nature of the problem and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.

PO 8: Moral Sensitivity	
Competency	**Indicators**
8.1 To Demonstrate the ability to identify that there is a moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence
8.2 Demonstration of the ability to solve the moral dilemma.	8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society

Submitted by: Ajanta Ghosh

_____   06.07.2023_____

(Name)   (Signature & Date)

Received by:

_____   _____

(HOD)   (Signature & Date)

Course code	BBABB501					

Course title	**Strategic Management**
	  Contents
	  Strategic Management for business professionals.					

Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	Semester
	3	1	0		**4**	V
Pre-requisite (if any)	Basic knowledge of Management					

Course Objectives:

1. To enable the students to understand the fundamental concept of strategy in business.
2. To enable the students to understand the fundamental techniques of formulating strategy.
3. To enable the students to understand the relevance of strategy to sustain in a competitive scenario.
4. To understand the logic of designing an effective strategy for effective growth of a corporate.

Course Outcomes:

1. Students can able examine the fundamentals of strategic issues of business.
2. Students can assess the various techniques of business.
3. Students can analyze the importance and logic of formulation of the business strategy.
4. Students can apply and implement strategy in corporate for business growth.

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	CO
Module I: Introduction, Strategic Intent - Vision, Mission & Objectives	• Definition and meaning of strategy & strategic management; Objectives & role of strategic management. • Benefits and importance of strategic management; Causes for failure of strategic management; the strategic management process. • Vision – concept & importance; Mission – concept & relevance; Objectives &	1. Kazmi, Azhar: Business Policy and Strategic Management, Tata McGraw Hill	6	CO1, CO2

(VMO)	goals – concept & relevance; Components of mission statement, • Formulation of mission & objectives and their specificity; Examples of VMO.			
Module II: Environmental Analysis	• Concept of environment, environmental analysis and appraisal, • Need for & component of external environment analysis; • Tools & techniques of environment analysis – PESTEL, ETOP; Porter's Five Forces Model • Concept of Internal analysis; Value chain analysis; Factors of internal analysis; • Strategic & Situational Analysis – SWOT Analysis, TOWS Matrix	1. Kazmi, Azhar: Business Policy and Strategic Management, Tata McGraw Hill	11	CO1, CO2, CO3
Module III: Strategic Planning:	• Meaning & Stages of Strategic Planning; Corporate goal setting, functional goal setting, managerial goal setting, positioning organization • Strategy Formulation I - Corporate level strategies: Concept, scope, types and significance of corporate level strategies; Generic Growth/expansion strategies - characteristics, forms, applicability; Ansoff matrix • Strategy Formulation II - Business level strategies: Concept of business level strategies; Competitive advantage and Core competencies; Cost leadership, differentiation & focus; Porter's framework of competitive strategies; Concept of SBU	1. Kazmi, Azhar: Business Policy and Strategic Management, Tata McGraw Hill	9	CO4, CO5, CO6
Module IV: Strategic Analysis, Choice and implementation	• Concept of strategic analysis and choice; BCG Matrix & GE-Nine Cell Planning grid. • Issues in strategy implementation, Integrating the functional plan and policies; Role of managers, Leadership, strategic control system & measurement; Strategic Actions - Mergers, Acquisitions & Diversification	1. Kazmi, Azhar: Business Policy and Strategic Management, Tata McGraw Hill	9	CO4, CO5, CO6

| Module V: Strategic Evaluation and Control | • Evaluation of strategy and strategic control, Need for strategic evaluation;
• Criteria for evaluation and the evaluation process; strategic control
• Process & types of external controls | 1. Kazmi, Azhar: Business Policy and Strategic Management, Tata McGraw Hill | 5 | CO4, CO5, CO6 |

Suggested Readings:

1. Pearce & Robinson: Strategic Management AITBS

2. Bhattacharya. and Venkataraman: Managing Business Enterprise: Strategies, Structures and Systems, Vikas Publishing House

3. Budhiraja, S. B. and Athreya, M. B: Cases in Strategic Management, Tata McGraw Hill

4. Subbarao: Strategic Management, Himalaya Publication

5. Thompson & Strickland: Strategic management Concept & Cases, Tata McGraw Hill,

CO-PO Mapping:

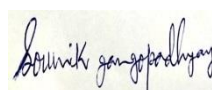| CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB5601.1	3	3	2	2				
BBABB601.2			3		3	3	3	
BBABB601.3		3	3				2	**1**
BBABB601.4		3			3	2	2	1

3= Strong   2=Average   1=Weak

PO & PI Mapping:

Competency	Indicators
PO1: Assessment of Choices	
1.1. Demonstrate competencies in Business Construction Model & Decision- Making Model **1.2. Demonstrate competencies in evaluation of each of the alternatives**	1.1.1. Ability to take up analytical approach for problem solving, **1.1.2.** Ability to take into consideration minute details and factors that influences a business. **1.1.3.** Ability to weigh the pros and cons of each of the alternatives or options available to a functional area of a business.
Competency	**Indicators**
PO2: Identification of the Nature of a Problem Area	
2.1. Demonstrate an ability to identify an area that requires problem solving. 2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.1. Ability to contribute towards problem solving methods. 2.1.2. Understanding a problem or issues belong to which of the specialized areas- Finance, HR or marketing. 2.2.3. To be able to identify the different factors that influence the business.
PO 3: **Decision Making Skills**	
3.1. To be able to demonstrate the	3.1.1. Capability of implementation of a decision

different aspects that can get influenced by the decision taken within the business. 3.2. To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem.	after proper assessment. 3.1.2. Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use) 3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented)
Competency	**Indicators**
PO5: Team Work	
5.1. To understand Group Formation and Group Cohesiveness 5.2. To be able to demonstrate the importance of adjustment and the importance of concentrating other group members' opinion.	5.1.1. Ability to understand the objective of the group and deciding a common goal. 5.2.1. The ability to apply the behavioral science when functioning within the group.
PO6: Integration of Functions	
6.1. Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps. 6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue. 6.2.1. Ability to study the changes in preferences of customers.

Submitted by :   Dr. Soumik Gangopadhyay   *Soumik gangopadhyay.* 27.07.23

_____   _____

(Name)   (Signature & Date)

Received by :

_____   _____

(HOD)   (Signature & Date)

Course code	**BBABB502**					
Course title	**Data Analytics Skills for Managers**					
Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	Semester-
	4	0	0	0	**4**	v
Pre-requisite (if any)	Basic knowledge of mathematical function, differentiation					

Course Objectives:

1. To enable the students to understand fundamental concepts, terms and terminologies involved in data analytics, and to relate themselves with importance, role and application of data analytics in business domain.

2. To help the students understand data collection and data pre-preprocessing strategies through the incorporation of case studies.

3. To enable students to identify three core types data analytical techniques i.e. exploratory, descriptive, and causal along with its nature and application.

4. To enable the students classify the application of appropriate analytical techniques in appropriate situation.

Course Outcome:

CO1:   Students will learn the basic & fundamental concepts of Data Analytics and its applications in different domains of business.

CO2:   Students will be able to understand the intricacies of Data Analytics such ashow it works, different statistical methods of Data Analytics, identify three core types of data analytical techniques i.e. exploratory, descriptive, and causal along with their application, how to deal with the critical issues related to data.

CO3: Students will be able to apply their knowledge of Data Analytics in dealing with the contemporary real world business problems effectively.

CO4: Students will be able to analyze business problems involving Data Analytics.

CO5: Students will be able to evaluate real world data to take efficient business decisions.

CO6: Students will be able to create newer ideas while dealing with the issues of Data Analytics and will also be able to ensure their overall development.

Course content:

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	CO
M I: Introduction to Data Analytics	Data, Information, Knowledge, and Wisdom; Types of Data – Qualitative-Nominal-Ordinal and Quantitative- -Continuous – Discrete; Dimensions of Data Quality- Accuracy – Completeness – Consistency – Timeliness – Uniqueness – Validity; Data Science; Big Data – Sources, Types of Big Data–Structured –	1. Big Data Analytics Applications in Business and Marketing: KiranChaudhary and MansafAlam-CRC Press.	10	CO1, CO2

	Unstructured – Semi-structured – Metadata; Characteristics of Big Data – Volume – Velocity – Variety – Veracity – Value; Data Analytics – Descriptive – Diagnostic – Predictive – Prescriptive; Applications of Data Analytics in Business –Production and Inventory Management – Sales and Operations Management – Finance and Investment – Marketing Research –Human Resource Management.	2. Big Data Fundamentals Concepts Drivers and Techniques: Thomas Erl, WajidKhattak and Paul Buhler- Prentice Hall. 3. Business Analytics A Management Approach: Richard Vidgen, Sam Krishner and Felix Tan- Macmilan International Higher Education (Red Globe Press)		
M II: Data Collection and Data Pre- Processing	Data Collection Strategies; Data Pre- Processing Overview – Need for Data Pre-processing - Data Pre-processing Methods - Data Cleaning – Data Objects and Attributes –Filling up Missing Values; Noisy Data – Binning – Regression – Clustering; Data Integration – Entity Identification Problem – Redundancy and Correlation – Chi-square test- correlation coefficient – covariance – Data Value Conflict Detection and Resolution; Data Transformation – Data Transformation Strategies Overview –	1. Data Mining Concepts and Techniques - Jiawei Han, Micheline Kamber and Jian Pei - Morgan Kaufmann Publishers (Imprint of Elsevier) 2. Data Mining and Warehousing Principals and Practical	10	CO2 , CO3 , CO4

	Data Transformation by Normalization; Data Reduction – Overview of Data Reduction Strategies – Principal Component Analysis – Attribute Subset Selection.	Techniques – Parteek Bhatia - Cambridge University Press 3. Fundamentals of Machine Learning for Predictive Data Analytics – The MIT Press: John D. Kelleher, Brian Mac Namee, and Aoife D'Arcy. 4. A Hands –on Introduction to Data Science – Cambridge University Press: Chirag Shah		
M III: Exploratory Data Analytics and Descriptive Statistics	Stem andLeaf Diagram, Calculation of Mean for Ungrouped and Grouped Data –Assumed Mean Method- Step Deviation Method; Calculation of Median, Mode and Quartiles; Mean Deviation from Mean and Median of Ungrouped and Grouped Data; Calculation of Variance and Standard Deviation from Ungrouped and Grouped Data; Skewness – Meaning – Measures of Skewness -Karl Pearson and Bowley's Coefficient of Skewness; Analysis of Variance.	1. Business Mathematics and statistics - Asim Kumar Manna - McGraw Hill Education (India) 2. Business StatisticsProblems and Solutions – J K Sharma – Pearson	10	CO3 , CO4 , CO5

		3. Business Mathematics and Statistics - (Late) N G Das and J K Das - Tata McGraw Hill Education Private Limited		
M IV: Correlation and Regression	Scatter Diagram, KarlPearson's Correlation Coefficient – Spearman Rank Correlation Coefficient; SimpleLinear Regression: Introduction – Overview – Importance -Least Square Method– Normal Equations - Calculation of Regression Coefficients – Properties of Regression Line – Uses of Regression; MultipleLinear Regression: Overview – Importance - Least Square Method –- Normal Equations – Calculation of Regression Coefficients - Properties of OLS Regression Line – Properties of OLS Estimators – BLUE Properties – Measuring Goodness of FIT –Adjusted R square – Testing Overall Significance of Regression – Testing Relevance of an Additional Explanatory Variable	1. Principles of Econometrics, Sankar Kumar Bhaumik, Oxford University Press 2. Basic Econometrics - D.N. Gujarati and D.C. Porter, Tata McGraw Hill. 3. Introduction to Econometrics – GMK Madnani – Oxford and IBH Publishing Co Pvt Ltd	10	CO2, CO3, CO4, CO5

Recommended Study Materials:

1. Big Data Analytics Applications in Business and Marketing: Kiran Chaudhary and Mansaf Alam- CRC Press.

2. Big Data Fundamentals Concepts Drivers and Techniques: Thomas Erl, Wajid Khattak and Paul Buhler- Prentice Hall.

3. Business Analytics A Management Approach: Richard Vidgen, Sam Krishner and Felix Tan-
Macmilan International Higher Education (Red Globe Press)

4. Data Mining Concepts and Techniques - Jiawei Han, Micheline Kamber and Jian Pei -
Morgan Kaufmann Publishers (Imprint of Elsevier)

5. Data Mining and Warehousing Principals and Practical Techniques – Parteek Bhatia -
Cambridge University Press

6. Fundamentals of Machine Learning for Predictive Data Analytics – The MIT Press: John D.
Kelleher, Brian Mac Namee, and Aoife D'Arcy.

7. A Hands –on Introduction to Data Science – Cambridge University Press: Chirag Shah.

8. Business Mathematics and statistics - Asim Kumar Manna - McGraw Hill Education (India)

9. Business StatisticsProblems and Solutions – J K Sharma – Pearson

10. Business Mathematicsand Statistics - (Late) N G Das and J K Das - Tata McGraw Hill
Education Private Limited

11. Principles of Econometrics, Sankar Kumar Bhaumik, Oxford University Press

12. Basic Econometrics - D.N. Gujarati and D.C. Porter, Tata McGraw Hill.

13. Introduction to Econometrics – GMK Madnani – Oxford and IBH Publishing Co Pvt Ltd

CO-PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB502.1	3	3	3			3	2	
BBABB502.2	3	3	3			3	2	
BBABB502.3	3	3	3			3	3	
BBABB502.4	3	3	3			3	3	
BBABB502.5	3	2	3			3	3	
BBABB502.6	2	2	3			3	3	

3= Strong   2=Average   1=Weak (Kindly mention the Number only)

PO & PI Mapping:

PO1: Assessment of Choices	
Students will develop the capability to assess alternate managerial choices and come up with optimal solutions.	
Competency	**Indicators**
1.1 Demonstrate competencies in Business Construction Model & Decision- Making Model 1.2 Demonstrate competencies in evaluation of each of the alternatives	1.1.1. Ability to take up analytical approach for problem solving, 1.1.2. ability to take into consideration minute details and factors that influences a business. 1.2.1 Ability to weigh the pros and cons of each of the alternatives or options available to

	a functional area of a business.
PO 2 : Identification of the Nature of a Problem Area Students will be able to apply their conceptual understanding of marketing, finance and human resources in the real world.	
Competency	**Indicators**
2.1. Demonstrate an ability to identify an area that requires problem solving. 2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.1 Ability to contribute towards problem solving methods, 2.1.2 Understanding a problem or issue belongs to which of the specialized areas of data analytics- Descriptive, Diagnostic, Predictive and Prescriptive. 2.2.1 To be able to identify the different factors that influences the business.
PO 3: Decision Making Skills: Students will develop decision making skills with the help of analytical and critical thinking ability.	
Competency	**Indicators**
3.1 To be able to demonstrate the different aspects that can get influenced by the decision taken within the business.	3.1.1 Capability of suggesting a decision after proper assessment
3.2 To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem.	3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented)
PO6: Integration of Functions: Students will be able to integrate functional areas of management for planning, implementation and control of business decisions.	
Competency	**Indicators**
6.1 Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps. 6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue. 6.2.1. Ability to study the changes in preferences of customers.
PO 7: Deployable Skill set: Students will develop deployable skills parallel to the chosen functional/ specialized area	
Competency	**Indicators**
7.1 Demonstrating the ability to identify the nature of a problem appearing during the course of business.	7.1.1 Acknowledgement of the existence of a problem.
7.2 Demonstrating the ability to apply the learned skill set as when required	7.1.2. Ability to implement the required knowhow as when necessity arises.

Submitted by: Prof. Arindam Roy

_____ _____
　　　　　　(Name)　　　　　　　　　　　　　(Signature & Date)

Received by:

_____   _____
                (HOD)   (Signature & Date)

Course Code	BBABB503					
Course Title	Business Law					
Scheme and Credits	L	T	P	S	Credits	Semester
	6	0	0	0	**6**	
Pre-requisite (if any)	Basic Concept of Legal Framework in Business Operation					

Course Objectives:

1. To make the students understand the fundamental concepts of various Laws applicable in Business.
2. To familiarize the students with Agreements, Contracts and their differences.
3. Students to know the legalities involved in efficient & effective operation of business.
4. Students to be made aware about the rights & privileges due to the employees.
5. Students to understand the importance of consumers and their rights.

Course Outcome:

CO1: Students would be proficient and knowledgeable about legalities involved in the business arena.

CO2: Students would be capable to bring in discipline in the operation by providing legitimate benefits to the workforce.

CO3: Students would ensure customers' protection.

CO4: Students would be familiar to conduct company's operation by maintaining proper regulations & norms.

CO5 : Students would be capable to bring about a healthy and congenial business environment by operating within the stipulated legal framework.

CO6 :   Students would reap benefits of Digital Business Transformation. Should also be conversant with up-to-date cyber law.

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	Blooms Level

MI:	Law of Contract (Indian Contract Act,1872).	Tulsian : Business Law, TMH.	20	CO1 CO2 CO3 CO4 CO5 CO6
	Introduction / Meaning of Contract / Classification of contract / Essentials of a valid contract / Performance of contract / Quasi contracts / Breach of contract & its remedies Special Contract : Indemnity; Guarantee; Bailment and pledge; Agency.			
	Sale of Goods Act,1930.			
	Contract of Sale of Goods / Conditions and warranties / Transfer of Property / Performance of Contract of sale / Rights of unpaid seller.			
MII:	Negotiable Instruments Act, 1881.	Tulsian : Business Law, TMH.	16	CO1 CO2 CO3 CO4 CO5 CO6
	Negotiable Instruments / Parties to Negotiable Instruments / Negotiations of Negotiable Instruments / Dishonour and Discharge of Negotiable Instruments / Crossing and Bouncing of cheques.			
	Arbitration and Conciliation Act, 1996.			
	General Provisions Regarding Arbitration / Arbitral Tribunal / Arbitration Proceedings / Conciliation / Enforcement of certain Foreign Awards.			
MIII:	Consumer Protection Act, 1986.	Tulsian : Business Law, TMH.	12	CO1 CO2 CO3 CO4 CO5
	Workmen Compensation, ESI. Information Technology Act (Cyber Law), 2000.			
MIV:	The Companies Act, 1956 The Company's Act and its Administration / The Company : Its Nature and kinds / Formation of a Company / Memorandum of Association / Articles of Association / Prospectus / Allotment of Shares / Shares and Share Capital / Share Certificate and Share Warrant / Shareholders or Members / Transfer and Transmission of Shares / Calls and Forfeiture of Shares / Company Management / Meetings and Resolution / Borrowing powers and Methods / Dividends / Accounts and Audit / Prevention of Oppression and Mismanagement / Compromise, Arrangements, Reconstruction and Amalgamation.	Tulsian : Business Law, TMH.	12	CO1 CO2 CO3 CO4

Reference:

1. Sen & Mitra **:** Commercial Law, World Press.

2. Pathak **:** Legal Aspect of Business, TMH.

3. Tejpal Sheth **:** Business Law, 3/e, Pearson.

4. Das & Ghosh **:** Business Regulatory Framework, Ocean Publication, Delhi.

5. Pillai & Bagavathi **:** Business Law, S Chand

6. Tulsian **:** Business Law, TMH.

7. Business Law by N. D. Kapur

CO & PO Mapping:

Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABB503.1	3	3	2	1		1	2	1
BBABB503.2	2	3	2	1	2	2	2	
BBABB503.3	3	3	2	1	2	1	2	
BBABB503.4	3	3	2	1	1	1	3	1

*3= Strong   2=Average   1=Weak

Submitted by: Shaibal Kumar Sen   25.07.2023
            (Name)   (Signature & Date)

Received by:

_____   _____
            (HOD)   (Signature & Date)

Specialization: BUSINESS ANALYTICS

Course code	BBABA504
Course title	**Programming in Python**

Scheme and Credits	L	T	P	S	Credits	Semester-
	4	0	0	0	**4**	V
Pre-requisite (if any)	Basic knowledge of Computer programming in Python for Business Analytics purposes					

Course Objectives:

5. To enable the students to understand the fundamental concepts of programming
6. To enable the students to understand the fundamental concepts of programming language in business analytics
7. To enable the students to understand the relevance of python as a programming language in commercial organization.
8. To understand the logic of designing an effective language skill in a corporate.

Course Outcomes:

CO1: Students can apply visualization tools in corporate
CO2: Students can apply basic principles of computers
CO3: Students can apply the binary computation
CO4: Students can implement the programming basics (operations, control structures, data types, etc.)

Course Content:

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	CO
Introduction To programming language	Introduction --Relationship between computers and programs --Basic principles of computers --File systems --Using the Python interpreter --Introduction to binary computation -- Input /Output	2. Atanu Das , Rajkumar Patra -Python Programming for Computer Science and Application	8	CO1
Data Types and Control Structures	Data types and control structures --Operators (unary, arithmetic, etc.) --Data types, variables, expressions, and statements --Assignment statements --Strings and string operations	1.Atanu Das , Rajkumar Patra - Python Programming for Computer Science and	8	CO2

	-- Control Structures: loops and decision	Application		
Classes	Modularization and Classes -- Standard modules --Packages -- Defining Classes --Defining functions --Functions and arguments(signature)	1.Atanu Das , Rajkumar Patra - Python Programming for Computer Science and Application	8	CO 3
Exception Handling	Exceptions and data structures -- Data Structures (array, List, Dictionary) -- Error processing -- Exception Raising and Handling	1.Atanu Das , Rajkumar Patra - Python Programming for Computer Science and Application	8	CO 3
Object Oriented Design	Object oriented design --Programming types --Object Oriented Programming -- Object Oriented Design --Inheritance and Polymorphism	1.Atanu Das , Rajkumar Patra - Python Programming for Computer Science and Application	8	CO4

Suggested Readings:

1. Atanu Das , Rajkumar Patra - Python Programming for Computer Science and Application

CO-PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABA504.1			2	3			1	**2**
BBABA504.2			2	3			2	**2**
BBABA504.3			1	1			1	2
BBABA504.4			1	1			3	**3**

3= Strong   2=Average   1=Weak

PO & PI Mapping:

Competency	Indicators
PO3: Decision Making Skills	
3.1. To be able to demonstrate the different aspects that can get influenced	3.1.1. Capability of implementation of a decision after proper assessment.

by the decision taken within the business. 3.2. To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem	3.1.2. Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use) 3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented)
Competency	**Indicators**
PO4: Communication Skills	
4.1. To Demonstrate the ability to make effective business communication.	4.1.1. Ability to choose appropriate words when making verbal communication, 4.1.2. To be able to select proper language and words when making written communication.
Competency	**Indicators**
PO7: Deployable Skill set	
7.1. Demonstrating the ability to identify the nature of a problem appearing during the course of business. 7.2. Demonstrating the ability to apply the learned skill set as when required.	7.1.1. Acknowledgement of the existence of a problem. 7.1.2. Deciding the overall nature of the problem and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.
PO8: Moral Sensitivity	
8.1. To Demonstrate the ability to identify that there is a moral dilemma. 8.2. Demonstration of the ability to solve the moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence. 8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society.

Submitted by : Prof. Sayan Karmakar

_____   _____
(Name)   (Signature & Date)

Received by :

_____   _____
(HOD)   (Signature & Date)

Course code	**BBABA591**
Course title	**Programming in Python**

Scheme and Credits	L	T	P	S	Credits	Semester-
	0	0	2	0	**2**	V
Pre-requisite (if any)	Basic knowledge of Computer programming in for Business Analytics purposes					

Course Objectives:

1. To enable the students to understand the fundamental concepts of programming

3. To enable the students to understand the fundamental concepts of programming language in business analytics

4. To enable the students to understand the relevance of python as a programming language in commercial organization.

5. To understand the logic of designing an effective language skill in a corporate.

Course Outcomes:

CO1: Students can apply visualization tools in corporates

CO2: Students can apply basic operations of computer programming

CO3: Students can apply the binary computation

CO4: Students can implement the programming basics (operations, control structures, data types, etc.)

Course Content:

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	CO
Introduction To programming language	--Using the Python interpreter --Introduction to binary computation -- Input /Output	3. Atanu Das , Rajkumar Patra - Python Programming for Computer Science and Application	4	CO1
Data Types and Control Structures	Data types and control structures --Operators (unary, arithmetic, etc.) --Data types, variables, expressions, and statements --Assignment statements --Strings and string operations	1.Atanu Das , Rajkumar Patra - Python Programming for Computer Science and Application	4	CO2

	-- Control Structures: loops and decision			
Classes	Modularization and Classes -- Standard modules --Packages -- Defining Classes --Defining functions --Functions and arguments(signature)	1.Atanu Das , Rajkumar Patra - Python Programming for Computer Science and Application	4	CO3
Exception Handling	Exceptions and data structures -- Data Structures (array, List, Dictionary) -- Error processing -- Exception Raising and Handling	1.Atanu Das , Rajkumar Patra - Python Programming for Computer Science and Application	4	CO3
Object Oriented Design	Object oriented design --Programming types --Object Oriented Programming	1.Atanu Das , Rajkumar Patra - Python Programming for Computer Science and Application	4	CO4

Suggested Readings:
1.Atanu Das, Rajkumar Patra - Python Programming for Computer Science and Application

CO-PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABA591.1			2	3			1	**2**
BBABA591.2			2	3			2	**2**
BBABA591.3			1	1			1	2
BBABA591.4			1	1			3	**3**

3= Strong   2=Average   1=Weak

PO & PI Mapping:

Competency	Indicators
PO3: Decision Making Skills	
3.1. To be able to demonstrate the different aspects that can get influenced by the decision taken within the business. 3.2. To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem	3.1.1. Capability of implementation of a decision after proper assessment. 3.1.2. Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use) 3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be

Competency	Indicators
	implemented)
Competency	**Indicators**
PO4: Communication Skills	
4.1. To Demonstrate the ability to make effective business communication.	4.1.1. Ability to choose appropriate words when making verbal communication, 4.1.2. To be able to select proper language and words when making written communication.
Competency	**Indicators**
PO7: Deployable Skill set	
7.1. Demonstrating the ability to identify the nature of a problem appearing during the course of business. 7.2. Demonstrating the ability to apply the learned skill set as when required.	7.1.1. Acknowledgement of the existence of a problem. 7.1.2. Deciding the overall nature of the problem and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.
PO8: Moral Sensitivity	
8.1. To Demonstrate the ability to identify that there is a moral dilemma. 8.2. Demonstration of the ability to solve the moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence. 8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society.

Submitted by : Prof. Sayan Karmakar

_____   _____
           (Name)   (Signature & Date)

Received by :

_____   _____
           (HOD)   (Signature & Date)

Course code	**BBABA505**					
Course title	**Data Visualization**					
Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	Semester-
	4	0	0	0	**4**	V

Pre-requisite (if any)	Basic knowledge of visualization tools for Business Analytics purposes

Course Objectives:

9. To enable the students to understand the fundamental concepts ofvisualization

10. To enable the students to understand the fundamental concepts of visualization tools in business analytics

11. To enable the students to understand the relevance of data visualization in commercial organization.

12. To understand the logic of designing an effectivevisualization dashboard in a corporate.

Course Outcomes:

CO1: Students can apply visualization tools in corporate

CO2: Students can connect the history of data visualization and its connection with computer graphics

CO3: Students can understand various types of data types

CO4: Students can examine the visualization of structured data

Course Content:

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	CO
Introduction	Introduction -- What is Data visualization? - - Why do we have to visualize data? -- How do we visualize? -- Seven stages of visualizing data -- Usage of visualization - - Types of charts Common chart selection questions-- Introductiontobinary computation -- Input /Output	4. Sharada Singeswara, Tiwari, U. Dinesh Kumar- Data Visualization: Storytelling using data	8	CO 1
Visualization best practices	- -Importance of data visualization - - Data types - - effectiveness of visual encodings - - color - Edward Tufte's Design principles Can chart junk be useful?	Sharada Singeswara, Tiwari, U. Dinesh Kumar- Data Visualization: Storytelling using data	8	CO 2

Visualization of structured data	Exploratory analysis Modelling Visualisation during deployment Business operation dashboard	Sharada Singeswara, Tiwari, U. Dinesh Kumar- Data Visualization: Storytelling using data	8	CO3
Visualization of Unstructured data	Importance of text data visualization Challenges of text data visualization Various form of text data Text data pre-processing pipeline Visualization text data Visualizing conversations	Sharada Singeswara, Tiwari, U. Dinesh Kumar- Data Visualization : Storytelling using data	8	CO3
Storytelling framework	Why storytelling matters? Science behind storytelling Presentation types Storytelling frameworks Data storytelling Analytics board	Sharada Singeswara, Tiwari, U. Dinesh Kumar- Data Visualization : Storytelling using data	8	CO4

Suggested Readings:

1. Sharada Singeswara, Tiwari, U. Dinesh Kumar- Data Visualization: Storytelling using data

CO-PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABA592.1			2	3			1	**2**
BBABA592.2			2	3			2	**2**
BBABA592.3			1	1			1	2
BBABA592.4			1	1			3	**3**

3= Strong   2=Average   1=Weak

PO & PI Mapping:

Competency	Indicators
PO3: Decision Making Skills	
3.1. To be able to demonstrate the different aspects that can get influenced by the decision taken within the business. 3.2. To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem	3.1.1. Capability of implementation of a decision after proper assessment. 3.1.2. Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use) 3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented)
Competency	**Indicators**
PO4: Communication Skills	
4.1. To Demonstrate the ability to make effective business communication.	4.1.1. Ability to choose appropriate words when making verbal communication, 4.1.2. To be able to select proper language and

Competency	Indicators
words when making written communication.	
PO7: Deployable Skill set	
7.1. Demonstrating the ability to identify the nature of a problem appearing during the course of business. 7.2. Demonstrating the ability to apply the learned skill set as when required.	7.1.1. Acknowledgement of the existence of a problem. 7.1.2. Deciding the overall nature of the problem and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.
PO8: Moral Sensitivity	
8.1. To Demonstrate the ability to identify that there is a moral dilemma. 8.2. Demonstration of the ability to solve the moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence. 8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society.

Submitted by : Prof. Sayan Karmakar

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(Name)   (Signature & Date)

Received by :

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(HOD)   (Signature & Date)

Course code	**BBABA592**					
Course title	**Data Visualization**					
Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	Semester-
	0	0	2	0	**2**	V
Pre-requisite (if any)	Basic knowledge of visualization tools for Business Analytics purposes					

Course Objectives:

1. To enable the students to understand the fundamental concepts of visualization

6. To enable the students to understand the fundamental concepts of visualization tools in business analytics
7. To enable the students to understand the relevance of data visualization in commercial organization.
8. To understand the logic of designing an effective visualization dashboard in a corporate.

Course Outcomes:

CO1: Students can apply visualization tools in corporate
CO2: Students can connect the history of data visualization and its connection with computer graphics
CO3: Students can understand various types of data types
CO4: Students can examine the visualization of structured data

Course Content:

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	CO
Introduction	-- Usage of visualization - - Types of charts Common chart selection questions-- Introductiontobinary computation -- Input /Output	5. SharadaSingeswara, Tiwari, U. Dinesh Kumar- Data Visualization: Storytelling using data	4	CO 1
Visualization best practices	- - Data types - - effectiveness of visual encodings - - color	SharadaSingeswara, Tiwari, U. Dinesh Kumar- Data Visualization: Storytelling using data	4	CO 2
Visualization of structured data	Exploratory analysis Modelling Visualisation during deployment Business operation dashboard	SharadaSingeswara, Tiwari, U. Dinesh Kumar- Data Visualization: Storytelling using data	4	CO 3
Visualization of Unstructured data	Various form of text data Text data pre-processing pipeline Visualization text data Visualizing conversations	SharadaSingeswara, Tiwari, U. Dinesh Kumar- Data Visualization : Storytelling using data	4	CO 3

Storytelling framework	Science behind storytelling Presentation types Storytelling frameworks Data storytelling Analytics board	SharadaSingeswara, Tiwari, U. Dinesh Kumar- Data Visualization : Storytelling using data	4	CO4

Suggested Readings:

1. Sharada Singeswara, Tiwari, U. Dinesh Kumar- Data Visualization : Storytelling using data

CO-PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8
BBABA592.1			2	3			1	**2**
BBABA592.2			2	3			2	**2**
BBABA592.3			1	1			1	2
BBABA592.4			1	1			3	**3**

3= Strong   2=Average   1=Weak

PO & PI Mapping:

Competency	Indicators
PO3: Decision Making Skills	
3.1. To be able to demonstrate the different aspects that can get influenced by the decision taken within the business. 3.2. To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem	3.1.1. Capability of implementation of a decision after proper assessment. 3.1.2. Follow up the changes that are occurring due to the implementation (situation analysis methods can be of use) 3.2.1 Reaching to a solution and evaluating it after observing the changes (Case study method can be implemented)
Competency	**Indicators**
PO4: Communication Skills	
4.1. To Demonstrate the ability to make effective business communication.	4.1.1. Ability to choose appropriate words when making verbal communication, 4.1.2. To be able to select proper language and words when making written communication.
Competency	**Indicators**
PO7: Deployable Skill set	
7.1. Demonstrating the ability to identify the nature of a problem appearing during the course of business. 7.2. Demonstrating the ability to apply the learned skill set as when required.	7.1.1. Acknowledgement of the existence of a problem. 7.1.2. Deciding the overall nature of the problem and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.
PO8: Moral Sensitivity	

8.1. To Demonstrate the ability to identify that there is a moral dilemma.	8.1.1. The ability to identify the confusion or the dilemma that is in existence.
8.2. Demonstration of the ability to solve the moral dilemma.	8.2.1. Ability to select the best path that will serve to a bigger interest of the stakeholders and the society.

Submitted by : Prof. Sayan Karmakar

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            (Name)   (Signature & Date)

Received by :

_____   _____
            (HOD)   (Signature & Date)

Course code	**BBABA506**					
Course title	**BUSINESS FORECASTING TECHNIQUES** **Contents** Forecasting Techniques of Business					
Scheme and Credits	**L**	**T**	**P**	**S**	**Credits**	Semester-
	6	0	0	0	**6**	V
Pre-requisite (if any)	Basic knowledge of Mathematics and Statistics					

Course Objective :
1. To enable the students to understand the fundamental concepts of forecasting.
2. To enable the students to understand the methods of forecasting in predicting future demands of a product or service.
3. To enable the students to understand the strategic relevance of the different forecasting methods in commercial organization.
4. To emphasize the need for a new strategic decision-making approach within a firm based on the Business Forecasting Orientation.

Course Outcome: Student will

CO1:   Learn the fundamental concepts of 'Business Forecasting'.

CO2:   Understand the value of Business Forecasting asdecision making tools in increasing the business revenue.

CO3:   Be able to apply the fundamentals to understand how to reach to the 'Perceived choice' – consumer's purchase decision, producer's decision.

CO4:   Be able to analyze the underlying causes related to any changes impacting a business.

CO5: Be able to evaluate the impact of any strategic decision made using Business Forecasting methods.

CO6:   Be able to prepare future strategy pertaining to a product and its market.

Course Content:

Modules	Serial of Modules	Text Book as per Syllabus	Total hours of teaching	Blooms Level
Fundamentals of Business Forecasting	Introduction, Need and scope of forecasting, Time series and cross sectional data, Graphical summaries – Time plots and time series patterns, Seasonal plots, Scatter plots, Univariatestatistics - MAD,MSD, Variance, Standard Deviation, Bivariate Statistics – Covariance, Correlation coefficient, Autocovariance and Autocorrelation coefficients, Measuring Forecast Accuracy – ME, MAE, MSE, MPE, MAPE.	6. Spyros Makridakis, Steven C. Wheelwright and Rob J Hyndman: FORECASTING METHODS AND APPLICATIONS:, Wiley India Editions, 3rd edition 7.John E Hanke, Dean W Wichern: Business Forecasting, PHI (old edition)	10	CO1, CO2, CO3
Time Series Smoothing Techniques	Principle of decomposition of time series, Moving Average Methods – Smiple, Centred and Double Moving Average; Exponential Smoothing Methods – Single Exponential Smoothing, Holt's linear methods, Holt Winters' trend and seasonality method, Exponential smoothing – Pegels' classifications	9. Spyros Makridakis, Steven C. Wheelwright and Rob J Hyndman: FORECASTING METHODS AND APPLICATIONS:, Wiley India Editions, 3rd edition. 10. John E Hanke, Dean W Wichern: Business Forecasting, PHI (old edition)	15	CO2, CO3, CO4

Linear Time Series Models	Stochastic Process, Stationary Stochastic Process, Non-Stationary Stochastic Process (Random Walk), Random Walk without Drift, Random Walk with Drift, Tests for Stationarity – Box-Pierce Test, Ljung-Box Test, Unit Root Test. Simple AR Models – AR(1), AR(2), AR(p) , , Properties of AR Models-Variance,Covariances(k-lag), ACF,Stationarity, Yule-Walker equations. Simple MA Models – MA(1), MA(2), MA(q) , Properties of MA Models-Variance, Covariances(k-lag), ACF.Stationarity Dual relationship between AR(p) and MA(q) process.	1. Sankar Kumar Bhaumik: Principles of Econometrics, Oxford University Press 2. Robert S Pindyck& Daniel L Rubinfeld: ECONOMETRIC MODELS AND ECONOMIC FORECASTS, McGRAW Hill International Editions 3. Jonathan D Cryer, Kung Sik Chan: Time Series Analysis with Applications in R, Springer	20	CO1, CO2, CO3, CO4, CO5
ARMA & ARIMA	Simple ARMA Models -ARMA(p,q), Properties of ARMA(1,1) Model-Variance , Covariances(k-lag), ACF Backward shift operator, Non Seasonal ARIMA Models-ARIMA(p,d,q) Models with examples, Seasonal ARIMA Models – ARIMA(p,d,q)(P,D,Q)s	1. Rubey S Tsay: Analysis of Financial Time Series, John Wiley and Sons 2.Spyros Makridakis, Steven C. Wheelwright and Rob J Hyndman: FORECASTING METHODS AND APPLICATIONS:, Wiley India Editions, 3rd edition 3. Jonathan D Cryer, Kung Sik Chan: Time Series Analysis with Applications in R, Springer	15	CO3, CO4, CO5, CO6

Suggested Readings:

1. Spyros Makridakis, Steven C. Wheelwright and Rob J Hyndman: FORECASTING METHODS AND APPLICATIONS:,Wiley India Editions, 3rd edition

2. Jonathan D Cryer, Kung Sik Chan: Time Series Analysis with Applications in R, Springer

3. Sankar Kumar Bhaumik: Principles of Econometrics, Oxford University Press

4. Robert S Pindyck& Daniel L Rubinfeld: ECONOMETRIC MODELS AND ECONOMIC FORECASTS, McGRAW Hill International Editions

5. Rubey S Tsay: Analysis of Financial Time Series, John Wiley and Sons

6. George E P Box, G M Jenkins, G M Ljung, G C Reinsel: Time Series Analysis and Control, John Wiley and Sons

7. John E Hanke, Dean W Wichern: Business Forecasting, PHI (old edition)

CO-PO Mapping:

CO	PO1	PO2	PO3	PO4	PO5	PO 6	PO7	PO8
BBABA506 .1		3	2			2	2	
BBABA506 .2		2	3			2	3	
BBABA506 .3		3	2			2	2	
BBABA506 .4		3	3			3	2	
BBABA506 .5		3	3			3	3	
BBABA506 .6		3	3			3	3	

*3= Strong   2=Average   1=Weak

PO & PI Mapping:

PO 2: Identification of the Nature of a Problem Area	
Competency	**Indicators**
2.1. Demonstrate an ability to identify an area that requires problem solving. 2.2 Demonstrate an ability to assess the business environment and understand their impact on the business.	2.1.1 Ability to contribute towards problem solving methods, 2.1.2 Understanding a problem or issue belongs to which of the specialized areas- Finance, HR or marketing. 2.2.1 To be able to identify the different factors that influences the business.

PO 3: Decision Making Skills	
Competency	**Indicators**
3.1. To be able to demonstrate the different aspects that can get influenced by the decision taken within the business. 3.2. To be able to demonstrate the optimal solution or close to an optimal solution to a given managerial problem.	3.1.1. Capability of implementation of a decision after proper assessment. 3.2.1 Reaching to a solution and evaluating it after observing the changes.

PO 6: Integration of Functions	
Competency	**Indicators**
6.1 Demonstration of the ability to identify gaps in a business strategy, and to be able to close these gaps. 6.2 Demonstrate the identification of changing trends in a business and operation of the functional areas accordingly.	6.1.1. Continuation of Professional development and observation skills, 6.1.2. Using rational approach towards an issue. 6.2.1. Ability to study the changes in preferences of customers

PO 7: Deployable Skill set	
Competency	**Indicators**
7.1 Demonstrating the ability to identify the nature of a problem appearing during the course of business.	7.1.1 Acknowledgement of the existence of a problem, 7.1.2 Deciding the overall nature of the problem

7.2 Demonstrating the ability to apply the learned skill set as when required.	and its minor details. 7.2.1. Ability to implement the required knowhow as when necessity arises.

Submitted by : Prof. Arindam Roy

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                (Name)   (Signature & Date)

Received by :

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                (HOD)   (Signature & Date)