Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore

MBA-BUSINESS ANALYTICS – IV SEMESTER (20-22)

MBAI401C STRATEGIC MANAGEMENT

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment				
MBAI401C	Strategic Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives

The objective of teaching this course is to enable students to integrate knowledge of various functional areas and other aspects of management, required for perceiving opportunities and threats for an organization in the long run and second generation planning and implementation of suitable contingency strategies for seizing / facing these opportunities & threats.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

Students will develop understanding of project planning and ability to monitor and control projects and risk involved. In addition, they become familiar with tools and techniques used in managing projects.

Unit I: Introduction

1. Meaning, Need and Process of Strategic Management
2. Business Policy, Corporate Planning and Strategic Management
3. Single and Multiple SBU organizations
4. Strategic Decision–Making Processes – Rational–Analytical
5. Intuitive-Emotional, Political – Behavioral; Universality of Strategic Management
6. Strategists at Corporate Level and at SBU Level
7. Interpersonal, Informational and Decision Roles of a Manager

Unit II: Mission, Business Definition and Objectives

1. Need, Formulation and changes
2. Hierarchy of objectives, Specificity of Mission and Objectives
3. SWOT Analysis, General, Industry and International Environmental Factors
4. Analysis of Environment, Diagnosis of Environment – factors influencing it
5. Environmental Threat and Opportunity Profile (ETOP)
6. Internal Strengths and Weaknesses
7. Factors affecting; Techniques of Internal Analysis; Diagnosis of Strengths and Weaknesses; Strategic Advantage Profile (SAP)

Unit III: Strategy Alternatives, Grand Strategies and their sub strategies

1. Stability, Expansion, Retrenchment and Combination
2. Internal and External Alternatives
3. Related and Unrelated Alternatives
4. Horizontal and Vertical Alternatives
5. Active and Passive Alternatives
6. International Strategy Variations

Unit IV: Strategic Choice and Analysis

1. Managerial Choice Factors, Choice Processes – Strategic Gap Analysis
2. ETOP-SAP Matching, BCG Product – Portfolio Matrix
3. G.E. Nine Cell Planning Grid; Contingency Strategies
4. Prescriptions for choice of Business Strategy; Choosing International Strategies

Unit V: Strategy Implementation, Concept, Barriers, Implementation Process

1. Project & Procedural Implementation
2. Resource Allocation; Structural Implementation
3. Plan and Policy Implementation; Leadership Implementation
4. Behavioral Implementation, Implementing Strategy in International Setting

Suggested Readings

1. Kazmi, Ajhar (2009***). Strategic Management and Business Policy***. New Delhi: Tata McGraw Hill.
2. Lomash, Sukul & Mishra P.K. (2003).***Business Policy & Strategic Management***. New Delhi: Vikas Publication.
3. Trehan, Alpana (2010).***Strategic Management***. Dreamtech: Wiley.
4. Nag, A. (2011). ***Strategic Management. Analysis. Implementation. Control***. Delhi: Vikas Publication.
5. Parthasarthy, Raghavan (2008). ***Fundamentals of Strategic Management***. India: Wiley.
6. Pankaj, Ghemawat (2006).***Strategy and the Business Landscape***. Pearson.
7. Haberberg, Adrian & Rieple Alison (2010).***Strategic Management***. New York: Oxford Press.
8. Tushman (2010.) ***Managing Strategic Innovation& Change***. New York : Oxford Press

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MBAI402C SUPPLY CHAIN MANAGEMENT

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment *	END SEM University Exam	Teachers Assessment *				
MBA I 402C	Supply Chain Management	60	20	20	-	-	4	-	-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
***Teacher Assessment** shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objectives

The objective of this course is to understand how the chain involved in the marketing and distribution is working and decide the routing and scheduling of the products.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Students having experience in the field of production can lean the techniques of materials and logistics management and implement them in their daily operations.
2. Provide a wider scope to the students interested in working in the manufacturing as well as shipping and retailing fields.

COURSE CONTENT

Unit I: Introduction to SCM

1. Importance of materials management
2. Codification, Simplification
3. Value analysis, Value engineering, Vendor analysis
4. Concepts and importance of a Supply Chain (SC)
5. Evolution of Supply Chain Management (SCM)
6. Key issues of Supply Chain Management, Competitive and SC strategies

Unit II: Dynamics of Supply Chain

1. Supply Chain Interventions
2. Push-based, Pull-based and Push-Pull based supply chain
3. Network design and Operations in the Supply Chain
4. Demand Forecasting in a Supply Chain
5. The value of information, Bullwhip effect, its Causes and remedial measures

Unit III: Managing inventory in SC environment

1. Basic and advanced inventory models
2. Multi-echelon inventory models

Unit IV: Transportation in SC environment

1. Design options for a transportation network
2. Strategic Outsourcing and Strategic Alliances
3. Third party and fourth party logistics

Unit V: Retailing and Supply Chain Management

1. Retailer- Supplier partnerships (RSP)
2. Supplier evaluation and selection
3. Information Technology (IT) in Supply Chain Management
4. SC performance model: SCOR model

Suggested Readings

1. Muthaiah, K. (2015). ***Logistics management and World Sea Borne Trade***. Mumbai; Himalaya Publishing House Ltd.
2. Aserkar, Rajiv (2007). ***Logistics in International Business***. Mumbai; Shroff Publication and Distribution Ltd.
3. Chopra, Sunil (2009). ***Supply Chain Management.*** New Delhi; Prentice Hall Publication.
4. Jaikrishna, S. ***Supply Chain Performance Management***. Hyderabad; ICFAI Unit Press.
5. Raghoramay, G. and Rangaraj, N. (2000). ***Logistics and Supply Chain Management***. New Delhi; MacMillan India Ltd.
6. Donald, Bowersok (2007). ***Logistics Management***. New Delhi; Tat McGraw Hill Publication.

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MBABAN403 DATA VISUALIZATION FOR ANALYTICS

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment *	END SEM University Exam	Teachers Assessment *				
MBABAN403	Data Visualization for Analytics	60	20	20	-	-	4		-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objective

This course is designed to provide students with the foundations necessary for understanding and extending the current state of the art in data visualization.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcome

By the end of the course, students will have gained:

1. An understanding of the key techniques and theory used in visualization, including data models, graphical perception and techniques for visual encoding and interaction.
2. Exposure to a number of common data domains and corresponding analysis tasks, including multivariate data, networks, text and cartography.
3. Practical experience building and evaluating visualization systems.

COURSE CONTENT

Unit I: Data Visualization: Introduction

1. Data Visualization - What and Why?
2. Modes of Visualization
3. Applications of Data Visualization

Unit II: Visualizing Data through Framework

1. Understanding and Responding to Visualization: Types of Reasoning - Inductive, Deductive, Abductive
2. Color Perception and Visualization
3. Data Visualization Framework : Data Types, Data as Variables

Unit III: Data Mapping

1. Data Mapping: Introduction, Steps in Data Mapping
2. Bar Chart, Vertical & Horizontal, Pie Chart and Coxcomb Plot, Line Chart, Area Chart
3. Tufte's Design Rules in Data Mapping

Unit IV: Business Intelligence and Visualization

1. Business Intelligence: Introduction, Tools of BI
2. Data Visualization Systems: Information Visualization, Large Data Visualization, Visual Analytics, Dash Boards
3. Schneiderman's Mantra of Data Visualization : Overview First, Zoom and Filter, Details on Demand

Unit V: Data Visualization using Excel Data & Tableau

1. Visualizing Unstructured Information
2. Data Visualization Using Excel
3. Data Visualization Using Tableau

Suggested Readings

1. *https://www.google.com/url?sa=t&source=web&rct=j&url=https://www.coursera.org/learn/datavisualization&ved=2ahUKEwjgrZ714vjuAhXU7XMBHcHNApoQjjgwAnoECCAQAg&usg=AOvVaw0YrCAiEEShQfBLyqiixsiz (Retrieved on February 02,2021)*
2. Liberatore and Luo (2010). *The Analytics Movement, Interfaces, Articles in Advance.* pp. 1–12, 2010.
3. Tufte, E. (2001). *The Visual Display of Quantitative Information (2nd Edition).* Graphics Press: UK.

MBABAN404 MARKETING METRICS FOR ANALYTICS

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment *	END SEM University Exam	Teachers Assessment *				
MBABAN404	Marketing Metrics for Analytics	60	20	20	-	-	4		-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objective

This course aims to cover topics in marketing analytics, an area that remains the decision enabler of utmost importance for many of the offline and online companies' marketing and merchandising divisions.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Students will have a general understanding of this vital area of marketing analytics.
2. Students will be able to analyse marketing data effectively using analytics.

COURSE CONTENT

Unit I: Overview of marketing analytics

1. Introduction to analytics - Marketing Analytics as an enabler of Marketing Strategy
2. Statistical foundations of marketing: Descriptive Statistics – Distributions - General Linear Models – Optimization.

Unit II: Product Analytics

1. Pricing and Revenue Management: Point-of-sale Data - Deciding on the "Right" Pricing Approach, a.k.a Strategic Pricing

2. Implementing tools to support pricing strategy - Managing the prices to meet revenue goals, a.k.a. Tactical Pricing Assortment Optimization: Panel and Point-of-Sale data - Customer meets product –
3. A retailer's nightmare: shelf-space optimization - Site-to-store – Product meets customer.

Unit III: Customer Analytics

1. Customer Lifetime Value: Loyalty Data - What is a customer's lifetime? –
2. How can we predict it? Market Basket Analysis
3. Market-Basket Data - Product Affinities

Unit IV: Channel analytics

1. Web Analytics: Online Data - Managing the online real estate
2. The "cloud" Marketing Budget Optimization across Channels
3. Search Engine Marketing versus Search Engine Optimization

Unit V: Managing the Delivery

1. Managing the delivery of analytics projects: Client is always right Future of Marketing Analytics.

Suggested Readings

1. Data, data everywhere, "*Special report on managing information, Economist"*, February 27th, 2010.
2. ***Using R for Data Analysis and Graphics: Introduction, Code and Commentary***. *Available at http://cran.rproject.org/doc/contrib/usingR.pdf?bcsi_scan_B318185731EF FDE3=0&bcsi_scan_filename=usingR.pdf*
3. Fader, P. and Hardie B.(2009). *Probability Models for Customer- Base Analysis. Journal of Interactive Marketing 23, 61–69.*

MBABAN405 DECISION AND RISK ANALYTICS

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment*	END SEM University Exam	Teachers Assessment*				
MBABAN405	Decision and Risk Analytics	60	20	20	-	-	4		-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in Class, given that no component shall exceed more than 10 marks.

Course Objective

Course focus is predominantly on prescriptive analytics with some parts focused on predictive analytics. It also focuses on topics such as PERT, CPM, computer simulation, decision analysis using decision trees and quantitative value functions, and heuristic methods are covered, as well as use of contemporary computer software for problem solving.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcomes

1. Enable students to arrive at decisions based on analytical research
2. Use effectively analytical decision making tools for problem solving

COURSE CONTENT

Unit I: Predictive and Prescriptive Analytics

1. Introduction: predictive and Prescriptive Analytics
2. Mathematical optimization

Unit II: Networks Modeling

1. Networks modeling-

2. Multi-objective optimization
3. Stochastic modeling

Unit III: PERT & PERT

1. PERT (performance evaluation and review technique)
2. CPM, (critical path method)
3. Computer simulation

Unit IV: Decision and Risk Analysis

1. Decision and Risk analysis
2. Decision trees
3. Quantitative value function model

Unit V: Forecasting Models

1. Forecasting models
2. Heuristic methods.

Suggested Readings

1. Stephen Powell and Ken Baker (2004). *The Art of Modeling with Spreadsheet.* Wiley.

2. *Hussein, Abbass (2014).* ***Computational Red Teaming Risk Analytics of Big-Data-to-Decisions Intelligent Systems.*** Springer International**:** Switzerland.

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MBABAN406 BIG DATA ANALYTICS

SUBJECT CODE	SUBJECT NAME	TEACHING & EVALUATION SCHEME								
		THEORY			PRACTICAL		L	T	P	CREDITS
		END SEM University Exam	Two Term Exam	Teachers Assessment *	END SEM University Exam	Teachers Assessment *				
MBABAN 406	Big Data Analytics	60	20	20	-	-	4		-	4

Legends: **L** - Lecture; **T** - Tutorial/Teacher Guided Student Activity; **P** – Practical; **C** - Credit;
*__Teacher Assessment__ shall be based on following components: Quiz/Assignment/ Project/Participation in class, given that no component shall exceed more than 10 marks.

Course Objectives

1. Identify the importance of data governance for managing Big Data.
2. Learn tips and tricks for Big Data use cases and solutions.

Examination Scheme

The internal assessment of the students' performance will be done out of 40 Marks. The semester Examination will be worth 60 Marks. The question paper and semester exam will consist of two sections A and B. Section A will carry 36 Marks and consist of five questions, out of which student will be required to attempt any three questions. Section B will comprise of one or more cases / problems worth 24 marks.

Course Outcome

1. Enable the students to analyse the big data using modern statistical/analytics approach.

COURSE CONTENT

Unit I: Introduction to Big Data

1. Introduction – distributed file system
2. Big Data and its importance, Four Vs, Drivers for Big data, big data analytics, big data applications
3. Algorithms using map reduce, Matrix-Vector Multiplication by Map Reduce.

Unit II: Introduction Hadoop

1. Big Data – Apache Hadoop & Hadoop EcoSystem
2. Moving Data in and out of Hadoop
3. Understanding inputs and outputs of Map Reduce - Data Serialization.

Unit III: Hadoop Architecture

1. Hadoop Architecture, Hadoop Storage: HDFS, Common Hadoop Shell commands ,
2. Anatomy of File Write and Read., Name Node, Secondary NameNode, and DataNode

3. Hadoop Map Reduce paradigm, Map and Reduce tasks, Job, Task trackers –
4. Cluster Setup – SSH & Hadoop Configuration – HDFS Administering –Monitoring & Maintenance.

Unit IV: Introduction to R

1. Concept of R, Installing R, IDE of R, Getting help from R
2. Mathematical Operators and Vectors, Assigning Variables, Special Numbers, Logical Vectors, Classes, Different types of numbers, Changing classes, Examining Variables, the workplace.

Unit V: Elements in R

1. Vectors – Sequences, Lengths, Names, Indexing Vectors, Vector Recycling and Repetition,
2. Matrices and Arrays – Creating Arrays and Matrices, Rows, Columns, Dimensions, Indexing Arrays, Combining Matrices, Array Arithmetic,
3. Lists – Creating lists, Automatic and recursive variables, List dimensions and arithmetic, indexing lists.

Suggested Readings

1. Michele Chambers, Michael Minelli, Ambiga Dhiraj (2012). ***Big Data Big Analytics, Emerging Business Intelligence and Analytic Trends for Today's Businesses***. Wiley: New Delhi.
2. Boris lublinsky, Kevin t. Smith and Alexey Yakubovich (2015). ***Professional Hadoop Solutions***. Wiley India: New Delhi.
3. Gert H. N. Laursen and Jesper Thorlund (2013). ***Business Analytics for Managers. Taking Business Intelligence beyond Reporting***. Wiley India: New Delhi.