



GUJARAT TECHNOLOGICAL UNIVERSITY

Programme: Master of Business Administration

Branch: International Business

Semester: 3

Subject Name: Business Intelligence & Analytics

Subject Code: 2539303

Rationale:

Information has been central to the success of businesses. The development of computing and information technology has enabled businesses to store, organise, and analyse vast quantities of consumer data for decision-making purposes. This course introduces database analytics concepts, methodologies, and tools through the use of industry-relevant case studies. Students will learn the fundamentals and advancements of data analytics-driven strategies for gaining a competitive edge in today's business climate.

Course Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks
L	T	P		Theory		Practical		
			C	ESE (E)	PA(M)	ESE (V)	PA (I)	
4	0	0	4	70	30	0	50	150

Course Outcomes:

Sr. No.	Course Outcomes
CO1	To understand the basics of business intelligence, data warehouse, and data mining tools & techniques in businesses (U)
CO2	To demonstrate the awareness and knowledge of business analytics (A)
CO3	To use power BI for visual analytics (A)
CO4	To assess the relevance and effectiveness of business analytics in various business areas (AN)

Course Content:

Unit No.	Content	No. of Hours	Marks
1	Business Intelligence and Data Warehousing <ul style="list-style-type: none"> Introduction to business intelligence and business decisions BI – function, process, services & tools Data Warehouse – introduction, characteristics, functions, usage, framework, architecture, ETL Metadata, Data marts, Data warehouse vs. DBMS, Data lake OLAP – introduction, operations, models OLTP – introduction, operations, models 	10	15
2	Big Data and Business Analytics <ul style="list-style-type: none"> BA – introduction, process, importance, components, types Data science vs. business intelligence vs. business analytics Digital data – introduction, sources, characteristics, challenges Big data – introduction, evolution, characteristics, life cycle, challenges 	10	15



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3	Predictive and Prescriptive Analytics <ul style="list-style-type: none"> Data mining – Introduction, application, architecture, tools, myths, mistakes, KDD process Data mining methods – classification, regression, clustering, association Text analytics – text mining, NLP, text mining process & tools Data mining vs. text mining Sentiment analysis – introduction, types, application, process, challenges Web analytics – web mining Basic concepts of neural network 	10	20
4	Diagnostic and Descriptive Analytics <ul style="list-style-type: none"> Business report – introduction, components Visual analytics – data and information visualization, basic charts and graphs Dashboard design Business Performance Management – closed-loop BPM cycle, KPI, balanced scorecard Functional Application of Analytics <ul style="list-style-type: none"> Financial analytics Digital media analytics Customer and marketing analytics HR Analytics Operations & SCM analytics Location based analytics Issues of legality, privacy, and ethics	10	20
	Practical <ul style="list-style-type: none"> Power BI based project Tableau basics 	-	CEC
Total		40	70

Suggested Specification Table For Question Paper Design:

Unit No.	Unit Title	Teaching Hours	Distribution of Theory Marks (Assessment as per Revised Bloom's Taxonomy Level*)						Total Marks
			RM	UN	AP	AN	EL	CR	
I	Module-1	10	00	05	10	00	00	00	15
II	Module-2	10	00	05	10	00	00	00	15
III	Module-3	10	00	05	05	10	00	00	20
IV	Module-4	10	00	02	08	10	00	00	20
	Total	40	00	17	33	20	00	00	70

***RM: Remember, UN: Understand, AP: Apply, AN: Analyze, EL: Evaluate, CR: Create**

Note: This specification table provides general guidelines to assist student for their learning and to teachers to teach and question paper designers/setters to formulate test items/questions to assess the attainment of the UOs. The actual distribution of marks at different taxonomy levels in the question paper may slightly vary from above table.



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Suggested Student Activities for Progressive Assessment (PA): (50 Marks)

- Presentation
- Project
- Hands on practice for BI tool
- Case study
- Assignment
- Quiz

Evaluation:

Students shall be evaluated on the following components:

Internal Evaluation	(Internal Assessment- 50 Marks)
• Project	20 Marks
• Presentation	10 Marks
• Assignment / Quiz	10 Marks
• Class presence and participation	10 Marks

Suggested Learning Resources:

S. No.	Title of Book	Author	Publication with place, year and ISBN
1	Business Intelligence and Analytics: Systems for Decision Support	Ramesh Sharda, Dursun Delen, Efraim Turban	Pearson, latest
2	Business Analytics Principles, Concepts, and Applications	Marc J. Schniederjans, Dara G. Schniederjans, Christopher M. Starkey	Pearson FT Press
3	Business Analytics	James Evans	person Education
4	Fundamentals of Business Analytics	R.N.Prasad and Seema Acharya	Wiley
5	Data Analytics	Anil Maheshwari	McGraw Hill
6	Business Analytics – The Science of Data Driven Decision Making	U. Dinesh Kumar	Wiley
7	Business Analytics	Sahil Raj	Cengage
8	Business Analytics for Managers: Taking Business Intelligence Beyond	Jesper Thorlund & Gert H.N. Laursen	Wiley

List of Journals / Periodicals / Magazines / Newspapers / Web resources, etc.

- International Journal of Business Analytics
- Analytics India – Magazine
- International Journal of Business Analytics and Intelligence
- <http://www.simplilearn.com/>
- <http://www.coursera.org/>
- <https://nptel.ac.in/>