



GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Master of Business Administration, 2nd Semester

Subject Name: Business Analytics (BA)

Subject Code: 4529201

With effective
from academic
year 2018-19

1. Learning Outcomes:

Learning Outcome Component	Learning Outcome (Learner will be able to)
Business Environment and Domain Knowledge (BEDK)	<ul style="list-style-type: none"> • <i>Develop</i> understanding of various information technologies and their application to facilitate business intelligence. • <i>Examine</i> the application of data analytics for a given business support function in a given industry.
Critical thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	<ul style="list-style-type: none"> • <i>Perform</i> a need assessment of a given business function and propose a framework for business reporting.
Global Exposure and Cross-Cultural Understanding (GECCU)	<ul style="list-style-type: none"> • <i>Analyze</i> the current global business analytics practices and <i>deduce</i> the applicability of these practices in providing solutions to organization problems / decision making requirements.
Social Responsiveness and Ethics (SRE)	<ul style="list-style-type: none"> • <i>Judge</i> the critical managerial and ethical issues in using business analytics.
Effective Communication (EC)	<ul style="list-style-type: none"> • <i>Evaluate</i> and communicate results of analysis and technical information to both technical and non-technical audiences through verbal, written and graphical reporting.
Leadership and Teamwork (LT)	<ul style="list-style-type: none"> • <i>Collaborate</i> with team members to design a framework for a given business problem using business analytics solutions.

LO – PO Mapping: Correlation Levels:

1 = Slight (Low); 2 = Moderate (Medium); 3 = Substantial (High), “-“= no correlation

Sub. Code: 4529201	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
LO1: <i>Develop</i> understanding of various information technologies and their <i>application</i> to facilitate business intelligence.	3	3	2	-	2	-	-	-	2
LO2: <i>Examine</i> the application of data analytics and related technological systems for a given business support function in a given industry.	3	3	2	-	2	2	-	2	2
LO3: <i>Perform</i> a need assessment of a given business function and	3	2	3	-	3	1	-	1	1



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<i>propose</i> a framework for business reporting.									
LO4: <i>Analyze</i> the current global business analytics practices and <i>deduce</i> the applicability of these practices in providing solutions to organization problems / decision making requirements.	2	3	3	-	3	1	-	1	2
LO5: <i>Judge</i> the critical managerial and ethical issues in using business analytics.	-	-	-	-	1	-	3	1	-
LO6: <i>Evaluate</i> and communicate results of analysis and technical information to both technical and non-technical audiences through verbal, written and graphical reporting.	-	2	3	3	-	1	2	-	-
LO7: <i>Collaborate</i> with team members to design a framework for a given business problem using business analytics solutions.	-	-	1	2	-	2	-	3	1



Course Duration: The course duration is of 40 sessions of 60 minutes each.

2. Course Contents:

Module No:	Module Content	No. of Sessions	70 Marks (External Evaluation)
I	Business Intelligence: <ul style="list-style-type: none">• Definitions and Examples in Business Intelligence• Need, Features and Use of Business Intelligence (BI)• BI Components<ul style="list-style-type: none">○ Data Warehouse○ Business Analytics○ Business Performance Management○ User Interface Business Analytics: <ul style="list-style-type: none">• Introduction to Business Analytics (BA) – Need.• Components (Business Context, Technology, Data Science).• Types (Descriptive, Predictive and Prescriptive).• Business Intelligence versus Business Analytics.• Transaction Processing v/s Analytic Processing<ul style="list-style-type: none">○ OLTP v/s OLAP○ OLAP Operations○ Data models for OLTP (ER model) and OLAP (Star & Snowflake Schema)	10	18
II	Types of Digital Data: <ul style="list-style-type: none">• Definition, Sources, Storage and Characteristics of Structured, Unstructured and Semi Structured Data Data Warehouse: <ul style="list-style-type: none">• Definition, characteristics, framework• Data lake Business Reporting, Visual Analytics: <ul style="list-style-type: none">• Definition, concepts• Different types of charts and graphs• Emergence of data visualization and visual analytics	10	18
III	Data Mining: <ul style="list-style-type: none">• Concepts and applications• Data mining process Text & Web Analytics: <ul style="list-style-type: none">• Text analytics and text mining overview• Text mining applications• Web mining overview• Social media analytics• Sentiment analysis overview Big Data Analytics: <ul style="list-style-type: none">• Definition and characteristics of big data• Fundamentals of big data analytics	10	17



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IV	<p>Business Performance Management:</p> <ul style="list-style-type: none"> • Business performance management cycle • KPI, Dashboard <p>Analytics in Business Support Functions:</p> <ul style="list-style-type: none"> • Sales & Marketing Analytics • HR Analytics • Financial Analytics • Production and operations analytics <p>Analytics in Industries:</p> <ul style="list-style-type: none"> • Telecom, Retail, Healthcare, Financial Services 	10	17
V	<p>Practical: Students should prepare a detailed report on applications of analytics in different industries.</p>	---	(30 marks CEC)

3. Pedagogy:

- ICT enabled Classroom teaching
- Case study
- Practical / live assignment
- Interactive class room discussions

4. Evaluation:

Students shall be evaluated on the following components:

A	Internal Evaluation	(Internal Assessment- 50 Marks)
	• Continuous Evaluation Component	30 marks
	• Class Presence & Participation	10 marks
	• Quiz	10 marks
B	Mid-Semester examination	(Internal Assessment-30 Marks)
C	End –Semester Examination	(External Assessment-70 Marks)

5. Reference Books:

No.	Author	Name of the Book	Publisher	Year of Publication / Edition
1	Ramesh Sharda, Dursun Delen, Efraim Turban	Business Intelligence: A Managerial Perspective on Analytics	Pearson	3 rd
2	R.N.Prasad and Seema Acharya	Fundamentals of Business Analytics	Wiley	2016
3	U. Dinesh Kumar	Business Analytics – The Science of Data Driven Decision Making	Wiley	2017
4	Anil Maheshwari	Data Analytics	McGraw Hill	2017
5	Jesper Thorlund & Gert H.N. Laursen	Business Analytics for Managers: Taking	Wiley	Latest



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		Business Intelligence Beyond		
6	Sahil Raj	Business Analytics	Cengage	Latest
7	James R. Evans	Business Analytics	Pearson	Latest

Note: Wherever the standard books are not available for the topic appropriate print and online resources, journals and books published by different authors may be prescribed.

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

1. International Journal of Business Analytics
2. International Journal of Business Analytics and intelligence
3. International Journal on Consumer and Business Analytics
4. Analytics India – Magazine