



# GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Master of Business Administration, 2<sup>nd</sup> Semester

Subject Name: Business Analytics (BA)

Subject Code: 4529201

With effective  
from academic  
year 2018-19

## 1. Learning Outcomes:

Learning Outcome Component	Learning Outcome
Business Environment and Domain Knowledge (BEDK)	<ul style="list-style-type: none"> <li>Develop domain knowledge of various technology and its application to facilitates managerial decision /MIS</li> </ul>
Critical thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	<ul style="list-style-type: none"> <li>Enhance capabilities for innovative use of I.T.</li> </ul>
Global Exposure and Cross-Cultural Understanding (GECCU)	<ul style="list-style-type: none"> <li>Understanding the significance of global platform for data retrieval/process among different business cultures of the world</li> </ul>
Social Responsiveness and Ethics (SRE)	<ul style="list-style-type: none"> <li>Understanding of ethics and prevention of fraud through technology, theft of data etc.</li> </ul>
Effective Communication (EC)	<ul style="list-style-type: none"> <li>Enable communication for data driven decision making</li> </ul>
Leadership and Teamwork (LT)	<ul style="list-style-type: none"> <li>Encourage cross functional collaboration to enhance efficiency and productivity.</li> </ul>

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

## 3. Course Contents:

Module No:	Module Content	No. of Sessions	70 Marks (External Evaluation)
<b>I</b>	<p><b>Business Intelligence:</b></p> <ul style="list-style-type: none"> <li>Definitions and Examples in Business Intelligence</li> <li>Need, Features and Use of Business Intelligence (BI)</li> <li>BI Components               <ul style="list-style-type: none"> <li>Data Warehouse</li> <li>Business Analytics</li> <li>Business Performance Management</li> <li>User Interface</li> </ul> </li> </ul> <p><b>Business Analytics:</b></p> <ul style="list-style-type: none"> <li>Introduction to Business Analytics (BA) – Need.</li> <li>Components (Business Context, Technology, Data Science).</li> <li>Types (Descriptive, Predictive and Prescriptive).</li> <li>Business Intelligence versus Business Analytics.</li> <li>Transaction Processing v/s Analytic Processing               <ul style="list-style-type: none"> <li>OLTP v/s OLAP</li> <li>OLAP Operations</li> <li>Data models for OLTP (ER model) and OLAP (Star &amp; Snowflake Schema)</li> </ul> </li> </ul>	10	18
<b>II</b>	<p><b>Types of Digital Data:</b></p> <ul style="list-style-type: none"> <li>Definition, Sources, Storage and Characteristics of Structured, Unstructured and Semi Structured Data</li> </ul> <p><b>Data Warehouse:</b></p> <ul style="list-style-type: none"> <li>Definition, characteristics, framework</li> </ul>	10	18



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	<ul style="list-style-type: none"> <li>Data lake</li> </ul> <b>Business Reporting, Visual Analytics:</b> <ul style="list-style-type: none"> <li>Definition, concepts</li> <li>Different types of charts and graphs</li> <li>Emergence of data visualization and visual analytics</li> </ul>		
III	<b>Data Mining:</b> <ul style="list-style-type: none"> <li>Concepts and applications</li> <li>Data mining process</li> </ul> <b>Text &amp; Web Analytics:</b> <ul style="list-style-type: none"> <li>Text analytics and text mining overview</li> <li>Text mining applications</li> <li>Web mining overview</li> <li>Social media analytics</li> <li>Sentiment analysis overview</li> </ul> <b>Big Data Analytics:</b> <ul style="list-style-type: none"> <li>Definition and characteristics of big data</li> <li>Fundamentals of big data analytics</li> </ul>	10	17
IV	<b>Business Performance Management:</b> <ul style="list-style-type: none"> <li>Business performance management cycle</li> <li>KPI, Dashboard</li> </ul> <b>Analytics in Business Support Functions:</b> <ul style="list-style-type: none"> <li>Sales &amp; Marketing Analytics</li> <li>HR Analytics</li> <li>Financial Analytics</li> <li>Production and operations analytics</li> </ul> <b>Analytics in Industries:</b> <ul style="list-style-type: none"> <li>Telecom, Retail, Healthcare, Financial Services</li> </ul>	10	17
V	<b>Practical:</b> Students should prepare a detailed report on applications of analytics in different industries.	---	(30 marks CEC)

## 4. Pedagogy:

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

## 5. Evaluation:

Students shall be evaluated on the following components:

A	Internal Evaluation	(Internal Assessment- 50 Marks)
	<ul style="list-style-type: none"> <li>Continuous Evaluation Component</li> </ul>	30 marks
	<ul style="list-style-type: none"> <li>Class Presence &amp; Participation</li> </ul>	10 marks
	<ul style="list-style-type: none"> <li>Quiz</li> </ul>	10 marks
B	Mid-Semester examination	(Internal Assessment-30 Marks)
C	End –Semester Examination	(External Assessment-70 Marks)



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## 6. 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 <sup>rd</sup>
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 Business Intelligence Beyond	Wiley	Latest
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.

## 7. 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