



**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Programme: Master of Business Administration**  
**Semester: 4**  
**Branch: International Business**  
**Subject Name: Advanced Data Analytics**  
**Subject Code: 2549307**

**1. Learning Outcomes:**

Learning Outcome Component	Learning Outcome (Student will be able to)
Business Environment and Domain Knowledge (BEDK)	<ul style="list-style-type: none"> <li>• <i>Evaluate</i> the significance of data Analytics in various business domains for sound decision making.</li> </ul>
Critical thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	<ul style="list-style-type: none"> <li>• <i>Develop</i> skills required for the use of HR, Marketing and Financial Analytics in providing modern business solutions.</li> </ul>
Global Exposure and Cross-Cultural Understanding (GECCU)	<ul style="list-style-type: none"> <li>• <i>Synchronize</i> the data and explore the cultural perceptive of sharing knowledge.</li> </ul>
Social Responsiveness and Ethics (SRE)	<ul style="list-style-type: none"> <li>• Manage large volume of data without compromising ethical aspects</li> </ul>
Effective Communication (EC)	<ul style="list-style-type: none"> <li>• <i>Analyse</i> and design multidisciplinary approaches of generating knowledge from data within and outside organizations.</li> </ul>
Leadership and Teamwork (LT)	<ul style="list-style-type: none"> <li>• <i>Enhance</i> teamwork abilities with generating information from all relevant domains.</li> </ul>

LO – PO Mapping: Correlation Levels: 1 = Slight (Low); 2 = Moderate (Medium); 3 = Substantial (High), “-“= no correlation

Sub. Code: 2549307	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
LO1: <i>Evaluate</i> the significance of data Analytics in various business domains for sound decision making	3	3	3	-	2	-	2	3	3
LO3: <i>Synchronize</i> the data and explore the cultural perceptive of sharing knowledge.	2	2	1	2	2	2	3	3	3
LO4: <i>Manage</i> large volume of data without compromising ethical aspects	3	3	3	3	3	1	3	3	3
LO5: <i>Analyse</i> and design multidisciplinary approaches of generating knowledge from data within and outside organizations	3	3	3	1	1	1	1	3	3
LO6: <i>Enhance</i> teamwork abilities with generating information from all relevant domains.	2	-	-	-	1	3	2	-	1

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



**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Programme: Master of Business Administration**  
**Semester: 4**  
**Branch: International Business**  
**Subject Name: Advanced Data Analytics**  
**Subject Code: 2549307**

**3. Course Contents:**

Module No.	Contents	No. of Sessions	70 Marks (External Evaluation)
I	<b>Introduction</b> <ul style="list-style-type: none"> <li>• Data Analytics: Definition and Significance</li> <li>• Application of Analytics in Business Functions</li> <li>• Big Data Analytics – Overview</li> <li>• Big Data Life Cycle</li> </ul>	10	17
II	<b>Basics of Financial Analytics</b> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Need of Financial Analytics in Business</li> <li>• Overview of Predictive Sales Analytics, Cash Flow Analytics and Product Profitability Analytics</li> <li>• Application of Analytics in Financial Process</li> </ul>	8	14
III	<b>The Role of Analytics in HRM</b> <ul style="list-style-type: none"> <li>• Introduction of HR Analytics</li> <li>• Different Phases of Development of Data-driven HR Decision: Descriptive and Predictive HR Decision Making</li> <li>• Analytics Vs. Metrics</li> <li>• Importance of HR Analytics</li> <li>• Steps to Implement HR Analytics</li> </ul> <b>HR Decision Making and HR Analytics</b> <ul style="list-style-type: none"> <li>• Changing Need for HR Decision-making</li> <li>• Framework of HR Analytics</li> <li>• Aligning Human Resources to Business Through HR Analytics</li> <li>• HRIS for HR Decision-making</li> <li>• Ethical Issues in HR Analytics</li> </ul>	12	21
IV	<b>Marketing Analytics</b> <ul style="list-style-type: none"> <li>• An Introduction to Marketing Analytics</li> <li>• Benefits of Marketing Analytics</li> <li>• Marketing Analytics: Tools</li> <li>• Segmenting the Market</li> <li>• Analysing Customer Life Time Value</li> <li>• Understanding Digital Analytics Concepts</li> </ul>	10	18
V	<b>Practical:</b> Group projects on the application of Analytics in selected areas of HR, Marketing and Finance domain	---	(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:

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

**6. Reference Books:**

<b>Sr. No.</b>	<b>Author</b>	<b>Name of the Book</b>	<b>Publisher</b>	<b>Year of Publication</b>
1	Dipak Kumar Bhattacharyya	HR Analytics – Understanding Theories and Applications	Sage Publication	Latest
2	Wayne L. Winston	Marketing Analytics -Data-Driven Techniques with Microsoft Excel	John Wiley & Sons	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. Journal of Marketing Analytics, Springer
2. Financial Analysts Journal, Taylor & Francis
3. [http://www.training.prace-ri.eu/uploads/tx\\_pracetmo/introDataAnalyticsSSDAV15.pdf](http://www.training.prace-ri.eu/uploads/tx_pracetmo/introDataAnalyticsSSDAV15.pdf)
4. <http://cdn2.hubspot.net/hub/53/blog/docs/ebooks/introduction-to-marketing-analytics.pdf>
5. <https://www.nima.today/wp-content/uploads/2018/11/Marketing-Analytics-Mike-Grigsby.pdf>
6. [https://www.jigsawacademy.com/em/Beginners\\_Guide\\_to\\_Analytics.pdf](https://www.jigsawacademy.com/em/Beginners_Guide_to_Analytics.pdf)
7. <https://www.forbes.com/sites/bernardmarr/2016/04/07/6-key-financial-analytics-every-manager-should-know/#3cb1628555de>
8. [https://www.ey.com/Publication/vwLUAssets/ey-faas-financial-analytics-slip-sheet-final/\\$File/ey-faas-financial-analytics-slip-sheet-final.pdf](https://www.ey.com/Publication/vwLUAssets/ey-faas-financial-analytics-slip-sheet-final/$File/ey-faas-financial-analytics-slip-sheet-final.pdf)