GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Master of Business Administration, 3rd Semester
Subject Class: Elective
Subject Name: Advanced Data Analytics
Subject Code: 1539612

1. Learning Outcomes:

Learning Outcome Component	Learning Outcome (Student will be able to)
Business Environment and Domain Knowledge (BEDK)	• *Evaluate* the significance of data Analytics in various business domains for sound decision making.
Critical thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	• *Develop* skills required for the use of HR, Marketing and Financial Analytics in providing modern business solutions.
Global Exposure and Cross-Cultural Understanding (GECCU)	• *Synchronize* the data and explore the cultural perceptive of sharing knowledge.
Social Responsiveness and Ethics (SRE)	• Manage large volume of data without compromising ethical aspects
Effective Communication (EC)	• *Analyse* and design multidisciplinary approaches of generating knowledge from data within and outside organizations.
Leadership and Teamwork (LT)	• *Enhance* teamwork abilities with generating information from all relevant domains.

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

Sub. Code: 4549296	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
LO1: *Evaluate* the significance of data Analytics in various business domains for sound decision making	3	3	3	-	2	-	2	3	3
LO3: *Synchronize* the data and explore the cultural perceptive of sharing knowledge.	2	2	1	2	2	2	3	3	3
LO4: *Manage* large volume of data without compromising ethical aspects	3	3	3	3	3	1	3	3	3
LO5: *Analyse* and design multidisciplinary approaches of generating knowledge from data within and outside organizations	3	3	3	1	1	1	1	3	3
LO6: *Enhance* 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.**

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With effective from academic year 2020-21

3. Course Contents:

Module No.	Contents	No. of Sessions	70 Marks (External Evaluation)
I	**Introduction** • Data Analytics: Definition and Significance • Application of Analytics in Business Functions • Big Data Analytics – Overview • Big Data Life Cycle	10	17
II	**Basics of Financial Analytics** • Introduction • Need of Financial Analytics in Business • Overview of Predictive Sales Analytics, Cash Flow Analytics and Product Profitability Analytics • Application of Analytics in Financial Process	8	14
III	**The Role of Analytics in HRM** • Introduction of HR Analytics • Different Phases of Development of Data-driven HR Decision: Descriptive and Predictive HR Decision Making • Analytics Vs. Metrics • Importance of HR Analytics • Steps to Implement HR Analytics **HR Decision Making and HR Analytics** • Changing Need for HR Decision-making • Framework of HR Analytics • Aligning Human Resources to Business Through HR Analytics • HRIS for HR Decision-making • Ethical Issues in HR Analytics	12	21
IV	**Marketing Analytics** • An Introduction to Marketing Analytics • Benefits of Marketing Analytics • Marketing Analytics: Tools • Segmenting the Market • Analysing Customer Life Time Value • Understanding Digital Analytics Concepts	10	18
V	**Practical:** 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

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5. **Evaluation:**
   Students shall be evaluated on the following components:

	Internal Evaluation	(Internal Assessment- 50 Marks)
A	• 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)**

6. **Reference Books:**

Sr. No.	Author	Name of the Book	Publisher	Year of Publication
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
   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
   7. https://www.forbes.com/sites/bernardmarr/2016/04/07/6-key-financial-analytics-every-manager-should-know/#3cb1628555de
   8. file:///G:/Sem%20IV%20IT%20Syllabus%2014.08.2019/Advance%20Data%20Analytics/Marketing%20Analytics/Digital%20Marketing%20Analytics%20(%20PDFDrive.com%20).pdf
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