

Name of the Programme	: MBA (Financial Services)
Course Code	: MGF-603
Course Title	: Business Analytics
Number of Credits	: 4
Effective from AY	: 2022-23

Pre-requisites for the Course:	NIL
Course Objectives:	To familiarize the learners about the domain of business analytics and equip them with skills in descriptive, predictive and prescriptive analytics.
Content:	<p>Unit 1 : Introduction to Business Analytics Meaning and significance of business analytics, Applications of business analytics, <i>Types of business analytics: Descriptive</i> analytics, Predictive analytics, Prescriptive analytics. Building analytics capability, Business analytics process, Role of business analytics in strategy. Deployment of business analytics model, Requirements for effective implementation of business analytics models, Big data analytics, Challenges in data driven decision making, Application software in business analytics.</p> <p>Unit 2 Descriptive Analytics <i>Introduction to descriptive analytics: Structured and unstructured</i> data, Descriptive statistics. Data visualization: Univariate visualization, Bivariate visualization, Multivariate visualization. <i>Graphical exploratory data analysis</i> (Example: Box-plots, heatmap, Histograms, Scatterplots) <i>Building business intelligence dashboard: Mapping, Interactive data charts, Association rules, Sequence rules, Segmentation rules: Cluster analysis (K-means and Hierarchical clustering), Social media</i> analytics</p> <p>Unit 3 Predictive Analytics <i>Regression models: Introduction to classical linear regression</i> model, Assumptions of CLRM, Specification and estimation of bivariate and multiple regression models, Statistical inference and hypothesis testing, Properties of least square estimators (BLUE), Model diagnostics, Model misspecification errors, Violation of regression assumptions. <i>Decision Tree: Introduction, Chi-Square Automatic Interaction Detection (CHAID) tree development, Classification and Regression Tree (CART), Random Forest, Machine learning applications in decisiontree analysis. Other techniques: Discriminant analysis, Artificial Neural Network.</i></p> <p>Unit 4 Prescriptive Analytics <i>Introduction to prescriptive analysis: Linear programming (LP)</i> model building, Sensitivity analysis in LP, Graphical solution to LP, Portfolio optimization techniques.</p>
Pedagogy:	Lectures/ case analysis/assignments/class room interaction/lab based exercises.
References/	1. Laursen, G. and Thorlund, J. (2010). <i>Business Analytics for Managers</i> .

Readings:	<p>Wiley.</p> <ol style="list-style-type: none"> 2. Kumar, U. (2017). <i>Business Analytics: The Science of data-Driven Decision Making</i>. Wiley. 3. Rao, P. (2013). <i>Business Analytics: An Application Focus</i>. PHI Learning, Delhi. 4. Abbott, D. (2014). <i>Applied Predictive Analytics</i>, Wiley. 5. Winston, W. (2016). <i>Microsoft Excel Data Analysis and Business Modeling</i>, Pearson. 6. Tatsat, H., Puri, S., Lookabaugh, B. (2020). <i>Machine Learning and Data Science Blueprints for Finance</i>, O'Reilly Media Inc., Boston, USA. 7. Mitchell, T. (2017). <i>Machine Learning</i>, McGraw Hill. 8. Kang, M. and Choi, E. (2021). <i>Machine Learning: Concepts, Tools and Data Visualization</i>, World Scientific. 9. Gujarati, D. (2004). <i>Basic Econometrics</i>, McGraw Hill, New Delhi. <p>Wooldridge (2006). <i>Introductory Econometrics</i>, Thomson-South Western, Singapore. <i>Latest edition</i>.</p>
Course Outcomes:	<p>Upon completion of the course learners will be able to:</p> <p>CO1. Explain the concepts in business analytics, its process and strategic significance.</p> <p>CO2. Perform descriptive analytics with data visualization, cluster analysis, and social media analytics.</p> <p>CO3. Apply techniques of regression models, decision trees, Discriminant analysis, and Artificial Neural Network in developing predictive models.</p> <p>CO4. Determine optimal solutions for given business resource problem with application of linear programming.</p>

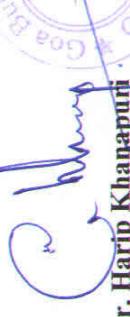
GOA BUSINESS SCHOOL
MBA (FINANCIAL SERVICES) SEMESTER III
TIME TABLE (W. e. f. 01/08/2023)

Timing	Monday	Tuesday	Wednesday	Thursday	Friday
9.30 - 10.30 AM	Macroeconomics [Dr. Narayan] BR Methods [Mr. Jick]	BR Methods [Mr. Jick]	FinTech [Dr. Pournima]	FinTech [Dr. Pournima]	Derivatives Market [Dr. Sanjeeta]
10.30 - 11.30 AM	Macroeconomics [Dr. Narayan]	BR Methods [Mr. Jick]	FinTech [Dr. Pournima]	FinTech [Dr. Pournima]	Derivatives Market [Dr. Sanjeeta]
11.30 - 12.30 PM	Entrepreneurship [Dr. Pawaskar]	Digital Marketing [Dr. Pournima]	Entrepreneurship [Dr. Prachi]	Digital Marketing [Dr. Pournima]	Macroeconomics [Dr. Narayan]
12.30 - 01.30 PM	Entrepreneurship [Dr. Pawaskar]	Digital Marketing [Dr. Pournima]	Entrepreneurship [Dr. Prachi]	Equity Valuation [Mr. Jick]	Macroeconomics [Dr. Narayan]
LUNCH BREAK (1.30 pm to 2.30 pm)					
02.30 - 03.30 PM	Derivatives Market [Dr. Sanjeeta]	Business Analytics [Dr. Harip]	Equity Valuation [Mr. Jick]	Equity Valuation [Mr. Jick]	Mentoring
03.30 - 04.30 PM	Derivatives Market [Dr. Sanjeeta]	Business Analytics [Dr. Harip]	Equity Valuation [Mr. Jick]	Business Analytics [Dr. Harip]	Mentoring
04.30 - 05.30 PM	BR Methods [Dr. Narayan]	Digital Marketing [Dr. Pournima]	BR Methods [Dr. Narayan]	Business Analytics [Dr. Harip]	Mentoring

- MGF-600:** **Equity Valuation** - Mr. Jick Castanha
MGF-601: **Derivatives Market** - Dr. Sanjeeta Parab
- MGF-602:** **Business Research Methods** - Dr. Narayan Parab/
MGF-603: **Business Analytics** Mr. Jick Castanha
- Dr. Harip Khanapuri
- MGF-621:** **Macroeconomics** - Dr. Narayan Parab
MGF-623: **Entrepreneurship** - Dr. Dr. Pinky Pawaskar/
Dr. Prachi Kolamker
- MGF-624:** **Digital Marketing** - Dr. Pournima Dhume
- MGF-625:** **FinTech** - Dr. Pournima Dhume

To, Student Circulation, Faculty Circulation
Copy to: Vice Dean (Academics)




Dr. Harip Khanapuri
(Programme Director)
MBA (Financial Services)

GOA UNIVERSITY				
Exam	November 2023 Examination (Master of Arts in Economics - MAEC)			
College	Goa Business School			
Programme	Master of Arts in Economics			
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Paper	MGF-603	Business Analytics		
Paper Head	SEA	Max Marks	40 Credits	4

Seat No	SEA Marks
22P0100005	21
22P0100020	23.5
22P0100026	29.5

Certified that all the sub components have been taken into account while finalising the above marks.

Dr. Harip Shanapur

NAME OF EXAMINER

C. May

EXAMINER'S SIGNATURE

C. May

Dean/Programme Director/ Principal's Signatu

Date: _____

N.B.NOTE : Department/College may kindly confirm that the above details are correct with reference to paper title, paper code and number of credits.

<< Absentees should be marked as 'A' (without quotes) >>

<< Carry forward of marks should be indicated as 'CF' (without quotes) >>

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GOA UNIVERSITY				
Exam	November 2023 Examination (Master of Arts in Economics - MAEC)			
College	Goa Business School			
Programme	Master of Arts in Economics			
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Paper	MGF-603	Business Analytics		
Paper Head	ISA	Max Marks	60 Credits	4

Seat No	Student Name	ISA Marks
22P010005	BERDOVA MUQADDAS KARAMSHOEVNA	39
22P010020	JUMABAYEVA MAYSA	43
22P010026	NTSELISENG ALINAH LETOLO	39.5

Certified that all the sub components have been taken into account while finalising the above marks.

Dr Hanif Khanapuri

NAME OF EXAMINER

C M
EXAMINER'S SIGNATURE

C M
Dean/Programme Director/ Principal's Signature

Date: _____

N.B.NOTE : Department/College may kindly confirm that the above details are correct with reference to paper title, paper code and number of credits.

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<< Carry forward of marks should be indicated as 'CF' (without quotes) >>

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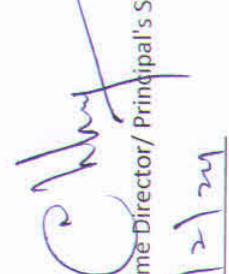
GOA UNIVERSITY		
Exam	November 2023 Examination (Master of Business Administration in Financial Services - MBAFS)	
College	Goa Business School	
Programme	Master of Business Administration in Financial Services	
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Paper	MGF-603	Business Analytics
Paper Head	ISA	Max Marks
		60 Credits
		4

Seat No	Student Name	ISA Marks
22P0300001	BILAL	39.5
22P0300004	FATHMA ZOHRA KHAN	40
22P0300005	GULBUDDIN	37
22P0300006	HASHMATULLAH	39
22P0300012	MALVIYA ANJALI GOVIND	38
22P0300014	MATIULLAH	48
22P0300015	PAI ANTARA ARUN	32.5
22P0300017	RAHUL SRIVASTAVA	39.5
22P0300018	SAID HADI SHAH	38.5
22P0300022	SAYED AHMAD SHAH SADAT	28.5
22P0300023	SAYED AZHAAR NAZIR	38
22P0300024	SEYYAR MAHMOOD	37.5

Certified that all the sub components have been taken into account while finalising the above marks.


Dr. Hanif N. Alamri
 NAME OF EXAMINER

EXAMINER'S SIGNATURE


Dr. Hanif N. Alamri
 Dean/Programme Director/ Principal's Signature
 Date: 14/12/2021

N.B.NOTE : Department/College may kindly confirm that the above details are correct with reference to paper title, paper code and number of credits.

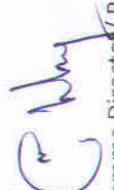
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<< Carry forward of marks should be indicated as 'CF' (without quotes) >>

GOA UNIVERSITY		
Exam	November 2023 Examination (Master of Business Administration in Financial Services - MBAFS)	
College	Goa Business School	
Programme	Master of Business Administration in Financial Services	
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Paper	MGF-603	Business Analytics
Paper Head	SEA	Max Marks
		40 Credits
		4

Seat No	SEA Marks
22P0300001	33
22P0300004	23.5
22P0300005	A
22P0300006	11.5
22P0300012	14
22P0300014	24.5
22P0300015	A
22P0300017	24
22P0300018	22
22P0300022	12.5
22P0300023	11.5
22P0300024	21.5

Certified that all the sub components have been taken into account while finalising the above marks.


Name of Examiner
EXAMINER'S SIGNATURE


Dean/Programme Director/Principal's Signature
Date: 14/12/24

N.B.NOTE : Department/College may kindly confirm that the above details are correct with reference to paper title, paper code and number of credits.

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