

2.3.2 Basic information of each course/module (Provide information where applicable in Table 3.)

Table 3: Summary of information on each course/module

1.	Name of Course/Module: Quantitative Methods for Business					
2.	Course Code: BBA 3274					
3.	Name(s) of academic staff:					
4.	<p>Rationale: Business decision making requires systematic approach in collecting and analysing data. Collecting data can be done by conducting research, survey or interviews for primary data and obtain ready data called secondary data. All these data need to be analysed and presented in meaningful ways so that the decision makers can make full use of them for making business decisions. Business students need to be exposed to these tools and approaches in preparing them to be the future entrepreneurs or decision makers in business.</p>					
5.	Semester and Year offered: Semester 5 , Year 3					
6.	Total Student Learning Time (SLT)	L	T	P	O	Total Guided and Independent Learning
	L = Lecture T = Tutorial P = Practical O = Others	36	12	-	7	55 (GL) + 105 (NGL) = 160 hrs
7.	Credit Value: 4					
8.	Prerequisite (if any):					
9.	<p>Objectives: The objectives of this course are to:</p> <ul style="list-style-type: none"> • Understand and learn to apply the relevant principles of quantitative methods such as PERT and CPM • Understand and learn to apply the principles of forecasting using past data and times series analysis • Understand and learn to apply quantitative analysis for problem solving • Develop the ability to determine the set of alternative solutions 					
10.	<p>Learning outcomes: At the end of the semester the students will be able to:</p> <ul style="list-style-type: none"> • Apply the relevant principles of quantitative methods such as PERT and CPM • Apply the principles of forecasting using past data and times series analysis • Apply quantitative analysis for problem solving • Determine the set of alternative solutions 					
11.	<p>Transferable Skills: Development of transferable skills such as financial management skills, effective group work, leadership skills, and knowledge in approaches to problem-solving.</p>					
12.	<p>Teaching-learning and assessment strategy: Class Participation, Assignments, Team Work, Case Studies, and Presentation.</p>					

13.	<p>Synopsis: This course intends to acquaint students with the role that quantitative methods play in business and economic decision making, beginning with a review of basic mathematics. It emphasizes, using computers and computer assisted solution methods, the application of a wide variety of quantitative techniques to the solution of business and economic problems. Additionally, this course examines the specific leading edge technologies currently in use in industry. The course is designed to prepare the students with the understanding on the process of research and acquire basic skills in Quantitative Methods by taking the students through topics and specific areas of coverage including Introduction to Quantitative Methods, Introduction to Probability, Probability Distributions, Decision Analysis, Utility and Game Theory, Linear Programming, Integer Programming and Applications.</p>																			
14.	Mode of Delivery: Lectures/Tutorial/Practical /Class Activities																			
15.	<p>Assessment Methods and Types:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 80%;">Class Participation</td> <td style="text-align: right;">10%</td> </tr> <tr> <td>Tests</td> <td style="text-align: right;">20%</td> </tr> <tr> <td>Assignments and Presentation</td> <td style="text-align: right;">30%</td> </tr> <tr> <td>Final exam</td> <td style="text-align: right;">40%</td> </tr> <tr> <td></td> <td style="text-align: right;">-----</td> </tr> <tr> <td>Total</td> <td style="text-align: right;">100%</td> </tr> </table>								Class Participation	10%	Tests	20%	Assignments and Presentation	30%	Final exam	40%		-----	Total	100%
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16.	Mapping of the course/module to the Programme Aims NA																			
17.	Mapping of the course/module to the Programme Learning Outcomes: See attached																			
18.	Content outline of the course/module and the SLT per topic:																			
		Delivery				GL	NGL	SLT												
	Topics	L	T	P	O	Hour	Hour													
	1. Introduction to Quantitative Methods. <ul style="list-style-type: none"> • Developing a general understanding of the management science/operations research approach to decision 	2	-	-	-	2	4	6												
	2. Calculus and Matrix Algebra <ul style="list-style-type: none"> • Algebraic and graphical representation • Linear and non-linear equations • Differential equations and integration • Applications in business and economics 	2	1			3	6	9												
	3. Statistical Models and Inferential Statistics <ul style="list-style-type: none"> • Normal Distribution • Calculating Z-Scores • Hypothesis Testing • Applications in business and economics 	2	1			3	6	9												

	4. Data gathering methods <ul style="list-style-type: none"> • Census data • Sample data • Surveys and Questionnaire • Data entry • Statistical packages 	3	1			4	8	12
	5. Time series analysis <ul style="list-style-type: none"> • Trends • Seasonal and cyclical factors • Irregular variations • Smoothing time series • Moving averages • Forecasting • Applications in business and economics. 	3		1		4	7	11
	6. Linear Programming, Integer Programming and Applications. <ul style="list-style-type: none"> • Describe how new information and revised probability values can be used in the decision analysis approach to problem solving. • Explain on why utility is a better criterion than monetary value in decision making situations. 	3		1		4	7	11
	7. Project Scheduling: PERT/CPM. <ul style="list-style-type: none"> • Understanding the role and application of PERT/CPM for project scheduling. • Learning how to define a project in terms of activities such that a network can be used to describe the project. 	3	2		2	7	20	27
	8. Financial Mathematics <ul style="list-style-type: none"> • Interest rates, simple and compound • Real and nominal rates • Investment and Return • Law of large numbers • Stochastics • Option pricing • Asset pricing 	4	2		1	7	17	24
	9. Decision Analysis. <ul style="list-style-type: none"> • Inventory Modeling • Queuing Theory • Game Theory 	3	2		1	6	15	21

	10. Multi-criteria Decisions. <ul style="list-style-type: none"> Understanding the concept of Transportation Problem Knowing how to apply Transshipment Problem. 	3	2		1	6	15	21
	TOTAL STUDENT LEARNING TIME (SLT)	30	12	2	5	49	111	160
19.	Main references supporting the course: <ul style="list-style-type: none"> Anderson D, Sweeney D, & Thomas A. William. Quantitative Methods for Business. Thompson Higher Education, 2010. Louise Swift, Sally Piff. Quantitative Methods for Business, Management and Finance. Palgrave Macmillan, 6th ed., 2010. Additional References: <ul style="list-style-type: none"> Donald Waters, Quantitative Methods for Business, Prentice Hall, 7th Edition, 2009. Les Oakshott, Essential Quantitative Methods: For Business, Management and Finance, Palgrave Macmillan, 4th Edition, 2009. 							
20.	Other additional information: Nil							

(17) Course Outcomes (CO) – Programme Outcomes (PO) Matrix:

		PROGRAM OUTCOMES									
Course Outcomes (CO)		Apply business concepts to develop business plans and strategies	Apply the knowledge of business and management to undertake tasks and solve job-related problems in the field.	Conduct business activities with colleagues responsibly.	Understand and conduct ethical and professional responsibility towards oneself, others and the environment.	Demonstrate leadership skills in team working environment.	Think critically to solve problems related to business.	Embrace a desire for life-long learning.	Seek entrepreneurship opportunities and initiate innovative activities.	Delivery	Assessment
No.	At the end of the course, student should be able to:	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8		
1	Understanding a quantitative methodology to be used in the real business environment	√	√	√			√	√		Lectures	Test, Examination
2	Identify and understand how to use basic statistics to evaluate and improve performance in the real business world.		√		√				√	Lectures	Class Assignment, Test, Examination
3	Describe the primary use of financial analysis in a real work situations		√							Lectures,	Assignment Examination
4	Improve the ability to make more informed business decisions thru a better understanding of new analytical decision making techniques.	√			√				√	Lectures,	Assignment, Presentation, Examination.
5	Analyze the significance of PERT and CPM to the business environment.	√	√			√	√			Lectures Class Exercise	Tests, Examination