1. Title of subject	**Business Mathematics**	
2. Subject code	FSBN 104	
3. Status of subject	Core	
4. Stage	Foundation	
5. Credit Hour	3 (3 hours per week X 14 weeks)	
6. Pre-Requisite	None	
7. Assessment	Coursework : 60% Final Examination : 40% Total : 100%	
8. Semester	Semester 1	
9. Objective of subject	To introduce the fundamentals of business mathematics for the foundation course.	
10. Synopsis of subject	This course introduces students to basic methods of quantitative inquiry in social sciences studies. The course will provide students a solid foundation in quantitative methods, enabling students to manipulate identities, equations and to build simple models used in business studies. In addition, the skills acquired will enable students to understand and master more sophisticated models and equations used in intermediate and advanced business and economics studies.	
11. Details of subject	**Contents**	**Hours**
Week 1	**TOPIC: LINEAR ALGEBRAIC EQUATIONS, INEQUALITIES AND SIMULTANEOUS EQUATIONS**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ solve the linear algebraic equations ▪ solve the inequalities of one unknown ▪ solve the simultaneous equations of two unknowns.	
	Activity: Tutorial Questions	

	Further reading for this lesson: Chapters 7 & 10 Francis, A. (2004). *Business Mathematics and Statistics* (6th ed.). Int. Thomson Business Press.	
Week 2	**TOPIC: QUADRATIC EQUATIONS**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ solve quadratic equations of one and two unknowns using factorization and formula methods.	
	Activity: Tutorial Questions	
	Further reading for this lesson: Chapter 7 Francis, A. (2004). *Business Mathematics and Statistics* (6th ed.). Int. Thomson Business Press.	
Week 3	**TOPIC: NUMERICAL FUNCTIONS / EXPRESSIONS**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ solve numerical expressions with a scientific calculator. (These expressions involve powers, roots, multiplication, divisions, additions, subtractions and logarithm.)	
	Activity: Tutorial Questions	
	Further reading for this lesson: Stamford College Manual	
Week 4	**TOPIC: INDEX AND LOGARITHM**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ solve indices and logarithm equations of one unknown. (The law of indices and logarithm are emphasized in this topic.)	
	Activity: Tutorial Questions	
	Further reading for this lesson: Stamford College Manual	

Week 5	**TOPIC: PERCENTAGE, RATIO AND PROPORTION.**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ calculate percentages, ratios and proportions of a set of given data.	
	Activity: Tutorial Questions	
	Further reading for this lesson: Chapter 2 Lerner, J. (2000). *Schaum's Outline of Basic Business Mathematics*. McGraw-Hill.	
Week 6	**TOPIC: CURRENCY EXCHANGE**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ convert from one currency to another, given the exchange rate. (This unit involves formulations of basic Algebraic equations as well as calculations of ratios.)	
	Activity: Tutorial Questions	
	Further reading for this lesson: Stamford College Manual	
Week 7	**REVISION AND TEST** **(WEEK 1 - WEEK 6)**	3
Week 8	**TOPIC: MEASUREMENT OF GEOMETRICAL FIGURES**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ convert from one unit of measurement to another.	
	Activity: Tutorial Questions	
	Further reading for this lesson: Stamford College Manual	

Week 9	**TOPIC: MEASUREMENT OF GEOMETRICAL FIGURES**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ calculate the perimeter and area of geometrical figures- circle, square, rectangle, triangle, cone, cube ▪ apply the Pythagorean theorem.	
	Activity: Tutorial Questions	
	Further reading for this lesson: Stamford College Manual	
Week 10	**TOPIC: SKETCHING AND PLOTTING GRAPHS**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ sketch and plot linear algebraic equations ▪ sketch and plot linear inequalities ▪ sketch and plot quadratic equations.	
	Activity: Tutorial Questions	
	Further reading for this lesson: Chapter 7 Francis, A. (2004). *Business Mathematics and Statistics* (6^{th} ed.). Int. Thomson Business Press.	
Week 11	**TOPIC: BUSINESS MATHEMATICS**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ identify and define profit, cost and price of a business problem. (The breakeven model will be emphasised in this topic.)	
	Activity: Tutorial Questions	
	Further reading for this lesson: Stamford College Manual	
Week 12	**TOPIC: FINANCIAL MATHEMATICS**	3

	Learning Outcomes: After attending the lesson, the students should be able to : ▪ calculate the simple interest ▪ calculate the compound interest	
	Activity: Tutorial Questions	
	Further reading for this lesson: Chapter 5 Lerner, J. (2000). *Schaum's Outline of Basic Business Mathematics*. McGraw-Hill.	
Week 13	**TOPIC: FINANCIAL MATHEMATICS**	3
	Learning Outcomes: After attending the lesson, the students should be able to : ▪ calculate the Annual Percentage Rate (APR).	
	Activity: Tutorial Questions	
	Further reading for this lesson: Chapter 5 Lerner, J. (2000). *Schaum's Outline of Basic Business Mathematics*. McGraw-Hill.	
Week 14	**REVISION CLASS AND TEST** **(WEEK 8 – WEEK 13)**	3
	Total	42

12. Text	**Compulsory**	Stamford College Manual – Introduction to Quantitative Methods (Certificate Level)
	Reference	Francis, A. (2004). *Business Mathematics and Statistics* (6th ed.). Int. Thomson Business Press. Lerner, J. (2000). *Schaum's Outline of Basic Business Mathematics*. McGraw-Hill.