

## CONTENT DISTRIBUTION

SUBJECT: SUBSIDIARY MATHEMATICS

COMBINATIONS: LFK, HLP&HGL

Class: S5

Number of period per week: 3 periods

Term 1 (36 periods)

UNIT 1: INTRODUCTION TO LOGIC (36 periods)		
<b>Key unit Competence:</b> Use mathematical logic as a tool of reasoning and decision making in daily life		
Week	Contents	Number of Periods
1	Introduction activity	1
	Simple statement	2
2	Compound statements	2
	Truth values and Truth tables	1
3	The negation “ <b>Not</b> ”	1
	The conjunction “ <b>and</b> ”	2
4	The disjunction “ <b>or</b> ”	1
	Concept of conditional statement “ <b>if ,..., then</b> ”	2
5	Converse and contrapositive	2
	Inverse of a conditional	1
6 -7	The bi-conditional statement “if and only if”	2
	Tautology	2
	Contradiction	2
8-9	Quantifiers: Universal quantifier “ <b>for all</b> ”	2
	Existence quantifier “ <b>there exists</b> ”	2
	Negation of quantifiers	2
10-11	Hypothetical syllogism	2
	Affirming the antecedent	2
	Denying the consequent	2
12	Revision for this unit 1	2
	End unit assessment	1
13	<b>EXAM</b>	

**Term 2 (36 periods)**

<b>UNIT 2: POINT, LINES IN 2D AND GEOMETRIC SHAPES (24 periods)</b>		
<b>Week</b>	<b>Lesson titles</b>	<b>Number of Periods</b>
1	Introductory activity	1
	Cartesian coordinate of a point in 2D.	2
2	Distance between two points in 2D	1
	Mid-point of a line segment	1
	Distance between two points in 2D	1
3	Vector in 2D	1
	Dot product of vectors in 2D	1
	Properties of dot product in 2D	1
4	Vector equation of a straight line	1
	Parametric equation of a straight line	1
	Cartesian equation of a straight line	1
5	Position of a point to the line	1
	Position of two lines	1
	Condition of parallelism	1
6	Angles between two lines	1
	Condition of perpendicularity	1
	Identification of Geometric shapes in 2D	1
7	Perimeter and area of geometric shapes in 2D: Square, Triangle, Rectangle,	1
	Perimeter and area of geometric shapes in 2D: Parallelogram, Pentagon and Hexagon	2
8	Revision of this unit 2	2
	End unit Assessment	1
<b>UNIT 3: GRAPHS AND FUNCTIONS (12/24 periods)</b>		
<b>Key Unit competence:</b> Apply graphical representation of functions in solving economics and financial models		
<b>Week</b>	<b>Lesson titles</b>	<b>Number of Periods</b>
9	Introductory activity	1
	Generalities on numerical functions	2
10	Constant function and identity functions	1
	Monomial and polynomial functions	1
	Rational and irrational functions	1
11	Domain of definition of polynomial functions	1
	Domain of definition of rational functions	1
	Domain of definition of irrational functions	1
12	Parity of a function (odd or even).	1
	Addition and subtraction of functions	1
	Multiplication and division of functions	1
<b>13</b>	<b>EXAM</b>	

**Term 3 (36 periods)**

<b>UNIT 3: GRAPHS AND FUNCTIONS</b>		<b>(12/24 periods)</b>
<b>Key Unit competence:</b> Apply graphical representation of functions in solving economics and financial models		
<b>Week</b>	<b>Lesson titles</b>	<b>Number of Periods</b>
1	Composite function	2
	Inverse of a function	1
2	Graphical representation and interpretation of linear function	1
	Graphical representation and interpretation of quadratic function	2
3	Price as function of quantity supplied and Consumption as function of income	1
	Price as function of quantity demanded and The Cost Function	1
	The Revenue Function and The Profit Function	1
4	The Marginal Cost, Marginal Revenue, and Marginal Profit	1
	Equilibrium Price and Quantity	1
	End unit assessment	1
<b>UNIT 4: SEQUENCES</b>		<b>(24 periods)</b>
<b>Key unit Competence:</b> Use arithmetic, geometric and harmonic sequences and their convergence to understand and solve problems arising in various contexts.		
<b>Week</b>	<b>Lesson titles</b>	<b>Number of Periods</b>
5	Introductory activity	1
	Definition of sequences	2
6-7	Arithmetic sequences	2
	$n$ th term of an arithmetic sequence	2
	Arithmetic mean	2
8-9	Sum of $n$ first terms of an arithmetic sequence	2
	Geometric sequence	2
	$n$ th term of a geometric sequence	2
10	Geometric mean	1
	Sum of $n$ first terms of a geometric sequence	2
11	Application of sequences in solving real life problems	3
12	Revision of this unit 4	2
	End unit Assessment	1
13	<b>EXAM</b>	