Mathematics

Table 1:   For student teachers offering AS: Mathematics

Course Code	Title	Course Category	No. of AUs	Pre-requisites
ASM10A	Fundamental Principles of Primary Mathematics I	Core	2	-
ASM10B	Fundamental Principles of Primary Mathematics II	Core	2	-

Table 2:   For student teachers offering Other AS

Course Code	Title	Course Category	No. of AUs	Pre-requisites
ASM10C	Number Topics	Core	2	-
ASM10D	Geometry Topics	Core	2	-
ASM40A	Further Mathematics Topics	Core	2	-

ASM10A Fundamental Principles of Primary Mathematics I

This course surveys topics covered in primary school curriculum and provides linkages between the Academic Subject Mathematics courses. Topics include: Problem solving and problem posing; Binary operations and four operations of numbers, classification of number systems; Sequence and Series and decimal representation of numbers, rational and irrational numbers; Computation in different bases; Historical Numeration system; Number Theory and divisibility; Proportional reasoning; Algebraic reasoning; Inequalities and approximations; Counting methods and systematic listing.

ASM10B Fundamental Principles of Primary Mathematics II

This course builds up the student teacher's knowledge of geometry and data topics from the perspective of concepts which are taught in the

primary mathematics syllabus. The course will draw upon concepts and processes learned in Academic Subject Mathematics courses. Topics are: Introduction to Geometry and geometrical entities; Measurement in Geometry; Geometrical constructions with concrete and virtual tools; Problem solving in geometry; Statistics.

ASM10C Number Topics

This course provides the foundational understanding of arithmetic topics which form a major portion of the primary mathematics curriculum. Problem solving processes will be introduced and re-visited in the different topics. Course topics are: Problem solving; Foundations of the Hindu-Arabic System; Algorithms on number operations in a place value system; Classification of number systems; Divisibility.

ASM10D Geometry Topics

This course aims to equip the primary mathematics teacher with a deeper understanding of geometry and measurement topics in the primary mathematics curriculum. Processes such as mathematical deduction and induction will be emphasized. Topics are: Mathematical deduction and induction; Basic elements of geometry as study of space in 2 and 3 dimensions; Properties associated with parallel lines; Properties of geometrical figures; Similarity and Congruency; Measurement; Constructions and proofs.

ASM40A Further Mathematics Topics

This course provides the mathematics teacher with deeper understanding and appreciation of the topics in the upper primary mathematics curriculum. Topics are: Mathematical thinking; Use of dynamic geometry software and other software for mathematical investigations; Geometrical figures in 3-dimensions; Algebra; Statistical investigations: Stages, Representations of data; Measures of central tendency and spread; misuse of statistics.