MATHEMATICS

COMPONENT	OBJECTIVES	COMPETENCY
I Geometry	1. Apply properties of spheres to real-life situations. **(MA.C.3.4.1)** 2. Use properties of transformations to deduce properties of polygons. **(MA.C.2.4.1)** 3. Develop criteria for similarity and congruence of figures. **(MA.C.2.4.1)** 4. Use properties of similar polygons to solve problems. **(MA.C.3.4.1)** 5. Define and use trigonometric functions to solve problems. **(MA.C.3.4.1)** 6. Use trigonometric functions to solve problems involving projections. **(MA.C.3.4.1)** 7. Use the Pythagorean theorem and its converse to solve problems. **(MA.C.3.4.1)** 8. Develop properties of geometric figures inductively and deductively. **(MA.C.1.4.1)**	A. Solve problems and prove assertions involving plane and solid figures.
II Algebra	1. Use proportional thinking to solve real-life problems. **(MA.C.3.4.1)** 2. Develop equivalent equations for proportions. **(MA.C.3.4.1)** 3. Interpret graphs and use them to represent situations. **(MA.C.3.4.2)**	A. Use variables and algebraic expressions to a. Represent concrete situations b. Generalize results c. Describe functions

COMPONENT	OBJECTIVES	COMPETENCY
III Statistics and Probability	4. Generalize properties of numbers using variables. 5. Solve problems using rational numbers in various representations. **(MA.A.3.4.2)** 6. Solve systems of equations using various methods, including technology. **(MA.D.2.4.1)** 7. Fit equations to data, using technology. 8. Solve problems involving motion using linear equations. **(MA.D.2.3.2)** 1. Construct area models to represent probabilistic situations. 2. Develop basic methods for calculating probabilities. **(MA.E.2.4.1)** 3. Understand, calculate and interpret expected value. 4. Construct graphs and apply the concepts of frequency, range, median, mode and relative frequency. **(MA.E.1.4.2)** 5. Develop properties of the normal curve. 6. Solve problems involving standard deviation. **(MA.E.1.4.3)** 7. Use simulations to estimate probabilities. **(MA.E.1.4.3)**	A. Construct and draw inferences from graphs, tables and charts that summarize data from real world situations.

MATHEMATICS

COMPONENT	OBJECTIVES	COMPETENCY
IV Logical reasoning	1. Make and test conjectures. 2. Construct logical arguments for conjectures that have been developed. 3. Formulate counterexamples. 4. Develop and describe algorithms. 5. Justify mathematical reasoning.	A. Follow logical arguments.