Academic Mathematics 3201
Unit 1: Set Theory

Text: Principles of Mathematics 11   **Chapter 1**

By the end of this unit, students will be expected to:

Outcome	Text Book
1. Solve problems that involve the application of set theory.	
● Provide examples of the empty set, disjoint sets, subsets and universal sets in context, and explain the reasoning.	Section 1.1 Pages 6 – 18
● Organize information such as collected data and number properties, using graphic organizers, and explain the reasoning.	
● Explain what a specified region in a Venn diagram represents, using connecting works (and, or, not) or set notation.	Section 1.2 Pages 19 – 21
● Determine the elements in the complement, the intersection or the union of two sets.	Section 1.3 Pages 22 – 35
● Solve a contextual problem that involves sets, and record the solution, using set notation.	
● Identify and correct errors in a solution to a problem that involves sets.	
● Explain how set theory is used in applications such as Internet searches, database queries, data analysis, games and puzzles.	Section 1.4 Pages 39 – 54
2. Analyze puzzles and games that involve spatial reasoning, using problem-solving strategies.	
● Determine, explain and verify a strategy to solve a puzzle or to win a game. ▪ guess and check ▪ look for a pattern ▪ make a systematic list ▪ draw or model ▪ eliminate possibilities ▪ work backwards ▪ simplify the original problem ▪ develop alternative approaches	Throughout M3201 Course
● Identify and correct errors in a solution to a puzzle or in a strategy for winning a game.	
< **Mid-Chapter Review** < **Chapter Self-Test** < **Chapter Review**	< Pages 36 – 38 < Page 56 < Page 57 – 58