

CORE COURSE PERFORMANCE OBJECTIVES

The student will be able to:

1. Develop problem solving strategies. (CCC 2, 5, 7)
2. Incorporate models in the solution of problems. (CCC 1, 2, 5, 6, 7)
3. Relate the various roles of individuals in problem solving. (CCC 3, 4)
4. Justify and communicate problem solutions. (CCC 1, 2, 4, 5, 6, 7)
5. Design mathematical problems to demonstrate specific types of problem solving strategies. (CCC 1, 2, 3, 4, 5, 6, 7)

MEASURABLE PERFORMANCE OBJECTIVES

1. **Assess problem solving strategies. (CCC 2, 5, 7)**
 - 1.1 Formulate diagrams, systematic lists, and tables to be used in a solution.
 - 1.2 Interpret patterns, guess and check, and elimination of possibilities in the construction of a solution of a problem.
 - 1.3 Construct physical representations and algebraic equations to represent and solve problems.
 - 1.4 Analyze a problem using the method of finite differences.
2. **Incorporate models in the solution of problems. (CCC1, 2, 5, 6, 7)**
 - 2.1 Create physical and algebraic models for a problem.
 - 2.2 Construct models for real world technological problems.
 - 2.3 Formulate diagrams, systematic lists, and tables to enhance the representation of a model.
3. **Relate the various roles of individuals in problem solving. (CCC 3, 4)**
 - 3.1 Manage a group.
 - 3.2 Defend methods of solution to others in the group.
 - 3.3 Synthesize the results obtained by subgroups.
 - 3.4 Appraise and criticize problem solving strategies while working is a group.
4. **Effectively justify solutions. (CCC 1, 2, 4, 5, 6, 7)**
 - 4.1 Compose a solution of a problem.
 - 4.2 Organize appropriate strategies to effectively communicate a solution to others.
 - 4.3 Prepare appropriate visual aids to enhance the presentation of a solution.
5. **Design mathematical problems to demonstrate specific types of problem solving strategies. (CCC 1, 2, 3, 4, 5, 6, 7)**
 - 5.1 Construct problems for others to develop understanding of a particular problem solving strategy.
 - 5.2 Formulate mathematical problems in proper mathematical language
 - 5.3 Compare the utility of problem solving strategies in terms of facilitating the solution of specific types of mathematical problems.

5.3 .

EVALUATION CRITERIA

Students will demonstrate proficiency on all Measurable Performance Objectives at least to the 75% level. The grade will be determined using the College Grading System:

92 – 100	A
83 – 91	B
75 – 82	C
0 – 74	R

Students should refer to the Student Handbook for information on Academic Standing Policy, Academic Honesty Policy, Students Rights and Responsibilities and other policies relevant to their academic progress.