

**WEBSTER UNIVERSITY**

**COURSE SYLLABUS**

**MTHC 50800.01**  
**COURSE NUMBER and SECTION**

**Andrea Rothbart**  
**INSTRUCTOR**

**Puzzles and Proofs**

**Summer, 2004**

1. **Course Description: (Student focus, rationale, scope, prerequisites)**

This course, designed for middle school math teachers, examines a variety of materials useful in developing reasoning skills. Included are attribute block puzzles, Lewis Carroll puzzles, logic puzzles and a variety of other puzzles and games that require deductive reasoning.

2. **Learning Outcomes: (Goals, objectives, course outcomes, etc.)**

Middle School Teachers will increase their skill in reasoning and in expressing mathematical ideas clearly. They will be able to distinguish valid arguments from invalid arguments and become adept at applying rules of inference. They will also have a body of curricular materials that can be used in their own classroom to help their students become more logical thinkers.

3. **Schedule**

**WEEK 1:** Lewis Carroll Puzzles

**WEEK 2-5:** Deductions using Attribute Blocks; Logic Puzzles and Assorted Games and other Puzzles.

**WEEK 6:** Paradoxes

There will be quizzes week 3 and week 6

4. **Resources:**

**Text Used:NONE**

All materials will be distributed by the instructor.

5. **EVALUATION: Based upon class participation, homework assignments and quizzes.**

**This syllabus is subject to change at the discretion of the instructor.  
Therefore, regular attendance is required.**