

1106-C1-566

Karen M Holmes* (kholmes@butler.edu). *Codes and Secret Messages: An Analytic Reasoning Course at Butler University.*

Codes and Secret Messages is a course created to fulfill the Analytic Reasoning requirement as part of the core curriculum at Butler University with the idea that the course would be student discovery based. To that end this course was designed for non-mathematics majors and has a workbook with twenty-nine group activities dealing with cryptography, ranging from anagrams and check digits to the Vigenere cipher and RSA encryption. Each class starts off with an explanation of the day's activity and then, in groups of four, the students work together to complete the workbook pages for the day. The mathematics we do in class varies from logic puzzles and combinatorics to matrices and modular arithmetic. The talk will consist of examples of groups from the workbook and will focus on the Enigma machine and RSA encryption. (Received September 02, 2014)