

1035-G1-1946      **Manmohan Kaur\*** (mkaur@ben.edu), Department of Mathematics, Benedictine University, 5700 College Road, Lisle, IL 60532. *Cryptology as a Pedagogical Tool*.

The science of sending and receiving secret messages charms young and old alike. Cryptology offers a wide variety of topics that are of interest not only to students of mathematics and computer science, but also of law, history, music, art, anthropology, chemistry, and many more. Each one of us is interested in the security of the financial transactions on the internet, 'smart cards' and electronic signatures. Cryptology can be used to attract non-mathematics majors and to kindle their long-term interest in mathematics in general.

On the other hand, Cryptology can also be used in traditional mathematics programs to motivate various concepts like modular mathematics, matrix structures, the importance of the existence of inverse of an element, etc. This topic is ideal for undergraduate research since the problems in the field are easy to understand, even though they may be hard to solve.

In this presentation, we will describe a popular course on Cryptology which has resulted in mathematics research by a wide spectrum of undergraduates. These students have presented their work at various professional meetings in the Midwest. A paper describing this course is accepted for publication by PRIMUS, a publication of the United States Military Academy. (Received September 20, 2007)