1067-C5-811 **Don Spickler*** (despickler@salisbury.edu), Salisbury University, 1101 Camden Ave., Salisbury, MD 21801. *Cryptography Tools: A Teaching Tool for the Investigation of Classical Cryptography and Cryptanalysis.*

The Cryptography Tools program was developed for the investigation of classical cryptography and cryptanalysis. The ciphers the program supports are mono-alphabetic substitution, Vigenere, Playfair, ADFGX, ADFGVX, LFSR, Hill, Enigma, and RSA. In addition the program has several tools to aid in the cryptanalysis of some of these ciphers. There are facilities to do frequency analysis, shift analysis, dot product analysis, determinant analysis and a facility to compare substrings. There are text extractors, combiners and converters to manipulate ciphertext. There is an infinite precision integer calculator as well as facilities for the calculation of probable primes and random numbers. The Cryptography Tools program was designed to remove the tedious calculations from the cryptanalysis process while still leaving the main decisions up to the user. The Cryptography Tools program is cross-platform and can be downloaded from my web site at http://facultyfp.salisbury.edu/despickler/personal/CryptTools.asp. In this talk we will discuss the main features of the program along with how it was used in a special topics course, for majors, in cryptography at Salisbury University and how it could be used in a course for non-majors. (Received September 15, 2010)