962-D1-533 **Aaron T Ekstrom*** (ekstrom@alfred.edu), Division of Mathematics, Alfred University, Alfred, NY 14802, and **Jennifer C Smith** (jsmith@grad.math.arizona.edu), Department of Mathematics, University of Arizona, Tucson, AZ 85721. *Cryptography as a Theme in a Course on Functions (Preliminary Report).* Preliminary report.

One of the main goals of college algebra and precalculus courses is to devlop students' conceptual understanding of functions. Recent research emphasizes the importance of students viewing a function as a process which maps one set to another, rather than as a series of manipulations or procedures. It has been suggested that this process conception of function is necessary in order for students to understand and apply various properties of functions such as covariance, injectivity, and invertibility when solving problems. In a precalculus course at a small private university, cryptography was used as a theme to illustrate and develop understanding of the definition of a function, the relationship between injective and invertible functions, identification of different classes of functions, and modelling data with functions. In this talk, we will demonstrate some of these activities and discuss preliminary data about their effectiveness. (Received September 15, 2000)