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With society becoming more reliant on digital and computing technology, the ability to transfer information in a secure and confidential fashion using cryptography, the science of secret message writing, has increased dramatically in importance. Cryptography is used in everyday life, including Internet applications, banking, and in the military.

Cryptography can be taught at a variety of levels, including to students from non-technical fields. To understand many algorithms in cryptography, including some modern methods, a student only needs to recall concepts such as division, prime numbers, and basic algebra. In addition, cryptography provides an excellent mechanism for increasing student interest in exploring and studying more advanced topics in mathematics. Application mathematical topics used in cryptography include linear algebra, abstract algebra, number theory, probability, and statistics.

The purpose of this presentation is to demonstrate how cryptography can be integrated into courses for early college-level students and high schools. As a model, a course in cryptography that has been taught for Radford University's Honors Academy and at the Southwest Virginia Governor's School for high school students will be described. (Received September 18, 2015)