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**Robert Talbert\*** ([rtalbert@franklincollege.edu](mailto:rtalbert@franklincollege.edu)), Department of Mathematics and Computing, Franklin College, 101 Branigin Boulevard, Franklin, IN 46131. *A Brief Fly-Through of Cryptology for First-Semester Students using Active Learning and Common Technology.*

In this talk we describe the instructional design of a multiple-day interactive unit on cryptology for students in the one-credit activity course “Introduction to the Mathematical Sciences” at Franklin College. The cryptology unit is intended to convey the major ideas and developments in cryptology, teach students some of the basic mathematical tools of cryptology (probability, modular arithmetic, binary arithmetic, etc.), and give students a sense of the range of applications of modern mathematics. Several factors mitigate the design of the unit. First, the students are mostly first-semester freshmen in their third week of college. Second, we assume the students’ mathematical background is just three weeks of Calculus I (and prerequisites). Third, the class is an activity course, so there is no homework given. In order to maximize student learning in this context, the unit is driven by a series of discovery activities enabled by readily-accessible technology such as spreadsheets and Wolfram|Alpha. (Received September 22, 2010)