

1023-F1-781

**Rich West\*** ([rwest@fmarion.edu](mailto:rwest@fmarion.edu)), 3586 W Hampton Pointe Dr., Florence, SC 29501. *Discrete Dynamical Systems as a College Algebra Thread.*

Discrete Dynamical Systems (or difference equations) is rich with real world applications. I have used this material as a "bridge" course for students transferring to Francis Marion University, which has a general education mathematics requirement of two courses. I have also used this material in Calculus, Linear Algebra, Differential Equations, and for in-service teachers at the graduate level. Now I am using Discrete Dynamical Systems in our two-course College Algebra sequence called Mathematical Modeling and Problem Solving I & II. These courses each have five projects, so access to the many applications of discrete dynamical systems is welcome. The modeling is intuitive, and iteration gives answers to many problems where answers were not accessible at the freshmen level. Besides, I find that Discrete Dynamical Systems gives insights into linear and exponential functions that were difficult to motivate with continuous mathematics. There are many other benefits that I will elaborate on in my talk. (Received September 21, 2006)