

1067-N1-1625 **Richard D. West*** (rwest@fmarion.edu), 3586 W Hampton Pointe Dr, Florence, SC
29501-8516. *Discrete Dynamical Modeling for Freshmen.*

Discrete Dynamical Systems (or difference equations) is rich with real world applications. I originally used this material as a "bridge" course for students transferring to Francis Marion University, which has a general education mathematics requirement of two courses. Now I am using Discrete Dynamical Systems in a freshman-level Discrete Dynamical Modeling course. To get this course approved I proposed it for majors not interested in pursuing calculus. The calculus students at Francis Marion are invariably required to take trigonometry or precalculus prior to taking calculus. This course enables students not interested in calculus to fulfill their education requirements with Discrete Dynamical Modeling and Probability & Statistics, useful courses for all citizens. Discrete Dynamical Modeling currently has four projects that highlight personal finance, institutional finance, pollution, and population dynamics. The modeling required is intuitive, and iteration gives answers to many problems where answers were not accessible to freshmen. Further, I find that Discrete Dynamical Systems gives insights into linear and exponential functions that were difficult to motivate with continuous mathematics. There are other benefits that I will elaborate on in my talk. (Received September 21, 2010)