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Mike Martin* (mmartin@jccc.edu), 12345 College Boulevard, JCCC Box 29, Overland Park, KS 66210. *Get Rhythm, If You Get to Choose!*

Rhythms and oscillatory signals are abundant in biological systems, yet some undergraduate biology majors still require just a single calculus course and one that has no trigonometry prerequisite. In this talk the argument will be made, with supporting evidence, that the calculus requirement for biology students should be one that presumes knowledge of trigonometry and includes trigonometry in its development. Additionally, the argument for early exposure to discrete dynamical systems, particularly as they relate to a sampling of rhythms, will be made. The second theme of the talk, related to trigonometry and/or discrete systems, is an exhibition of dynamic web tools used to produce and analyze rhythms associated to biology and medicine. These enabling tools are designed for use in mathematics courses from algebra through differential equations and a variety of niches within freshman-sophomore biology courses. The tools were distinguished by receiving the 2004 ICTCM Award for Excellence and Innovation and are associated to applications in membrane dynamics, red blood cell populations, cardiology, pharmacology, and population dynamics. Rhythms are inherently important in an evolving biology education and tools and modules will be provided to help integrate that instruction. (Received September 19, 2006)