The biocalculus courses at Benedictine University are designed to provide quantitative techniques and approaches that will be useful to students majoring in the biological and health sciences in their future coursework and careers. There is a particular emphasis on students interested in pursuing research. The courses use a threefold approach integrating mathematics, biology, and the use of computational software to investigate biologically oriented problems. This presentation will focus methods used to motivate the biological content in these courses, including using the reading of journal articles, computer activities, and course projects. We conclude with a discussion of student feedback and student research involvement after completion of the course sequence. (Received September 13, 2010)