Swarthmore College offered an Intro to Mathematical Biology class for the first time this fall to target biology majors with limited mathematical background and comfort. To reach this audience, the only prerequisite was Intro Bio. The fundamental goal for the course was for biology students to reach a mathematical literacy and to feel comfortable reading scientific journal articles containing mathematical models. To reach this goal, students manipulated models in computer labs, participated in in-class projects, and read, discussed, and critiqued three biological journal articles containing mathematical models. As a final project and measurement of the course goal, students self selected a modeling journal article to read, interpret, and critique. A description of the course, benefits and drawbacks of the course, and the results of students’ pre/post surveys will be discussed in the talk. (Received September 22, 2010)