



*Mathematical Biology* is an emerging field of research that combines fields of Mathematics with the fields of Biology and Medicine. The twenty-first century will see enormous strides and breakthroughs in understanding and dealing with changes in the environment, the introduction and interplay between new and displaced species, the treatment of new and old diseases, and abstraction of the complex human body from the sub-cellular level up to the groups of individuals, just to mention a few. Mathematics is pushing the envelope of the current knowledge of these fields, and many of these new discoveries will be fueled by this cooperative interaction.

MATH 391 (will be called MATH 380 in the future semesters) – Introduction to Mathematical Biology. This class is co-taught by faculty in the Departments of Mathematics and Biology. The goals for the class is first demonstrate the utility of abstract mathematical modeling of a variety of biological phenomena in order to better understand the processes behind them; and secondly to give students an understanding of the process involved in doing interdisciplinary research between the fields of Mathematics and Biology.

Some of the mathematical topics will include from Graph Theory, Fractals, Cellular Automata, and Difference Equations. Some of the biological topics will include population biology, gene sequences, pollen movement, and gene networks.

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