

# Education and Research

## M.S. Sequence in Biomathematics.

30 sem. hrs. required 1, including thesis (minimum of 4 sem. hrs. MAT 499). Sequence structure: In addition to the core courses, the sequence requires a thesis, and at least 14 hours of coursework chosen from the electives listed below. A minimum of 13 hours outside the core must be at the 400 level. At least 12 hours of Biological Sciences courses outside the core must be included. Transfer credit may be granted for MAT 340, 350, or 351, provided that at least 2 Mathematics courses are taken while in residence at ISU.

*Prerequisites:* Three semesters of calculus, 1 semester of linear algebra, and 4 additional appropriate mathematical and/or biological courses.

*Core courses* (taken by all M.S. students in the sequence): BSC 420.36 3 Seminar in Biomathematics (1 sem. hr., taken twice for total 2 sem. hrs.); MAT 499 (4 sem. hrs.); MAT 340 Differential Equations I (3 sem. hrs.); MAT 350 Applied Probability Models (4 sem. hrs.); MAT 351 Statistics and Data Analysis (4 sem. hrs.); MAT 442 4 Quantitative Biomathematics (3 sem. hrs.).

*Emphases and advisement:* Each student in the sequence selects one of the following emphases: (1) Biological Statistics and Modeling, or (2) Computation and Bioinformatics. Each student's graduate advisor will guide the research and choice of courses outside of the core and if any additional courses are necessary for the particular student's project.