Summer Program on Mathematical Modeling
• Our Mathematical Modeling course (MATH 485/585) combines formal lectures with computer laboratories and simulations of dynamical systems and models.

• Undergraduates work in teams on modeling projects, under the supervision of graduate or post-graduate mentors.

• Each undergraduate team writes a midterm and a final report, and gives oral presentations of its work.

• Students taking the course for graduate credit work on their own modeling problems.

• At the end of the semester, students present their projects in a poster session held in a public venue.

• Posters from the past two years are available online at [http://math.arizona.edu/~lega/485-585/mh.html](http://math.arizona.edu/~lega/485-585/mh.html)
Examples of successful projects (2005)


Examples of successful projects (2006)


• Working knowledge of
  – Calculus
  – Introductory differential equations
  – Introductory linear algebra
Questions for the audience

- Are there some modeling themes you would like to see included in the summer program?
- Will your students be able to participate?
- Are there skills that you would like your students to learn during the summer program (for instance, PowerPoint, MATLAB, LaTeX, how to write a resume)?
- Would it be useful to have MATLAB-based applets that would help undergraduates learn or review basic mathematics skills needed in a mathematical modeling course?
- Would you consider transporting some of these projects to your own institution, either as Research Experiences for Undergraduates, or as part of a mathematical modeling course?