1035-T1-638 **Petronela Radu*** (pradu@math.unl.edu), 239 Avery Hall, University of Nebraska-Lincoln, Department of Mathematics, Lincoln, NE 68588. *Math in the City - A Mathematical Modeling Program for Undergraduates.*

After teaching Differential Equations for several semesters, I found a recurring issue: mathematical modelling does not come easy to students. It seems that word problems are some of the most challenging to solve and this may be due to the fact that the automatism of applying an algorithm is not available anymore. Thus I developed a course which uses real world data in the context of mathematical problems.

The students work in groups on problems that are connected with current issues in our city, Lincoln, NE. So far, they performed a statistical analysis of factors that predict heart attacks, modeled the water levels in the largest lake in Nebraska, studied traffic in downtown and on a highway, and used linear regression to assess the growth of the real estate market prices over the last decade. The prerequisites for the course are minimal, yet students develop good mathematical and reasoning skills that they can use in their post-college life.

I will talk about the benefits that students gain by taking this course and also some of the issues that arose when running the course. (Received September 12, 2007)