

1067-K1-913 **Tim Chartier*** (tichartier@davidson.edu), Davidson College, Department of Mathematics,
P.O. Box 6908, Davidson, NC 28035. *A Model for the Community.*

Service-learning offers unique educational opportunities for students to apply their learning to issues of community interest. This talk will discuss a service-learning project used in a discrete math modeling course. The course teaches such topics as Monte Carlo simulation, queuing theory, Markov Chains, and optimization. The capstone group project requires students to create a mathematical model for a problem posed by a local nonprofit organization. Topics included designing the layout of a parking lot for a local food pantry and assigning elementary students into practicum groups according to scheduling constraints and indicated interests for a local elementary school. The final model and recommendations from it were presented in a public poster session and in a paper. This talk will discuss how such project topics were collected and integrated into the course. (Received September 16, 2010)