

1096-F5-817      **Olivia M. Carducci\*** (ocarducci@esu.edu). *A Service-Learning Approach to Mathematical Modeling.*

Each spring I teach a course in mathematical modeling. For the last six years, the course has culminated in a service-learning project. The projects have included proposing population models to the Lehigh Valley Planning Commission, estimating the CO<sub>2</sub> emitted by cars traveling to and from campus for the University sustainability committee, developing a complete life-cycle cost model for gas fracking for the Pocono Environmental Education Center (PEEC), and developing complete life-cycle cost models for commercial wind and solar electricity generation for PEEC. Each project expands the students' appreciation for the value of mathematics in addressing community issues. In this talk, I will describe how I organize the course with special attention to how I organize the service-learning project. I will include information on how I identify appropriate service-learning projects and how I evaluate the impact the project has on the students. I will allow the students to speak for themselves through their comments in their required reflection papers. (Received September 10, 2013)