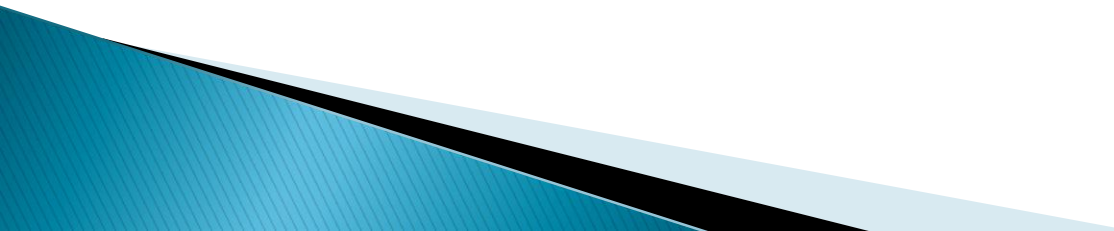


# A Service Project in a Capstone Modeling Course

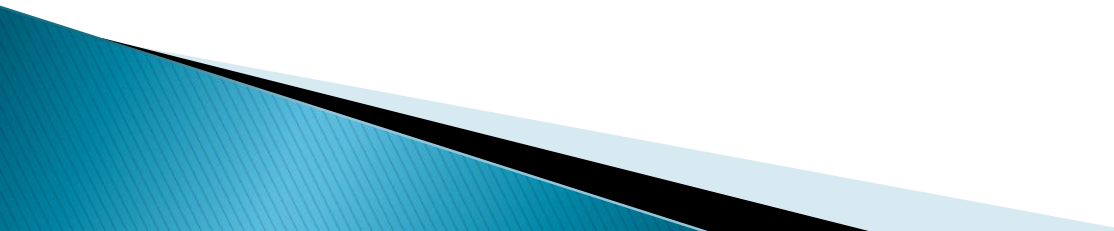
Ethan Berkove  
Lafayette College



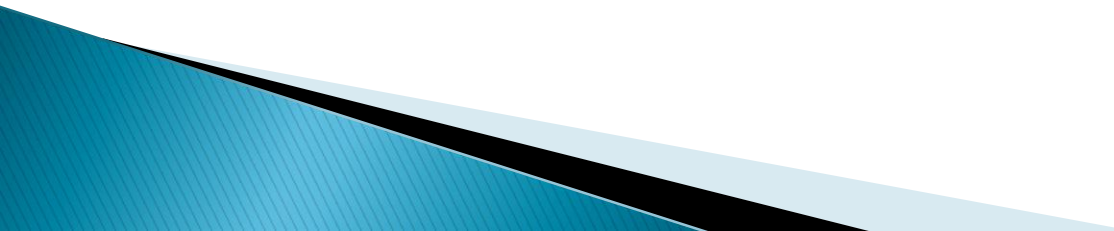
# Case Studies in Math Modeling

- ▶ Usually taken during junior or senior year
  - ▶ Capstone course for joint Mathematics / Economics major
  - ▶ Course structure
    - *Not* a techniques course
    - Students work in groups of 3 – 4
    - Writing component
    - Three one-month projects
- 

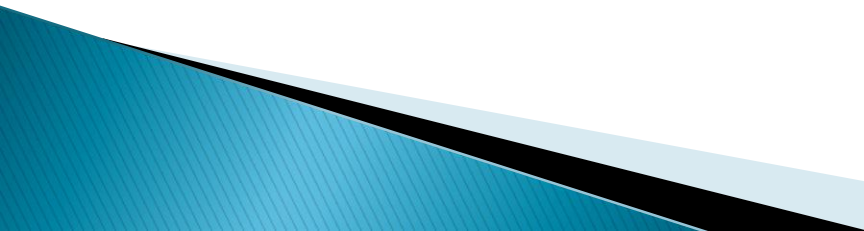
# The Partner

- ▶ Rising Tide Community Action Committee of the Lehigh Valley
  - ▶ Provides microloans (< \$35K) to community members (3–5 year duration, 8 – 10% interest)
  - ▶ Funded through federal grants and conventional bank loans
  - ▶ One full-time employee
- 

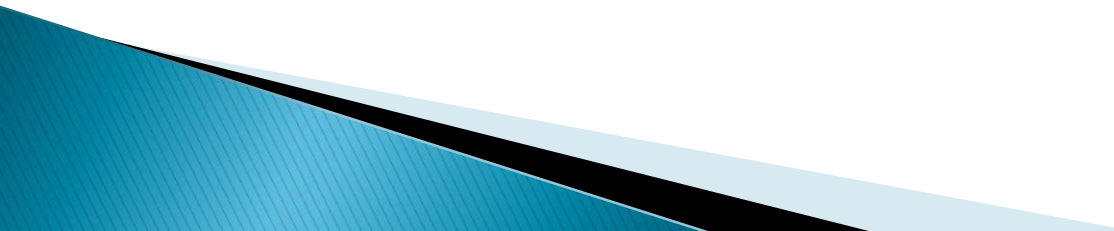
# The Project

- ▶ Determine how Rising Tide can be made more self-sufficient
  - ▶ Develop a five year business plan to realize this goal
- 

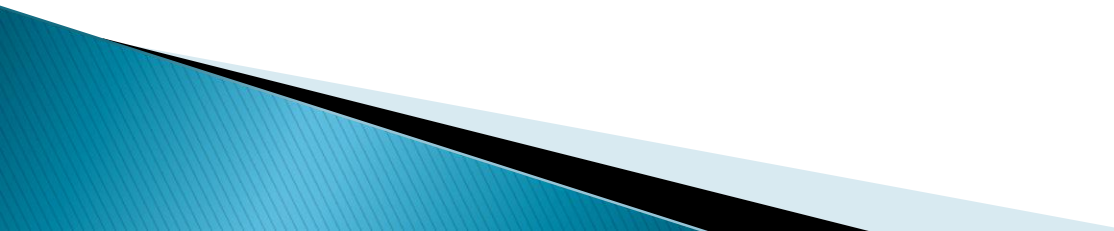
# Project Development

- ▶ Six months out: A **LOT** of leg work
  - ▶ Mid-summer: first meeting, idea development
  - ▶ September: ....
  - ▶ October: rough draft, feedback
  - ▶ November: final form, assigned to class
  - ▶ Mid-November: further information requests
  - ▶ December: final reports and oral presentations
- 

# Student Comments

- ▶ Overwhelmingly positive
  - ▶ Paid particular attention to solution
  - ▶ Extra emotional investment in their work
- 

# Lessons learned

- ▶ Final project gives course additional focus
    - Motivates need to develop skills
    - Helps students think about problems from a more realistic point of view
  - ▶ Final presentations to representatives are recommended
  - ▶ Students appreciate working on a real problem
  - ▶ The class is more enjoyable
- 

**Questions?**

