

Group Project Plan - Marya Poterek and Patricia Portmann

(a description of what your steps will be to completing the project and who is responsible for what) - due Wednesday, November 28th at 11:59 pm via email to your project TA

Part 1: Lotka-Volterra - Friday, November 30th

1. Conceptual Model: Marya
2. Write code for Lotka-Volterra in Python: Patricia and Marya
3. Run simulations with suggested parameters: Marya and Patricia
4. Run more simulations changing only one parameter and see the effect on the predator-prey relationship
5. Graphical Evidence 1: What can you say about the “role” of each parameter? : Patricia
6. Graphical Evidence 2: What can you say about the role of the predators in the simulations? : Marya
7. Graphical Evidence 3: What is the relationship between parameter values and predator-prey cycle length? : Marya and Patricia

Part 2: Rosenzweig-MacArthur - Sunday, December 2nd

1. Conceptual Model: Marya
2. Write code for Rosenzweig-MacArthur in Python: Patricia and Marya
3. Run simulations with suggested parameters: Marya and Patricia
4. Run more simulations changing only one parameter and see the effect on the predator-prey relationship: Patricia and Marya
5. Graphical Evidence 1: How do the dynamics differ from Lotka-Volterra? : Marya
6. Graphical Evidence 2: What can you say about the “role” of each parameter, especially what causes the dynamics to differ between Lotka-Volterra and Rosenzweig-MacArthur models? : Patricia
7. Graphical Evidence 3: What is the relationship between parameter values and predator abundance? : Patricia and Marya

Part 3: Paradox of Enrichment - Tuesday, December 4th

1. Run simulations on the Rosenzweig-MacArthur model with the higher carrying capacity for prey. : Marya and Patricia
2. Graphical Evidence 1: What happens as the carrying capacity increases? : Patricia
3. Explanation: Why do you think we see the Paradox of Enrichment? : Marya