**Homework Jan-17: Model Equations**

15 points total

By 9am on Wednesday, January 17, please upload a Word document with your file to the corresponding Canvas assignment. Please follow the naming convention:

**HW\_Jan17\_ModelEquations\_LastName\_FirstName.doc/docx**

Assignment details:

* Write out the system of differential equations that defines your model. *(10 points)*
* Include a legend that clearly identifies all state variables and parameters that are included in your equations. *(5 points)*

**Example:**

**Parameters**

b = birth rate

= aging rate

= transmission coefficient

= incubation rate

= recovery rate

= background mortality rate

= infection-induced mortality rate

= recovery rate

**State Variable**

Sjuv = juvenile susceptible rats

Sadult = adult susceptible rats

E = exposed rats

I = infectious rats

R = recovered (immune) rats