**Grading Directions**

**Reading Digests**

*10 points per day*

*5 points per paper*

*For each paper:*

2.5 points for summary

* 1.5 points for just doing it (allot fewer if the response is super brief or if the student clearly did not read the paper)
* 1 point for actually grasping the main point(s) of the paper. Partial credit possible

1.5 points for figures

* 1 points for actually listing all figures and writing something
* 0.5 point for accurate descriptions

*If no figures in paper, award all points*

1 point for a question

* Half credit if the question is totally inane

**Class Participation**

*7 points per day*

5 points for showing up and participating in all activities

* *Assume all students start with all 5 points – detract if someone fails to participate in some egregious way*

2 points for contributing to discussion and actively engaging

* *Any student who makes a single comment or question to the class as a whole should receive both points.*
* *Any student who does not speak to the class but is observed at least engaging in partner pairs or small groups should get one point here*

First day (Jan 8) is just 5 points for attendance

**Homework Jan-11: Disease + Question + States & Processes**

*15 points*

2 points for choosing disease

* Allot 1 if it won’t work for this assignment and will need to be changed (for example, a chronic disease)

5 points for the research question

* Allot 3 points for a serious research question (just one if the question is inane)
* Allot 2 points if the question can actually be addressed with a dynamical model (just one if it was a genuine effort but will need to be changed)

4 points for states

* Allot 2 points for a serious attempt to list all states
* Allot another 2 if all states needed are named

4 points for process

* Allot 2 points for a serious attempt to list all processes
* Allot another 2 if all processes needed are named

**Homework Jan-15: Model Diagram**

*25 points*

3 points for following directions (including research question at top of page + printing assignment and bringing to class)

10 points for correctly listing all the states

* 5 points if any kind of relevant boxes are drawn
* 5 additional points if all are correct (subtract if edits need to be made)

7 points for correctly listing all the processing

* 5 points for putting arrows in the right places and in the correct shape/direction
* 2 points if all are correct

5 points for legend

* 3 points for accurately labeling states
* 2 points for accurately labeling processes
* Subtract if parts are missing

**Homework Jan-16: Updated Model Diagram**

*7 points*

2 points for perfect model diagram (0 points if there are any mistakes remaining)

5 points for model description

* 2 points for attempt
* 3 points for perfectly accurate. Subtract 1 for each correction that needs to be made

**Homework Jan-17: Equations**

*15 points*

10 points for writing the differential equations

* 5 points for a basic attempt
* 5 additional points for errors (subtract 1-by-1 for each correction that needs to be made)

5 points for the accurate legend

**Homework Jan-19: Draft R Script**

*10 points*

5 points for turning in anything at all

5 additional points for correctly formulating the script (subtract 1-by-1 for each correction that needs to be made)

**Final Paper + Model**

*144 points*

*Paper:*

30 points for Introduction/Background

* 10 points for disease history
* 10 points for public health impact
* 10 points for describing the context of transmission modeling as applied to this disease historically.

*Automatically give 5 points for each of the above sections if touched on at all. Beyond, this add points iteratively for high quality work (gain of 2 points per section for high quality scientific writing). Subtract points if incorrect information is conveyed.*

20 points for Methods

* 5 points for including accurate model diagram
* 5 points for including accurate model equations
* 5 points for including accurate parameter legend for above diagram + equation
* 5 points for clear written explanation of methodological approach

25 points for Results

* 5 points for describing what you learned about the disease transmission process from the model
* 5 points for describing what you learned about potential disease interventions from the model
* 10 points for inclusion of a plot produced by your model (including legend)
* 5 points for accurate interpretation of plot

30 points for Discussion

* 10 points for correctly placing your results in context
* 10 points for discussion of ways modeling could be applied for more effective interventions in the future
* 10 points for discussion of limitations of study.

9 points for References

* Start with full marks, then detract if there are mistakes in citation format or errors in the attribution of each paper.

**Final Presentation**

*48 points*

10 points for Intro/Background

* 6 points (2 each) for mention of: disease history, modeling history, public health impact
* 3 points for clarity of slides on the above three topics
* 1 point for presentation style and clarity in this section

10 points for Methods

* 9 points (3 each) for presentation of: model diagram, model equations, parameters/processes involved in transmission
* 1 point for presentation style and clarity in this section

10 points for Results

* 4 points (2 each) for mention of: what you learned about transmission and what you learned about interventions related to your disease.
* 5 points for explanation of figure(s) produced from model, including the significance of the result.
* 1 point for presentation style and clarity in this section

10 points for Discussion

* 9 points (3 each) for discussion of shortcomings of your existing study, opportunities for greater impact in the future, and framing your results within the context of prior work

8 points for answers to Q&A

* We’ll aim for 4 questions, so 2 points per question.
  + 1 point for successfully understanding the question
  + 1 point for addressing the question reasonably