

**Due: Monday, May 4, 2020**

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In this project you will explore how a simple systems of differential equations can help model an epidemic. Although very simple, this model captures many of the basic elements of epidemics and form the basis for more robust models that help the medical establishment and governments plan for and deal with epidemics.

For this project you'll be working through and answering the questions a project<sup>1</sup> from Duke University, a part of their *Modules at math.duke.edu*, which in turn is part of the Connected Curriculum Project. Rather than using the web pages at Duke, you'll be using a PDF version of the project which I have adapted for us to use.

**Assignment:** I would like you to work in teams of two to solve this problem. Each team will submit a single project report containing answers to questions 1 through 35 in <http://www.math-cs.gordon.edu/courses/mat225/projects/p2/duke-sir.pdf>.

Along the way you'll be asked to download and use a spreadsheet. You're welcome to use the Excel sheet linked to in the project document or you may use the Google sheet <https://docs.google.com/spreadsheets/d/11NBa2tya6-erfxKH8a0PkJo9n8T8pLdEhXAEyv9VgEc/edit?usp=sharing>.

As in the last project, please also include a description, signed by both partners, describing the contribution each of you made to the project. This should demonstrate that you both equally (but not necessarily identically) contributed to the project.

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<sup>1</sup><https://services.math.duke.edu/education/ccp/materials/diffcalc/sir/index.html>