

# Reading materials

## What is Epidemic

1. Epidemic: [Link](#)
2. Timeline of the 2019-20 Wuhan coronavirus outbreak: [Link](#)

## R-nought ( $R_0$ )

1. Understanding R nought: [Link](#)
2. What Is  $R_0$ ?: Gauging Contagious Infections [Link](#)
3. Notes on  $R_0$  (Part 1): [Link](#)

## Case Fatality Ratio (CFR)

1. Case fatality rate | epidemiology: [Link](#)
2. A deadly disease: measuring case fatality rates: [Link](#)

## Mathematics

1. Exponential growth functions: [Link](#)
2. What is the meaning of First Order Derivative (optional): [Link](#)

## Compartmental models

### SIR model

1. Intro to SIR model: [Link](#)
2. SIR Example Part 1: [Link](#)
3. SIR Example Part 2: [Link](#)
4. Discrete SIR infectious disease model, part 1: [Link](#)
5. Discrete SIR infectious disease model, part 2: [Link](#)
6. SIR Model of an Epidemic: [Link](#)
7. Notes on  $R_0$  (Part 2): [Link](#)

### SI model (optional)

1. Model of an infectious disease without immunity: [Link](#)
2. Analysis of a model of an infectious disease without immunity: [Link](#)

### IDEA model

1. Early Transmissibility Assessment of Wuhan virus: [Link](#)
2. An IDEA for Short Term Outbreak Projection: [Link](#)