

# Modeling and Simulation, MC312

## Lab-5

Due Date: September 26, 2023

September 20, 2023

In this lab, we include some realistic effects in the SIR model and examine their role. No specific parameter value is provided. You may refer to the book or the lecture slides for representative values of the parameters.

1. **(Modeling epidemics by SIR)** To check for the correctness of your numerical code, implement the SIR model of Influenza and obtain Fig. 6.2.3 in the book.
  - (a) From the projects section, do questions 1, 2, and 3 and write a report on your understanding of the dynamics of the SIR model and the role of vaccination interventions.