New Graduate Elective Course | EPHD 318
Introduction to Mathematical Modelling of Infectious Diseases

➔ Why study mathematical modelling of infections?

To understand how an infection spreads in a population, predict the future course of an epidemic, and evaluate control strategies, all of which are needed to inform policy making, as exemplified recently during the COVID-19 pandemic

➔ Who could join?

- Graduate students who have an interest in infectious disease epidemiology
- Background in Public Health, Biology, Medicine, Biostatistics, Biomedical Sciences, Physics, Mathematics, or Statistics, or any other relevant field
- No pre-requisites required, but students should be comfortable with basic calculus

➔ What will you learn?

- Concepts of mathematical modelling of infectious diseases
- Principles of transmission dynamics
- How to design and implement simple, yet informative models to predict the course of epidemics and estimate the impact of interventions such as vaccines, social distancing restrictions, treatment, and others.

➔ How will you learn?

- Lectures
- Hands-on practical sessions: class exercises and discussion, computer applications, and article discussion
- Basic disease models will be built and run using Berkeley Madonna, a user-friendly mathematical package