Outline

Plagues to Pandemics: Our Struggle to Understand and Control Infectious Disease

**Lecture 1: Introduction**
- What is an infectious disease?
- Infectious agents
- Factors influencing the spread of infectious disease
- Early history of disease
- The plague

**Lecture 2: Acquired immunity and vaccination**
- Smallpox: its role in history
- How we develop immunity
- Discovery of vaccination
- Worldwide eradication of smallpox

**Lecture 3: Discovery of germs, cholera and epidemiology**
- Our understanding of germs and infectious agents
- Epidemiology: discovering infectious agents
- Cholera: its discovery, its impacts and transmission
- Typhoid

**Lecture 4: Polio and the role of disease specific charities**
- Polio: a disease of the rich
- Polio vaccine an American and a Canadian story
- The foundation of vaccine safety
- The role of disease specific foundations
- Re-emergence of polio

**Lecture 5: Influenza and pandemics**
- Influenza and the 1918 epidemic
- The influenza virus and how viruses make us ill
- Seasonal influenza and pandemic influenza
- Anti-viral treatment
- How vaccines are made

**Lecture 6: Emerging and re-emerging diseases**
- Neglected diseases: diseases of the developing world
- Ebola, dysentery/rotavirus, malaria, tuberculosis
- HIV and AIDS
- Potential pandemics MERS, Ebola, Zika