Topics to be covered

Week 2: Lundberg Equation, Adjustment Coefficient Associated Defective Renewal and Proper Renewal Equation, Cramer-Lundberg Inequality, Key Renewal Theorem, Asymptotic Behaviour of the Probability of Ruin
Week 3: Compound Geometric Representation, Ruin Probability Calculations (Combination of Exponentials, Mixture of Erlang, Phase-Type), Deficit and Surplus, Maximal Loss, Discounted Penalty Function.
Week 4: Associated Defective Renewal Equation for Penalty Function, Moments of Surplus Prior to Ruin and Deficit at Ruin, Compound Poisson Risk Model with Diffusion, Risk Models with Dividend.
Weeks 5-6: Student Presentations on Projects.