

• Explain how the inhomogeneous Poisson process differs from the poisson process (the homogeneous one) that we introduced in previous videos.

• Give an expression for the probability P(N(t) = 0) if N(t) is given by an inhomogeneous Poisson process with rate function  $\lambda(t)$ .

• State the fundamental theorem of calculus.

• Give an expression for the probability P(N(t) = 1) if N(t) is given by an inhomogeneous Poisson process with rate function  $\lambda(t)$ .



• Try to derive an expression for P(N(t) = 2) if N(t) is given by an inhomogeneous Poisson process with rate function  $\lambda(t)$ .