**Masters of Public Health:**

**Clinical Epidemiology Track**

MPH-512 Genetic Epidemiology

### **MPH- 512 Genetic Epidemiology.**

The course provides understanding of disease processes, when to suspect a genetic component, emphasizing genetic versus environmental theory in disease occurrence. It then addresses disease clusters, and whether clustering is due to genetic effects. It also covers main genetic concepts as segregation analysis, linkage analysis, pedigrees, designs for complex disease including concordant and discordant sib pairs, trios, and genes at the population level. It provides examples of genetic epidemiological studies, e.g. adoption studies, twin studies, migration studies, and heritability analysis as well as addressing gene-environment interactions using specific designs, e.g. case-only, counter-matching and co-twin design