

Course Code			
Course Name	Introduction to Epidemiology		
Credits	4		
Course Offered to	UG/PG		
Course Description	Investigations to monitor and thus improve the health of individuals are firmly based on a sound understanding of modern quantitative methods. This involves the ability to discover patterns and extract knowledge from health data on a sample of individuals and then to infer, with measured uncertainty, the unobserved population characteristics. This course will address this need by covering the principles of epidemiology used for public health and clinical research.		
Pre-requisites			
Pre-requisite (Mandatory)	Pre-requisite (Desirable)	Pre-requisite(other)	
Probability and Statistics	Sound grasp of algebra	Working knowledge of MS Excel	
Post Conditions			
CO1	CO2	CO3	CO4
Demonstrate the epidemiological approach in a public health context	Identify the main epidemiological studies	Describe and interpret data derived from research or other analysis	Find and appraise research evidence efficiently.
Weekly Lecture Plan			
Week Number	Lecture Topic	COs Met	Assignment/Labs/Tutorial
1	Epidemiology- Foundation of Public Health	CO1	Discussion
2	Measuring Health and Disease + Measuring Effect	CO1	Practical Exercise
3	Research question formulation and hypothesis testing	CO1, CO2, CO3	Practical Exercise
4	Ecological Studies	CO2, CO3	Review of a scientific article
5	Cross-Sectional Studies	CO2, CO3	Review of a scientific article
6	Identify cause of disease: Cohort Studies	CO2, CO3	Review of a scientific article
7	Identify cause of disease: Case-Control Studies	CO2, CO3	Review of a scientific article
8	Assessing the efficacy of preventive and therapeutic measures: Intervention studies in individuals	CO2, CO3	Review of a scientific article
9	Assessing the efficacy of preventive and therapeutic measures: Intervention studies in communities	CO2, CO3	Review of a scientific article
10	Systematic Review and Meta-analysis	CO3, CO4	Review of a scientific article
11	Validity and bias	CO3	Practical Exercise
12	Causation and Causal Inference	CO3	Practical Exercise
13	Statistical methods	CO3	Practical Exercise
Assessment Plan			
Type of Evaluation	% Contribution in Grade		
Assignment	50		
Quiz	10		
Mid-sem	20		
End-sem	20		
Resource Material			
Type	Title		
Textbook	Epidemiology, Leon Gordis, Fifth Edition		
Reference	Principles of Biostats, Marcello Pagano & Kimberlee Gauvreau		
Reference	Oxford Textbook of Global Public Health		