Course Specifications

General Information

Course name	Epidemiology
Course number	BIOL4207
Faculty	
Department	
Course type	Major Needs
Course level	4
Credit hours (theoretical)	2
Credit hours (practical)	0
Course Prerequisites	

Course Objectives

1 - Knowledge of basic concepts and definitions related to epidemiology
2 - Study of factors of epidemiologic triangle that cause disease
3 - Study of the methods of disease transmission (direct and indirect)
4 - Identification of levels of disease prevention
5 - Knowledge the basic measures of morbidity and mortality used in epidemiology
6 - Study of epidemiological studies: observational and experimental

Intended Learning Outcomes

Knowledge and Understanding	* Knowledge of the aims of epidemiology, and the concepts and definitions related to epidemiology. * Knowledge of the role of agent, host, and environment in causing disease. * Understanding the differences between epidemiological studies: observational and experimental * Knowledge of some important indices of health and disease such as crude birth rate, fertility rate, infant mortality rate, and case fatality rate. * Understanding the differences between the levels of prevention * Understanding the differences between direct and indirect transmission of disease. * Understanding the concept of cause, the factors play a role in causation of disease, and establishing the cause of a disease * Understanding the differences between attributable and relative risk
Intellectual Skills	* The ability to explain the basic principles underlying different study designs, including descriptive, ecological, cross-sectional, cohort, case-control and intervention studies * The ability to be aware of criteria that should be met before a screening program is instituted
Professional Skills	* The ability to apply observational and interventional epidemiological study designs to a range of health-related issues * The ability to describe and apply measures of disease incidence and prevalence * The ability to measure the strength of an association between exposure and outcome e.g. relative and attributable risk * The ability to calculate and interpret sensitivity, specificity and predictive values * The ability to formulate researchable problems * The ability to describe and apply some indices of health and disease * The ability to assess the relationship between a possible cause and an outcome
General Skill	* The ability to make a small report or research on a point in the course * The ability to communicate and use internet

Course Contents

1 - The historical context of epidemiology and its aims and epidemiology of infectious diseases
2 - Direct and indirect transmission of disease
3 - Control of infectious diseases and prevention
4 - Some important indices of health and disease
5 - Screening and measurement of risk
6 - Epidemiological studies: observational and experimental studies
7 - Causation in epidemiology

Teaching and Learning Methods

1 - Lectures
2 - Reports
3 - Discussion

Teaching and Learning Methods for the Disabled Students

1 - Not applicable

Students Assessment

Assessment Method	TIME	MARKS
Quiz 1	the third week	10
Quiz 2	the sixth week	10
Midterm exam	the eighth week	30
Quiz 3	the eleventh week	10
Final exam	the thirteenth week	40

Books and References

Essential books	Beaglehole, R. Bonita, R. and Kjellstrom, T. 1993. Basic epidemiology
Recommended books	Robert, F.H. and Thomas, S.A. 1999. Epidemiology for Public Health Practice
	Gary, F. D. 1994. Primer of Epidemiology
	Sathe, P.V. 2005. Epidemiology and Management for Health Care for All

Knowledge and Skills Matrix

Main Course Contents	Study Week	Knowledge and Understanding	Intellectual Skills	Professional Skills	General Skill
The historical context of epidemiology and its aims and epidemiology of infectious diseases	First week	Knowledge of the aims of epidemiology, and the concepts and definitions related to epidemiology Knowledge of the role of agent, host, and environment in causing disease			
Direct and indirect transmission of disease	the second and third weeks	Understanding the differences between direct and indirect transmission of disease			
Control of infectious diseases and prevention	Fifth and sixth weeks				
Some important indices of health and disease	seventh and eighth weeks	.Understanding the differences between prevalence and incidence rate . Knowledge of some important indices of health and disease such as crude birth rate	.	he ability to describe and apply measures of disease incidence and prevalence The ability to describe and apply indices of health and disease	.