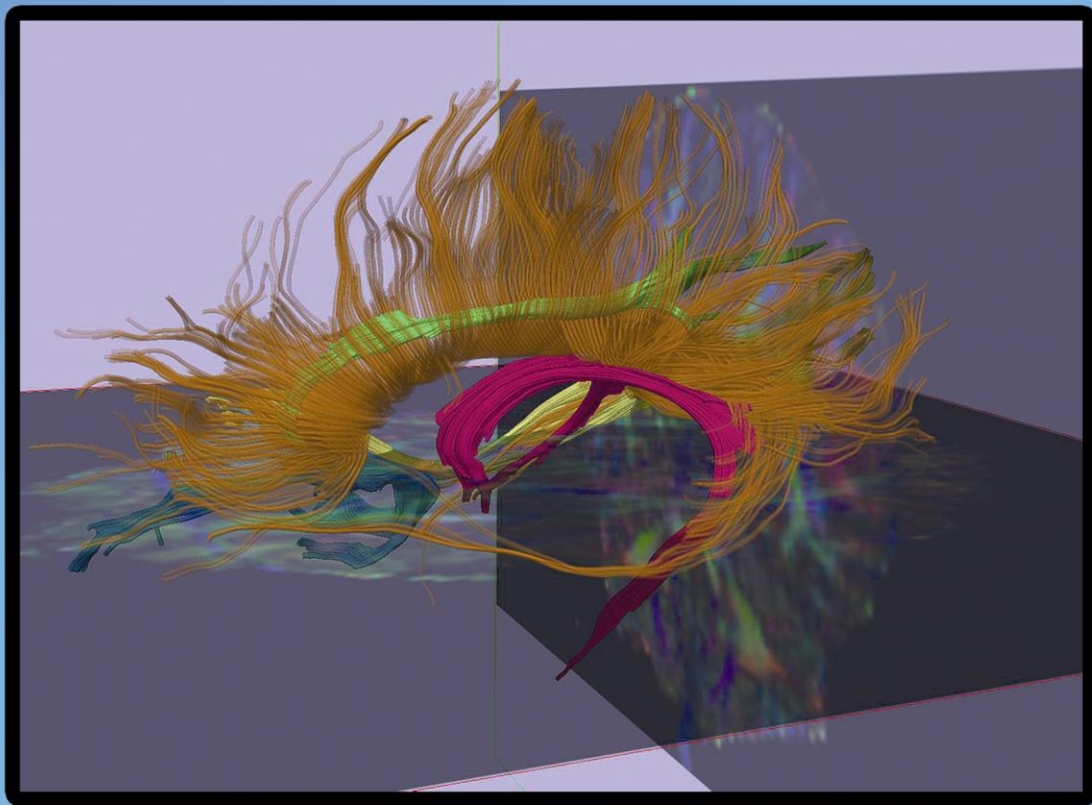


# Community Health Stream PHASE II



**FACULTY OF MEDICAL SCIENCES  
UNIVERSITY OF SRI JAYAWARDENEPURA**



# Members of the module committee

## Development stage

Prof. K. Wijewardene

Prof. N. Warnasuriya

Prof. S. Sivayogan

Prof. P. Fonseka

Dr. A.L.P. de S. Senevirathne

Dr. Shyamali Thilakaratne

Dr. A. Fernando

Dr. W.A.A.Wijayasiri

Dr. C.S.E. Goonawardene

Dr. V. Jayasuriya

Dr. B.C.V. Senaratna

Dr. S. Prathapan

## Implementation stage

Prof. K. Wijewardene

Prof. S. Sivayogan

Prof. P. Fonseka

Dr. A.L.P. de S. Senevirathne

Dr. Shyamali Thilakaratne

Dr. A. Fernando

Dr. W.A.A. Wijayasiri

Dr. C.S.E. Goonawardene

Dr. V. Jayasuriya

Dr. B.C.V. Senaratna

Dr. S. Prathapan

# **Mission**

The graduates will have the necessary knowledge, skills and attitudes to promote health and well-being with other health care professionals and community agencies to the benefit of the individual, the family and the community as a whole. Their practice will be community health oriented and evidence-based. They will have the skills to use the factors and resources available to integrate this knowledge effectively in providing health care in any part of Sri Lanka.

# General Objectives

At the end of the course

1. the graduate should be able to demonstrate an understanding of ;
  - demography and vital statistics
  - basic and applied epidemiology
  - basic statistics as applied to medicine/research
  - health promotion and prevention of disease
  - the organization of curative and preventive health services in the country
  - needs assessment and health care planning
  - health care management and health economics
  - the quality of health care provided
  - the impact of environment on health
  - the concept of quality of life
  - health care provision in disaster situations
  - concepts and trends of international health
  - care of the marginalized and the differently-abled
  
2. the graduate should be able to possess the knowledge, attitude and skills necessary to (Research Methodology Handbook)\*;
  - formulate relevant research questions and/or hypotheses
  - use appropriate methods in collecting, analyzing and interpreting data
  - read critically medical literature and determine its relevance to practice within one's own working environment
  
3. the graduate should have knowledge on (Community Medicine Clerkship Guidelines)\*
  - health care services available to pregnant women, infants, pre-school children, school children, adolescents and elders in a health unit area and the personnel involved in delivery of these services
  - the activities carried out in a health unit area to ensure proper environment and occupational health and to prevent communicable and non-communicable diseases towards promotion of health in a health unit area
  - basic health care facilities available for the estate community and their needs
  - services and facilities available for differently-abled persons in the society

\* - Available in the Department

## **Method of Introduction of content areas**

- 10 study units in Phase II
- Clerkship programme
- Research project

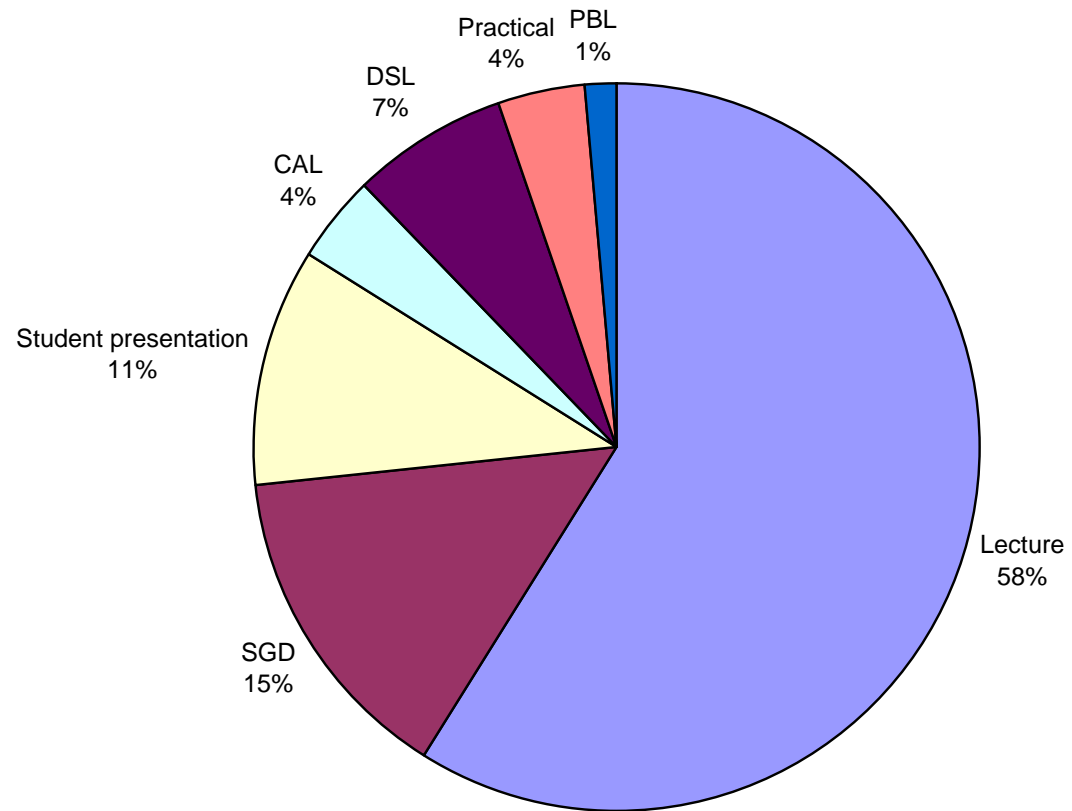
## **Main Content Areas**

- Introduction to Health care system
- Epidemiology
- Statistics
- Demography
- Planning and Management of Health Care System
- Health Information System
- Occupational Health
- Environmental Health
- Research Methodology
- Health Education

## Time required for the Study units

Study unit	Duration in Phase II (No. of slots)
1. Introduction to Community Stream	8
2. Epidemiology	12
3. Statistics	8
4. Demography	8
5. Health Care System Planning and Management	17
6. Health Information System	6
7. Occupational Health	8
8. Environmental Health	8
9. Research Methodology	25
10. Health Education	5
<b>Total</b>	<b>105</b>

## Methods adopted for teaching



## Introduction to Community Stream

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe the concepts of health	Define health - A Describe, Concepts of health and disease - A Strengths and weaknesses of the definition - B	Lecture	1 slot
To describe the concept of quality of life and well-being and factors affecting quality of life and well-being	Define well-being - A Define quality of life - A Describe, Methods of measurement of quality of life and well-being - A Factors influencing well-being - A Factors associated with quality of life - A	Lecture	1 slot
To describe the structure of health care systems in Sri Lanka	Describe, Concept of health care and levels of health care provision- A The organizations through which health care is provided to the people of Sri Lanka - B	Lecture	1 slot
To describe the structure of health services and the human resources for health	Describe, The organizational structure of health care provision at the - central level - A - provincial level - A Strengths and weakness of health care provision institutions - A Type of available human resources - A Type of training and resources available for health care workers - A	SGD	1 slot



## Introduction to Community Stream (Contd.)

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe the alternate health care systems	Describe the Importance in provision of health care by, alternate systems - Ayurvedha, Homeopathy, Acupuncture, Traditional system, Siddha, Unani, Acupressure, Reflexology, Yoga, Aroma therapy, Magnetic therapy - B	Lecture	1 slot
To describe the health policies in Sri Lanka and identify the contribution of the other sectors in health policy	Describe Health policies in Sri Lanka - A The sectors associated with health care provision - B	Lecture	1 slot
To describe the role of the state/ national NGOs/ international partners in health care provision	Describe, The functions of governmental, national and international health care providers - B The functions of non governmental and governmental organizations - B	Student presentation	1 slot
To describe Global Health trends and millennium goals	Describe, Global trends in health and mortality and morbidity – A the Millennium goals - A	Student presentation / formative assessment	1 slot
<b>Total</b>			<b>8 slots</b>

# Epidemiology

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe what is epidemiology and its uses and the meaning of epidemic, endemic and pandemic	Define the terms, Epidemiology, epidemic, endemic and pandemic - A Describe, Types of epidemics - A Incubation and communicable periods - A Epidemiological transition - A Emerging diseases and patterns - A	Lecture	1 slot
To measure the of burden of disease in a community To define, calculate and interpret measures of morbidity To define, calculate and interpret measures of mortality	Describe, Measures of morbidity - A Measures of mortality - A Prevalence – period and point - A	Lecture	2 slots
To describe different epidemiological study designs and their uses and limitations	Classification of study designs – A 1. Observational studies - A Descriptive studies – Case series Case report Cross sectional studies Analytical studies – Case control studies Cohort studies 2. Experimental studies – Randomized clinical trials - A Community trials - A 3. Qualitative studies – A 4. Meta analysis - B	Lecture & CAL	2 slots
To describe, calculate and interpret measures of effect and association	Describe Odds ratio, Relative risk and Attributable risk - A	Lecture	1 slot
To describe factors considered to determine causation	Understand causality and associations - A	Directed self-learning	2 slots

## Epidemiology (Contd.)

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe the difference between survey and surveillance	Understand survey and surveillance principles - A	Lecture	1 slot
To describe concepts of screening and evaluation of a screening test	Describe, Screening principles - A Validity – sensitivity, specificity and predictive values – and reliability – A	Lecture	1 slot
To describe the application of epidemiology in clinical setting	Describe, Risk assessment and prognosis - A Prevention - A Clinical decision analysis - A	SGD	2 slots
<b>Total</b>			<b>12 slots</b>

<b>Statistics</b>			
<b>Intermediate Objectives</b>	<b>Broad Content Areas</b>	<b>Activity</b>	<b>Time</b>
To describe and summarize a set of data using appropriate summary statistics and graphical methods	Describe, <ul style="list-style-type: none"> <li>• Data types – A</li> <li>• Scales of measurement – A</li> <li>• Tables and Graphs : Histograms, Stem &amp; Leaf plots, Box plots, Bar charts (simple, compound and component), Pie charts, Pictograms, Scatter diagrams, Line graphs - A</li> <li>• Measures of central tendency Average – mean, median, mode – A</li> <li>• Measure of dispersion: Range, Quartiles, Standard deviation – A</li> <li>• Normal distribution: properties and uses, probability limits, 95% reference levels - A</li> </ul>	CAL Lectures Class Room -Practical	2 slots
To explain confidence intervals and perform statistical (significance) tests	Describe, <ul style="list-style-type: none"> <li>Standard error of mean - A</li> <li>Standard error of percentage/proportion - A</li> <li>SE of difference between two means - A</li> <li>SE of difference between two proportions - A</li> <li>Null hypotheses and alternate hypotheses - A</li> <li>Normal test / Z test, t test, Chi square test - A</li> <li>Type I error and type II error - A</li> </ul>	Lecture, Practical / formative assessment	2 slots

## Statistics (Contd.)

Intermediate Objectives	Broad Content Areas	Activity	Time
To be able to interpret correlation coefficient and linear regression	Understand and describe, Correlation coefficient, linear regression, regression coefficient - A	Lecture CAL	1 slot
To have an understanding of meta analysis and its interpretation	Understand, Principles of Meta analysis and systematic reviews - A Strengths and weaknesses of meta analysis - A	Lecture	1 slot
To be able to select the statistical test to a given set of data	Able to select appropriate statistical tests for given situations - A	SGD	2 slots
<b>Total</b>			<b>8 slots</b>

## Demography

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe the factors that influence the size and composition of the population and demographic transition	Define and describe, 1. Demography - A 2. Demographic variables - A 3. Fertility, Mortality & Migration - A 4. Population growth rate - A 5. Natural increase - A 6. Population projections - A 7. Demographic transition - A 8. Dependency ratio - A	Lecture	2 slot
To describe the population size of Sri Lanka and the implications of population growth  To describe principles of population estimation and projection	Describe, 1. Population Census - A 2. Demographic and Health Surveys - A 3. Registration systems (Births & Deaths) and their limitations. - A 4. Vital statistics - A 5. Age sex composition ( Population Pyramid) - A 6. Needs for estimation, common methods used in Demography - A	Student presentation Field Visit (Clerkship)	2 slots
To describe the concepts of expectation of life	Understand the principle of life tables and its uses - B	Lecture	2 slots
To describe the Principles of comparison of mortality	Describe Standardized Mortality Rates(Direct/Indirect) - A	Lecture	2 slots
<b>Total</b>			<b>5 slots</b>

## Health Care System Planning and Management

Intermediate Objectives	Broad Content Areas	Activity	Time
<p>To describe the health policy of Sri Lanka and the standards for health care</p>	<p>Understand,            National policy statement - A            Regional policy statement - A            Health related legislations - A            Strengths and weakness - A</p>	<p>Handout and directed self-learning</p>	<p>2 slots</p>
<p>To describe the health planning for            1.1 Community            1.2 Emergency needs</p>	<p>Describe,            What is Health Care planning – B            Rationale for health planning - B                -activity planning                -allocation            State's responsibility in health sector – B            Planning models – B            Private and public sector planning – B            Financing health Care - B                - state funding                - insurance scheme – compulsory              - voluntary                - user fees                - aid funds(NGOO and INGOO contribution)            Information for planning - B                - mortality and morbidity                - disability ( DALY)                - sources of information            Situation analyses - B                - health needs assessment                - community appraisal                - emergency needs assessment                - health and demographic situation                - services and resources                - policy and political environment                - methods of analysis</p>	<p>Lecture            &amp;            Handout</p>	<p>2 slots</p>

## Health Care System Planning and Management (*contd.*)

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe briefly the public health interventions	List of interventions - A Target groups - A Types of interventions - A	Student presentation	2 slot
To describe monitoring and evaluation of interventions	Describe, Indication for monitoring - B Methods of evaluation- B	Lecture	1 slot
To describe the essentials of health economics	Describe, Introduction to health economics - A Indicators relevant to health economy - A Cost benefits - A Cost effectiveness - A	Lecture	1 slot
To describe the issues in global public health	Describe Global burden of diseases - B Agenda for action - B - Prevention in rise of smoking - Safer road travel, - Hepatitis B - Safe motherhood - Improved case management of TB - Screening of cervical cancer - Relieving cancer pain - Managing diabetes	Self Directed learning	
To assess quality of health care	Describe, Dimensions of quality - A Equity, efficiency, effectiveness - A 5 S concept- clearing, organizing, cleaning, standardizing      Training and self discipline – A	Lecture	2 slot



## Health Care System Planning and Management (*contd.*)

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe the methods of medical audit	Describe, Setting standards - A Methods - A Analysis - A Use of a measurement tool - A	Lecture	1 slot
To be aware of the extent and distribution of differently-abled persons and other marginalized sub groups in Sri Lanka and the services available	Describe, Types of differently-abled persons, marginalized sub groups - A Health care needs - A	Lecture	1 slot
To describe the human rights issues in relation to health	Describe, Issues of human rights and health - B Gender equity - B Children's rights- B Patients' rights - B	SGD	1 slot
To describe Health promotions and the role of counseling in Community health	Describe the Healthy life styles and the need of counseling - B	SGD	1 slot
To describe the welfare measures available for care of the elderly	Describe the welfare measures available for the care of the elderly in state, NGO's and paid day care and residential institutions - A	Student presentation	2 slots
To be aware of the health and social care systems in Sri Lanka and be able to liaise with different organizations to provide health care	Be aware of, Health and social care organizations - B Mandate of the organizations and services provided - B Methods of accessing- B Forming partnerships - B	Lecture	1 slot
<b>Total</b>			<b>17 slots</b>

## Health Information System

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe the information in the existing health care systems and its limitation	Describe, What is information - A Uses for health information - Planning, monitoring, evaluation, policy decision, resource allocation, education, research - A Sources of health information - Vital event registration, census, Routine information system, Epidemiological surveillance data, special surveillance, special survey campaigns, notifications - A Reliability and validity of data - A Annual Health Bulletin - A Weekly Epidemiological Report and quarterly epidemiological report - A	Lecture Tutorial Self Directed learning	2 slots
To describe the existing hospital information system and flow of information and its limitations	Describe the Registration of vital events - A	SGD	2 slots
To describe Certifications of cause of death and Classification of diseases	Describe, International classification of deaths - Certification of cause of death and - A Classification of diseases and cause of death - A	Lecture PBL	2 slots
<b>Total</b>			<b>6 slots</b>

## Occupational Health

Intermediate Objectives	Broad Content Areas	Activity	Time
To understand the concept of occupational health and health hazards	Describe, Relationship between health and work - A Importance of taking an occupational history in clinical setting - cancers, lung & skin disorders, visual and hearing problems, musculoskeletal problems, psycho-social problems - A Aims of occupational health - A	Lecture	1 slot
To understand the principles of occupational health services To be aware of the screening procedure for applicants/workers for occupational/work related health problems and risk factors To be able to describe prevention and management of occupational and work related health problems	Describe, Pre-employment screening, pre-placement screening, periodic screening, executive health screening, post illness employment screening, pre-retirement health screening - A  Understand, Health and Engineering measures of prevention - A Legislation - Factories ordinance - A Workmen's compensation Act - A Notification of occupational diseases and occupational accidents- A Role of occupational health service - A Common occupational health problems	Lecture	5 slots
To be able to describe health hazards in common occupations in Sri Lanka	Describe Occupational hazards - B Major occupational groups and related problems- B Walk through survey (Inventorising health hazards) - B	Lecture Clerkship - Visit to an occupational setting (factory)	2 slots
<b>Total</b>			<b>8 slots</b>

## Environmental Health

Intermediate objectives	Broad content areas	Activity	Time
To describe the impact of environment on health and the strategies adopted to improve the health	Describe provision of measures adopted for, Water, air [including Green House effect], refuse disposal and waste management in Sri Lanka - A Housing Housing and town improvement - A Ordinance -features of a habitable house - A Health effects related to poor housing - A  Food safety and hygiene Food act - A Consumer protection act - A GM foods - A Food labeling regulations - A Prevention of chemical pollution - A Prevention of Radiation - A	Lecture Clerkship	5 slots
To describe the International health regulations	Describe International health regulations - A Port health - A Quarantine - A Vaccines - A Deratting - A	Clerkship / Lecture	1 slot
To describe and assess the provision of healthcare needs in disaster situations	Health care provision Water, sanitation - A Temporary placement - A Nutrition - A Basic Health care - A	Lecture	2 slots
<b>Total</b>			<b>8 slots</b>

## Research Methodology

Intermediate Objectives	Broad Content Areas	Activity	Time
To define research and describe types of research	Definition of research - A Types of research Basic research - A Applied research - A Health system research - A	Handout / Directed self-learning	
To identify researchable problems and carry out a problem analysis	Identification of researchable problems - A Problem analysis - A Formulate Conceptual framework - A Problem statement - A	Lecture  SGD	2 slots
To identify sources of literature, access literature and review	Describe, Types and sources of literature - A Accessing literature – library, internet - A Reviewing literature - A	Lecture/ practice session	1+4 slots
To formulate hypothesis/objectives	Able to formulate Hypotheses - A General objective/s - A Specific objectives - A	SGD	1 slot
To describe the research method	Describe, Identification of variables and operationalisation - A Study setting - A Study instruments - A	Student presentation	2 slots
To describe the concept of a population and the different sampling procedures.	Describe, Sampling methods 1.Probability Sampling methods - A Simple Random Sampling Systematic Sampling Stratified Random Sampling Multistage Sampling Cluster sampling 2.Non Probability Sampling methods - A Snowball sampling Quota sampling Purposive sampling Sample size calculation - A	Lecture Class room -practical	2 slots

## Research Methodology (Contd.)

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe and design a suitable study instrument and its application	Describe, Data collection tools – questionnaires, qualitative data collection methods such as interviews, observations - A Pre-testing and pilot study - A	SGD	1 slot
To describe and plan Project management	Describe, Data collection plan – field work - A Budgeting - A Time frame - A	Lecture	1 slot
To identify ethical issues involved in a study and process of obtaining ethical clearance	Understand concepts related to , Voluntary participation - A Informed consent - A Subjects incapable of giving consent - A Investigations (invasive) - A Drug trials - A Ethical review committee - A Method of obtaining clearance - A	Lecture	1 slot
To draw up a project proposal	Have the ability to write, Introduction - A Literature review - A Methodology - A Sampling and sample size calculation - A Organization of field work – training data collectors - A Data management and quality control - A Budget - A Time frame - A	SGD / student presentation	2 slots
To describe and perform data analysis	Have the skills to do, Data entry – computer software – EXCEL, Epi data - A Data cleaning and storage - A Data analysis - A Manual - dummy tables Computer programmes – Epi info, SPSS Cross tabulation - A Selection of a suitable statistical test - A Arriving at inferences - A	Lecture/ Practical	4 slots

## Research Methodology (Contd.)

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe qualitative data analysis and its uses	Describe qualitative data analysis methods - B	Lecture	1 slot
To report research outcome	Have the skills to, Arrive at conclusions - A Making recommendations - A Writing a paper/Report - A Writing Dissertations, thesis, Publishing - A	Lecture	1 slot
To write the references scientifically	Describe, Vancouver system - A Harvard system - A	Directed self learning	
To critically discuss the findings and conclusions of scientific study	Critically discuss - a scientific paper - A limitations of a study and suggest improvements - A	Formative assessment	2 slots
To carry out a research project under supervision	Have the skills to, Write an Introduction, literature review and methodology - A Have skills on collecting data - A Analyse the data and present the results - A Critically discuss the results - A		
<b>Total</b>			<b>23 slots</b>

## Health education

Intermediate Objectives	Broad Content Areas	Activity	Time
To describe the relevance of health education in health care provision and principals of health education	Describe, Definition of health education - A Principles of health education - A Definition of 'knowledge', 'beliefs', 'attitudes', and 'values' and their relationship to health - A	Lecture	1 slot
To describe the factors affecting behaviour and ways of influence behaviour change	Describe, Pre-disposing factors - A Enabling factors - A Re-enforcing factors - A	Lecture	1 slot
To describe methods of health education, identification of behaviour related health problems, identification of appropriate health messages, steps in planning and evaluation of a health education programme	Describe, Currently available methods of health education - A Identification of health problems for intervention - A Identification of appropriate messages/tools - A Steps involved in planning a health education program - A Evaluation of a health education program - A	Lecture SGD clerkship	1 slot 2 slots
To describe the planning of IEC / BCC programme for Health Promotion and prevention of diseases in community setting ( IEC – Information, Education and Communication) ( BCC – Behavioural Change and Communication)	Describe, Identification of behaviour related health problems - A Identify appropriate messages - A Teaching learning techniques - A Teaching aid - A Implementation of IEC / BCC programme - A Evaluating IEC / BCC programme - A	Lecture	1 slot
<b>Total</b>			<b>5 slots</b>

A - Must Know  
B - Good to Know



## Assessment Methods

The structure of Community Health Stream assessments will be as follows

	Component	% marks allocation
1	Research project	20
2	Community Health Clerkship SEQ paper and Objective Structured Practical Examination (OSPE)	20
3	MCQ paper at the end of 4 <sup>th</sup> year (60 questions)	30
	SEQ paper at the end of 4 <sup>th</sup> year (5 questions)	30
	Total	100

\* Formative assessments at the end of each term in Phase II

## Recommended Reading Material

- Park's Text book of Preventive and Social Medicine 18<sup>th</sup> Edition
- Text book of Community Medicine – Sunder Lal, Adarsh, Pankaj
- Basic Epidemiology – R Bonita, R Beaglehole, T Kjellstrom (2<sup>nd</sup> Edition) WHO publication
- Statistics at Square One (9<sup>th</sup> Edition) - T D V Swinscow
- Oxford Textbook of Community Medicine
- Annual Health Bulletin of Sri Lanka Available in - <http://www.health.gov.lk> (Ministry of Health Sri Lanka)
- Weekly Epidemiological Report Available in - <http://www.epid.gov.lk> (Epidemiology Unit, Sri Lanka)
- Pre-reading material prepared for medical undergraduates – Available in the medical library