POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA

Prospectus
MASTER OF SCIENCE IN COMMUNITY DENTISTRY

(To be effective from the year 2017)

BOARD OF STUDY IN COMMUNITY MEDICINE

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Contents

This prospectus is made under the provisions of the Universities Act, the Postgraduate Institute of Medicine Ordinance, and the General By-Laws No. 1 of 2016 and By-Laws No. 3 of 2016 for Master's Degree Programmes.

1. Background

The Board of Study in Community Medicine (hereinafter referred to as BoS) of the Postgraduate Institute of Medicine (PGIM) is responsible for conducting the course leading to the degree in MSc Community Dentistry.

This course has been conducted since 1991 by the Board of Study in Community Medicine which was one of the founder Boards of Study of the Postgraduate Institute of Medicine (PGIM) when it was established in1980. This is a one year course which covers areas relevant to the practice of Community Dentistry.

Community Dentistry is a discipline which has special interests in promoting oral health in the population and is firmly rooted in the parent discipline of Public Health. It is a broad subject which seeks to increase the focus and understanding on factors that influence oral health in the population.

As the only population based dental specialty, dental public health practice requires different skills to those of clinical dental practice. The course is designed to produce dental public health practitioners with knowledge and skills required to carry out various public health activities associated with oral health.

Moreover this course is closely integrated with the course in Community Medicine which is based on the application of principles of “Primary Health Care”. Accordingly it deals health promotion, prevention, treatment and rehabilitation, thus addressing the needs of both ill and well populations. Hence, these practitioners will be able to effectively function as members of a multidisciplinary team of public health professionals, whose responsibility will be to prevent disease, protect, promote and improve the health of the community.

This “Prospectus” will come into effect from 2017 for trainees who will qualify the Selection Examination in 2017 and replace the previous prospectus**.**

2. Course Outcomes

The MSc course in Community Dentistry offers training in the principles and practice of public health including dental public health to equip trainees with knowledge, attitudes and skills that enable them to function as an efficient and effective dental public health practitioner within the framework of the community dental services in Sri Lanka.

On completion of the MSc in Community Dentistry, trainees should be able to:

A. Apply principles of public health including dental public health in the day-to-day practice
B. Promote community participation and inter-sectoral coordination to ensure effective implementation of oral health programmes.
C. Plan, implement, monitor and evaluate public health programmes for prevention and control of oral diseases and promotion of oral health,
D. Monitor and evaluate oral health care delivery systems in Sri Lanka
E. Collaborate with and lend support to Community Medicine counterparts as required in all areas of health promotion
F. Successfully carry-out research to define and describe oral health problems
G. Critically evaluate research communications
H. Communicate effectively at individual and community level
I. Enhance personal and professional development of highest ethical standards

3. Eligibility criteria

A. A dental degree registered with the Sri Lanka Medical Council.
B. Satisfactory completion of one year of dental practice or teaching in a university/public/private sector institution in Sri Lanka acceptable to the PGIM.
C. The applicant should comply with all other PGIM regulations.

4. Selection Examination

The format of the Selection Examination is described below. The subject areas covered will be based on the undergraduate Community Dentistry syllabus and include Basic Epidemiology, Statistics, Demography, Oral Disease Prevention, Oral Health Care Delivery, Health Promotion and Health Education.

4.1. Format of the Examination

The examination shall consist of one (1) written paper with five (5) structured essay type questions of three (3) hours duration.

Each answer will be independently marked out of 100 by two examiners. The mark for each answer will be the average of the marks given by the two examiners based on a predetermined marking scheme, provided the difference in the marks assigned by the two examiners do not exceed 15%. If the difference between the marks assigned is more than 15% for any answer, the two examiners will re-correct such answers and arrive at an agreed mark a difference of 15% or less.

4.2. Requirement to Qualify the Examination

Candidates who obtain an overall mark of 50% or more in the above examination will be eligible for selection to follow the MSc. course

4.3. Number to be selected for the MSc. course

The number to be admitted from among the candidates who shall qualify the "Selection Examination" will depend on the requirements of the Ministry of Health and the training facilities available, as determined by the BoS/Board of Management. The number to be admitted each year from different sectors shall be indicated in the circular/newspaper advertisement calling for applications. The number may vary from year to year. The predetermined number will be selected based on merit and other relevant regulations.

4.4. Validity of Results of the Selection Examination

The results of a given "Selection Examination" will be valid only to follow the MSc. Course that immediately proceeds it.

5. Duration of training

The duration of training shall be one year (twelve calendar months) on full time basis and the course content is equivalent to 65 credits points.

6. Format of the MSc. Course

The MSc Community Dentistry course shall consist of:

- Lectures
- Clinical training
- Practical sessions
- A research project leading to a dissertation

Clinical training shall be hospital based and practical training shall be field and laboratory based. The teaching learning settings shall include hospitals, class room, Information Technology laboratory and community and occupational health settings.

The teaching learning methods shall include didactic lectures, small group discussions, practical sessions, computer based learning, clinical skills for community oriented patient care and performance of selected clinical procedures, and field based learning.

The course will be conducted over three terms and an in-course assessment will be held at the end of the first and second terms based on the modules covered during that term.

It is mandatory for all trainees to have 80% attendance for each module to be eligible to sit the relevant in-course assessments. Failing to do so he/she should repeat the relevant module/s with the next batch and fulfill the 80% requirement to be eligible to sit for the relevant in-course assessment/s and the MSc Examination.

7. Curriculum and Credit Calculation

The MSc in Community Dentistry is SLQF level 9 qualification. The curriculum consists of 20 modules**.** The detailed curriculum is described in ***Annex I.*** A summary of the credit points assigned to each module and the total credit points for the full MSc course is shown in Table 1. The credit points are computed according to the type of teaching learning method and the time spent on each type of teaching learning method (Table 2).

Table 1: Individual modules and the credit points

Serial No.	Module	Slots #	Mode of Delivery## (hours)			Credit Points ###
			L	SP+P	C&F	
MSc/CD 01	Statistics	28	36.0	06.0	-	03.0
MSc/CD 02	Basic. Epidemiology	31	31.5	15.0	-	03.0
MSc/CD 03	Demography & Health Implications of Ageing	18	25.5	01.5	-	02.0
MSc/CD 04	Applied Epidemiology	57	67.5	09.0	09.0	05.0
MSc/CD 05	Environmental Health & Disaster Management	29	31.5	-	12.0	03.0
MSc/CD 06	Occupational Health	36	46.5	07.5	-	03.0
MSc/CD 07	Maternal & Child Health	70	93.0	12.0	-	07.0
MSc/CD 08	Nutrition	21	25.5	06.0	-	02.0
MSc/CD 09	Non Communicable Diseases	20	27.0	03.0	-	02.0
MSc/CD 10	General Administration & Public Health Management	85	79.5	48.0	-	07.0
MSc/CD 11	Social Welfare & Rehabilitation Services	12	12.0	06.0	-	01.0
MSc/CD 12	Health Promotion	29	42.0	01.5	-	03.0
MSc/CD 13	Mental Health	15	18.0	04.5	-	01.0
MSc/CD 14	Personal & Professional Development	11	12.0	04.5	-	01.0
MSc/CD 15	Medical Sociology & Anthropology	07	10.5	-	-	01.0
MSc/CD 16	Dental Public Health	33	33.0	-	16.5	03.0
MSc/CD 17	Research Methodology	42	36.0	27.0		03.0
MSc/CD 18	Field Training in Clinical & Practical Skills	80	-	60.0	60.0	03.0
MSc/CD 19	Dissertation	-	-	-	-	15.0
Total		**624**	**627.0**	**211.5**	**97.0**	**68.0**

- One slot = 1.5 hours

- L - Lectures; SP+P – Student Presentations + Practical work; C&F – Clinical & Field Work

- One credit point is equivalent to:

15 hours of lectures; 30 hours of practical sessions + tutorials/ seminars/ small group discussions, 45 hours of field & clinical work

8. Research project leading to the dissertation

Objective

The objective of the research component is to develop knowledge and skills of the trainee to plan and conduct a research project based on scientific and ethical principles, analyze data using appropriate statistical methods, derive conclusions and recommendations applicable to the findings and to present the findings in a scientific report conforming to principles of scientific writing.

Scope

The scope of the research project is defined as "a project that encompasses research material adequate to publish one full journal article". The module on "Research Methodology" (MSc/CM- 17) will be conducted during the first term to introduce the trainees to basic principles of research. The research project should **only be based on "quantitative research***"* and the objectives of the research project should only be developed to reflect the same. However, "qualitative research" may be used as a means of complementing "quantitative research" (e.g., in questionnaire development provided time permits it). The **data collected** should be **"primary data**", but "secondary data" may be used to support "primary data" (e.g., clinical data).

Procedure

The trainee has to identify a supervisor to guide him/her, whose name should be submitted to the BoS with the tentative title of the proposed research project on a specified date for approval following the completion of the "Research Methodology" module. The supervisor should officially confirm acceptance of the appointment, using the form provided by the PGIM **(*Annex II*).** The guidelines for supervisors are available in ***Annex III***.

During the "Research Methodology" module, the trainees shall be assisted in identifying a research topic (***Annex IV.A***) and the development of the "Research Proposal" ***(Annex IV.B***). The trainee shall obtain the guidance of the supervisor during the development of the research proposal and obtain the supervisor's endorsement (refer "Research Project: Timeline" - ***Annex V***) prior to the submission of the research proposal to the BoS for approval, on or before the specified date.

The research proposals shall be reviewed by two members of the subcommittee appointed by the BoS independently (***Annex VI***). Based on the decision of the reviewers, the subcommittee shall make recommendations to the BoS regarding approval/resubmission of the research proposal. Major revisions related to "formulation of objectives" and "methodological flaws" shall be the decisive factors in relation to the need for resubmission of the research proposal. Following the approval of the BoS, the trainee shall apply for ethical clearance from the Ethics Review Committee of the PGIM/ SLMA/any Medical Faculty. The trainee should be ready to commence data collection soon after ethical clearance is received, having completed by this time the required preliminaries. The details of the subsequent stages up to the preparation of the Dissertation are given in the "Research Project: Timeline" ***(Annex V).***

Writing the dissertation

Both supervisors and the trainees should be familiar with the document titled "Guidelines for Dissertation Writing" **(*Annex VII*)**and refer to it from the time of preparing the proposal until submission of the dissertation.

The dissertation shall be one component of the MSc Examination and it will be assessed as described in Section 13.0 included below, with reference to the guidelines issued **(*Annex VIII*).**

9. Log Book/Portfolio

Log Book

1. The "Log Book" to be completed in relation to the following modules:
    a. MSc/CM-18 Field Training in Clinical & Practical Skills – 17 field activities **(*Annex IX*)**
    b. MSc/CM-19 - Clinical Skills in Community Care – specified clinical conditions seen during Medicine, Paediatrics, Obstetrics and Psychiatry appointments **(*AnnexIX*)**

The purpose of the Log Book is to document evidence of participation in the specified field and hospital appointments. Each entry should be signed by the respective trainers.

Portfolio

1. MSc/CM-18 Field Training in Clinical & Practical Skills - reflective writing to be included on five procedural skills **(*Annex X*).**
2. Evidence related to continuing professional development (CPD) **[*Annex X*].**

The purpose of the Portfolio is to document and reflect on his/her training experience with regard to clinical procedures that is pertinent to field practice. This shall enable him/her to identify and rectify deficiencies in the expected competencies, and also to recognize and analyze any significant clinical events experienced, which will help to change their practices to adopt better options based on the lessons learnt.

The trainee should engage in continuing professional development which should take place from the time of entry to the training course up to the end of third term. The evidence of such activities should be included in the portfolio. It is the responsibility of the trainee to submit the portfolio for evaluation by the BoS two weeks after the completion of "Clinical Skills in Community Care" module (MSc/CM-19).

The Log Book and the Portfolio should be bound together in an organized manner and named as the **Log Book and Portfolio. The acceptance of the Log Book and Portfolio is a prerequisite to be eligible to sit for the MSc Examination.**

10. Identification of trainers

The Lecturers, Module Coordinators and Supervisors will be recommended by the Board of Study through the Board of Management for approval by the Senate/Council of the University of Colombo.

Medical trainers shall consist of Board Certified Specialists in Community Medicine and other relevant medical fields. Non-medical trainers shall be those who are accepted as experts in the *relevant fields* and having recognized postgraduate or graduate qualifications or technical competency.

11. Assessments

Assessments shall consist of:

a. Formative Assessment: In-course assessments
b. Summative Assessment: MSc in Community Medicine Examination

12. Formative Assessment

12.1. In-course assessments (20% of the marks of final MSc Examination)

In- course assessments shall consist of two assignments based on either a) case studies or b) an essay. The objective of the assignment (based on the overall objectives of the modules covered) shall be stated. It shall be structured to suit the objective/s indicated.

There shall be two assignments which will be held at the end of first and second terms. Trainees shall be allowed two weeks to complete and submit the assignments**. Late submissions shall receive only 50% of the marks obtained**. Extensions will only be given if accompanied by written proof (e.g.: a medical certificate) for the need to extend, and the time extended will be equivalent to the duration of leave granted.

The assignments submitted shall be trainee's own work and in the event any two or more candidates being found guilty of copying, all such candidates shall receive a zero mark.

12.2. Guidelines on submission of assignments

The assignments should be submitted on A4 size paper and the number of words should be between 1000 and 1500. The document should be formatted as given below:

Left margin – 25 mm
Top, Right & Bottom margins – 15 mm
Font - Times New Roman
Font Size - 12
Spacing -1.5 lines

12.3. Assessment of assignments

Each assignment shall be marked by two independent examiners and the total marks obtained shall be expressed as a percentage. Total marks allocated for the two assignments shall be 200 marks and 20% of the final mark of the MSc Examination will consist of in-course assessment marks.

13. Summative Assessments: MSc in Community Medicine Examination

13.1. Appointment of examiners

The examiners shall be recommended by the Board of Study through the Board of Management for approval by the Senate/Council of the University of Colombo.

13.2. Eligibility criteria to appear for the examination

13.2.1. Satisfactory completion of one year training
13.2.2. Attendance of equal or more than 80% for each of the modules
13.2.3. Acceptance of the "Log Book and Portfolio" by the BOS
13.2.4. Completion of all the assignments

13.3. The format of the MSc examination

The examination shall consist of the following components (C):

C1. Theory papers

There shall be **two theory papers**. The duration of each paper shall be three (3) hours and each paper shall consist of six (6) structured essay questions.

Paper 1 [20%] –Basic Statistics, Basic Epidemiology, Demography and Ageing, Environmental Health & Disaster Management, Occupational Health, Maternal and Child Health, Nutrition and Dental Public Health

Paper II [20%] –Applied Epidemiology, Non Communicable Diseases, Health Promotion, Mental Health, General Administration and Public Health Management, Personal and Professional Development, Social Welfare and Rehabilitation Services, Medical Sociology and Anthropology

Assessment:

Each answer on shall be independently marked out of 100 by two examiners. The mark for each answer will be the average of the two marks given by the examiners based on the predetermined marking scheme for the expected answers, provided the difference in the marks assigned by the two examiners do not exceed 15%. If the difference between the marks assigned is more than 15% for any answer, the two examiners will re-correct such answers and arrive at an agreed mark

C2. Spots examination [15%]
This shall consist of 10 spots of 10 minutes duration. Each spot will have 8-10 structured questions. The spots will be based on the content covered in the "Dental Public Health module".

C3. Dissertation [25%]
The dissertation shall be assessed by two examiners independently. The marks shall *be awarded based on the format described in* ***Annex VI***

The pass/fail status – of the dissertation shall be as described below:
1. Both examiners have allocated ≥50% of marks - **pass**
2. Both examiners have allocated <50% of marks - **fail**
3. One examiner has allocated ≥50% and the other examiner <50% of marks – **the dissertation shall be evaluated by a third examiner.**

The final result will be e based on the decision reached by the majority of the three examiners.

C4. In-course Assessments (Refer Section 12.0) **[20%]**

13.4. Overall marking scheme for the MSc Examination:

No.	Components	Marks Assigned
1.	Theory (2 papers)	400 (40%)
2.	Spot examination	150 (15%)
3.	Dissertation	250 (25%)
4.	In-course assessment	200 (20%)
Total		**1000 (100%)**

Decision related to pass/fail status of the MSc. Examination

13.5. Pass

a A candidate should obtain an overall aggregate of 50% or more

And

b A minimum mark as specified below for theory, clinical and dissertation components (excluding in-course assessment) :

No.	Component	Minimum Pass Mark	
		Absolute	**Percentage**
1.	Theory (two papers)	200.0	50%
2.	Spot examination	067.5	45%
3.	Dissertation	125.0	50%
4.	In-course assessment	-	-
Overall aggregate		**500.0**	**50%**

A. Failed categories

First attempt

Passes the dissertation but fails in theory or clinical or both components:

If a candidate fails the MSc examination due to failure to obtain an overall aggregate of 50% or required minimum marks either for theory or clinical components or both, but has obtained 50% or more for the dissertation, the candidate will be exempted from submitting a dissertation at a subsequent examination.

Theory and Clinical components -

The candidate has to sit the above two components at a subsequent MSc. examination.

Dissertation and In-Course assessment marks -

The marks obtained by the candidate for the above two components at the first attempt of the MSc. examination shall be carried forward when computing the final result at the subsequent attempts.

B.

Passes theory and clinical components with an overall aggregate of 50%, but fails the dissertation:

The recommendations for re-submission of dissertation is categorized based on marks obtained at the main MSc. Examination as specified below:

a. Marks between 45% - 49% (Dissertation which has fulfilled most criteria to pass but with minor revisions related to the presentation of the dissertation):

The candidate with the guidance and advice of the supervisor may resubmit the dissertation after carrying out the corrections recommended by the examiners, as well as any other corrections deemed necessary to improve the quality of the dissertation. The dissertation has to be resubmitted **on or before the end of three (3) months** after release of results. The date shall be specified by the PGIM.

Theory and Clinical and In-course assessment marks:

The marks obtained by the candidate for these three components of the main MSc examination will be carried forward for computation of the final aggregate mark.

b. Marks between 40% and 44% (Research methods are satisfactory but contain major revisions related to the presentation of the dissertation):

The candidate with the guidance and advice of the supervisor, shall use the same data and rewrite and resubmit the dissertation after carrying out corrections as recommended by the examiners, as well as any other corrections deemed necessary

to improve the quality of the dissertation. Resubmitted dissertations will be assessed only at a subsequent main MSc examination.

Theory, Clinical and In-course assessment marks:
The marks obtained by the candidate for these three components of the main MSc examination will be carried forward for computation of the final aggregate mark.

c. Marks between 30% and 39% (Satisfactory study design but with flaws in data collection with or without major revisions related to the presentation of the dissertation):
The candidate with the guidance and advice of the supervisor, shall collect new data on the same topic and rewrite and resubmit the dissertation after carrying out corrections as recommended by the examiners, as well as any other corrections deemed necessary to improve the quality of the dissertation. Resubmitted dissertations will be assessed only at a subsequent main MSc examination.

Theory, Clinical and In-course assessment marks –
The marks obtained by the candidate for these three components of the main MSc examination will be carried forward for computation of the final aggregate mark.

d. Marks less than 30% (Major methodological flaws with or without major revisions related to the presentation of the dissertation):
The candidate shall submit a new dissertation under a different topic at a subsequent main MSc examination.

Theory, Clinical and In-course assessment marks –
The marks obtained by the candidate for these three components at the main MSc examination will be carried forward for computation of the final aggregate mark.

C.
The candidate fails in all three components: Theory, Clinical and Dissertation

Theory, Clinical and Dissertation-
The candidate has to sit all the three components together at a same subsequent examination.

Dissertation -
The resubmission of the dissertation has to be based according to the marks obtained for the dissertation submitted for the main MSc examination, as stipulated in Sections 13.6/B/b, c & d.

In-course assessment marks:
The marks obtained by the candidate for the in-course assessment at the first attempt of the MSc examination will be carried forward for computation of the final aggregate mark.

D. Repeat Attempts

a. Fails Theory or Clinical or both components and passes dissertation -
Has to sit both components together at a subsequent main examination until the candidate passes both components together.

b **Passes theory and clinical components and but fails (obtains <50% of marks) the dissertation at the second attempt and beyond:**
The candidates who are unable to obtain ≥50% marks for the resubmitted dissertations stipulated under Sections 13.6/B/a, b, c and d, at the second attempt will be considered as failing the Dissertation.
The resubmission of dissertations from third attempt onwards will be assessed only at a subsequent main MSc examination, which has to be based according to the marks obtained for the latest dissertation submitted, as stipulated in Sections 13.6/B/b, c & d.

c. The candidate fails in all three components: Theory, Clinical and Dissertation
Theory, Clinical and Dissertation-
The candidate has to sit all the three components together at a same subsequent examination.

Dissertation -
The resubmission of the dissertation has to be based according to the marks obtained for the dissertation submitted for the immediate previous attempt, as stipulated in Sections 13.6/B/b, c & d.

In-course assessment marks:
The marks obtained by the candidate for the in-course assessment at the first attempt of the MSc examination will be carried forward for computation of the final aggregate mark.

E. Computation of pass marks of repeat examinations

Theory and Clinical marks –
The marks obtained by the candidate for these two components at the attempt of the MSc examination in which the candidate passed both the components together, should be considered for computation of the final aggregate mark.

Dissertation marks –
The pass marks obtained for the dissertation at which ever attempt should be considered for computation of the final aggregate mark.

In-course assessment marks –
The marks obtained by the candidate for the above at the first attempt of the MSc examination will be carried forward for computation of the final aggregate mark.

13.6. Number of attempts

A candidate is permitted up to a maximum of six (6) attempts with in a period of eight years from the date of the first attempt.

13.7. Award of the degree

Candidates successful at the examination will be awarded the degree of MSc (Community Medicine).

14. General Regulations

Candidates should also follow all the General Regulations of the PGIM regarding permitted leave and other matters in addition to the rules and regulations specified in this prospectus.

15. Recommended Reading

Refer individual module under Annexure I.

ANNEX I – CURRICULUM - MSc COMMUNITY DENTISTRY

Basic Statistics
MSc/CD-01

Competencies:

1. Application of knowledge on basic statistics for analysis and drawing inferences from public health data relevant to day to day practice
2. Drawing inferences from available information to practice evidence based public health

Overall Objectives:

To be able to

1. describe a data set
2. summarize data
3. apply basic inferential statistical methods and draw conclusions from such analysis
4. present the data using scientifically appropriate methods
5. critically interpret the statistical findings which appear in the papers published in medical journals
6. act as an interpreter between a clinical researcher and a statistician
7. able to discuss with a statistician problems in medical research and enlist their help

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Introduction to Statistics:**	Lecture	1.5
	a.	Uses of statistics		
	b.	Types of data: Qualitative vs quantitative, discrete vs continuous		
	c.	Scales of measurement: nominal, ordinal, interval & ratio		
	d.	Introduction to descriptive and inferential statistics		
	02.	**Describing data:**	Lecture	1.5
	a.	Measures of central tendency: mean, median & mode		
	b.	Measures of dispersion: range, inter-quartile range, variance standard deviation & standard error, coefficient of variation		
	c.	Normal distribution & characteristics of a skewed distribution		
	d.	Graphical presentation of data: histogram, bar chart, stem and leaf plot, box plot, scatter plot, line graph, normal probability plot		
	03.	**Probability:**	Lecture	6.0
	a.	Probability & normal distribution laws of probability: addition & multiplication laws		
	b.	Normal distribution: features		
	c.	Conversion of raw scores into Z scores		
	d.	Determining probabilities from standard normal distribution		
	e.	Determining the area of distribution between two values: normal distribution curve, reference range		
	f.	Binomial distribution		
	g	Poisson distribution		

		Tutorial I		1.5
	04.	**Sampling techniques:**	Lecture	3.0
	a.	Probability & non-probability sampling		
	b.	Advantages & disadvantages of probability & non-probability sampling techniques: simple random, systematic, stratified, multistage, cluster & probability proportionate to size		
	c.	Differentiate between sampling error & bias		
	d.	Sample size calculations for cross-Sectional, case-control & cohort studies		
	05.	**Estimation of population parameters:**	Lecture	6.0
	a.	Z – distribution,		
	b.	T – distribution		
	c.	Standard error calculations		
	d.	Confidence intervals for means & percentages		
	e.	Confidence intervals for the difference between two means for unpaired & paired data		
	f.	Confidence intervals for difference between two proportions		
	06.	**Hypothesis testing:**	Lecture	3.0
	a.	Type I and II errors & Power		
	b.	Null hypothesis, alternate hypothesis & Steps in hypothesis testing		
	c.	Definition & interpretation of p value		
	d.	One & two tailed tests		
	e.	SND test for means & proportions		
	f.	Applications, calculations, interpretation & testing of assumptions		
		Tutorial II	-	1.5
	07.	**T tests**	Lecture	3.0
	a.	Student's t test, paired & two sample t tests		
	b.	Applications, calculations, interpretation & testing of assumptions		
		Tutorial III	-	1.5
	08.	**Chi square test**	Lecture	3.0
	a.	Applications, calculations, interpretation & testing of assumptions		
	b.	Alternative tests: Fishers exact test		
	c.	Matched analysis: McNemar test		
	09.	**Analysis of variance (ANOVA)**	Lecture	3.0
	a.	One-way ANOVA: Applications, calculations & interpretation		
	b.	Correlation: Applications, calculations & testing of assumptions		
	10.	**Simple linear Regression**	Lecture	3.0
	a.	Uses of simple linier regression Applications,		
	b.	Calculation of beta coefficient & intercept		
	c.	Regression equation m& regression curve		
	d.	Interpretation of a regression table		
	e.	Principles & uses of logistic regression		
Knowledge	**11.**	**Non- parametric tests**	Lecture	3.0
		Applications, Calculations & Interpretation of:		

		Mann-Whitney U-test, Wilcoxan sign rank test, Kruskal Walles H test & Spearman‟s rank correlation test		
		Tutorial IV	-	1.5
Assessment - End of term combined assignment				
Total number of slots = 28; Total number of hours = 42.0				
Mode of delivery in hours: Lectures (L) = 36.0; Tutorials (T) = 6.0				
Credit points = 2.4 (L) + 0.2 (T) = 2.6 ≈ 3				

Basic Epidemiology
MSc/CD-02

Competencies

1. Application of basic epidemiological principles in day to day practice as a middle level manager
2. Interpretation and application of scientific information with regard to evidence based public health practice
3. Utilization of epidemiological tools to analyze and evaluate the strengths and weaknesses of assertions in the scientific literature

Objectives

1. describe the concepts and scope of epidemiology
2. collect and analyze community health data
3. discuss probable sources of error and methods of minimizing errors in such data
4. describe and be able to compute measures of disease frequency
5. describe and calculate measures of risk of exposure
6. state the principles underlying and the application of different study designs
7. describe the concepts of measurement of test performance of screening tests
8. be able to plan and conduct an epidemiological study and draw appropriate conclusions from the results of the study
9. describe the basic epidemiological concepts in establishing causation

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Introduction to epidemiology**	Lecture	3.0
	a.	Definition of the term "epidemiology"		
	b.	Epidemiologic approach		
	c.	Descriptive epidemiology in terms of time, place & person		
	d.	Summary of epidemiology - 5Ws		
	e.	History: Evolution of epidemiology		
	f.	Natural experiments: John Snow & contribution to epidemiology		
	g.	Uses of epidemiology		
	02.	**Measures of Morbidity**	Lecture	1.5
	a.	Measurement tools in epidemiology: rate, proportion & ratio		
	b.	Incidence rates: cumulative incidence & incidence density,		
	c.	Special incidence rates: attack rate & secondary attack rate		
	d.	Uses of incidence		
	e.	Prevalence Rates: Point prevalence & period prevalence		
	f.	Uses of prevalence		
	g.	Relationship between incidence and prevalence		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**03.**	**Measures of Mortality**	Lecture	1.5
	a.	Crude death rate		
	b.	Specific death rates: age, sex & cause		
	c.	Standardization of death rates:		
		i. Direct		
		ii. Indirect – Standardized mortality ratio (SMR)		
	d.	Proportionate mortality & proportionate mortality ratio		
	e.	Survival rates: five year survival		
	04.	**Tutorial I**	-	1.5
	05.	**Epidemiological approaches; descriptive & analytical**	Lecture	1.5
	a.	Classification of study designs : Descriptive vs analytical Observational vs experimental Retrospective vs prospective		
	06.	**Descriptive Studies**	Lecture	1.5
	a.	Case reports, case series, cross sectional, & correlational/ecological studies		
	07.	**Cohort Studies**	Lecture	1.5
	a.	Meaning of word cohort		
	b.	Definition of exposure/non exposure		
	c.	Selection of study groups & control groups: internal & external		
	d.	Follow up & ascertainment of outcome/ disease status		
	e.	Analysis: Relative risk (RR), Attributable risk (AR), Attributable risk percent (ARP)		
	f.	Establishment of chance/significance of effect measures		
	g.	Impact of RR & AR on common/rare diseases		
	h.	Interpretation/application of effect measures		
	i.	Advantages & disadvantages		
	08.	**Tutorial II**		1.5
	09.	**Case Control Studies (CCS)**	Lecture	1.5
	a.	Selection of study groups		
	b.	Sources of study group members		
	c.	Selection of control group: traditional, incidence density & case cohort		
	d.	Sources of control groups		
	e.	Advantage & disadvantages of selection from each source		
	f.	Use of multiple controls		
	g.	Matching of cases & controls/confounding		
	h.	Other methods of control for confounding		
	i.	Ascertainment of exposure		
	j.	Analysis: Odds ratio (OR)		
	k.	Bias – recall/interviewer		
	l.	Effect measure: Odds Ratio (OR)		
	M	Establishment of chance/significance of effect measure		
	n.	Interpretation of effect measure		
	o.	Advantages & disadvantages of CCS		
Knowledge	**10.**	**Cross Sectional Analytical Studies**	Lecture	1.5
	a.	Selection of study groups		

	b. c.	Effect measures: OR & prevalence rate ratio Uses & Limitations		
	11. a. b. c. d. e. f. g. h. i. j. k. l. m. n.	**Experimental Studies** Difference between experimental & quasi-experimental studies Community trials/drug trials Cluster randomized trials Before & after designs Parallel group designs Cross over designs Phase I, II, III, and VI trials Selection of experimental group Selection of control group/s Application of simple randomization: advantages & disadvantages Concealment of allocation Single / double blinding Intention to treat analysis Relevant effect measures: RR, risk reduction, relative risk reduction & number needed to treat & harm	Lecture	3.0
	12. a. b. c.	**Types of Error** Random error – definition , precision, measures of overcoming random errors Systematic errors – definition & introduction to bias **Bias: Types** **Selection** – volunteering, non-participation, detection, incidence –prevalence, Berkson's bias, loss to follow up **Information** –Differential & non-differential (basics) Recall and interviewer bias **Confounding:** definition, Measures to overcome (basics): Selection stage – matching, restriction & randomization Analysis stage- stratified & multivariate analysis	Lecture	3.0
	13. a. b. c.. e. f. g. h.	**Screening & Diagnostic Tests** Criteria to decide the need for screening Measures of test performance: sensitivity, specificity & predictive values positive & negative Application to population level Bias related to evaluation of screening programmes ROC curves Diagnostic tests: Introduction Difference between screening & diagnostic tests	Lecture	3.0
	14. a. b. c.	**Quality of Data** **Reliability –definition** Types: inter observer reliability, internal consistence, test re -test reliability & parallel forms [basics] Analysis: Qualitative data: Percent agreement , Kappa coefficient & interpretation Quantitative data: , Altman –Bland plot & interpretation	Lecture	1.5

	d.	**Validity – definition** Types – face, content, consensual, criterion & construct [basics]		
	15.	**Tutorial III**		1.5
	16. a. b. c. d.	**Effect Measures** Overview: RR, OR, AR, ARP, SMR, PMR, Difference of means Establishment of chance /significance of effect measures Impact of RR & AR on common/rare diseases Interpretation /application of effect measures, advantages & disadvantages	Lecture	1.5
	17. a. b.	**Causality** Relationship between association and causation Causal criteria	Lecture	1.5
	18.	**Evidence Based Medicine (EBM)** Definition of EBM Basics of a systematic review and meta-analysis Advantages of systematic review and meta-analysis Steps involved in designing a systematic review Interpretation of a forest plot		3.0
	19.	**Tutorial IV (Formative assessment)**		3.0
	20.	**Appraisal of a journal article**	Lecture	1.5
	21.	**Journal clubs**		7.5
Assessment - End of term combined assignment				
Total number of slots = 31; Total number of hours = 46.5				
Mode of delivery in hours: Lectures (L) = 31.5; Tutorials (T) = 7.5; Journal clubs (JC) = 7.5				
Credit points = 2.2 (L) + 0.2 (T) + 0.25 (JC) = 2.65 ≈ 3.0				

Reading Material:

1. Hennekens, C.H., Buring, J.E. (2006). *Epidemiology In Medicine*, Brown and Company, Boston.
2. Rothman, K.J. *Epidemiology-An introduction*. Oxford University Press.
3. Beaglehole, D.R., Lasang, M.A., Gulliford , M.(Eds.). *Oxford Text Book of Public Health. Volume 2.*
4. Grimes,D. A., Schulz, K.F.(2002). Epidemiology Series An overview of clinical research: the lay of the land. *Lancet, 359*, 57-61.
5. Lucas,R. M., McMichael, A. J. (2005 October). Association of causation: evaluating links between "environment and disease". Public Health Classics. *Bulletin of the World Health Organization*, 83(10), 792-795.
6. Sackett, D. L.(1979). Bias in Analytical Research. J. *Chron. Dis., 32*, 51-63.
7. Gregg, M.B. (Ed). Field Epidemiology. Oxford University Press.

Demography & Health Implications of Ageing
MSc/CD-03

1. **Demography**
2. **Health Implications of Ageing**

Component 1: Demography

Competencies:

1. Application of knowledge on the range of demographic techniques available to collect, analyze and interpret population data at both national and sub-national levels.
2. Application of knowledge on past, present and future population trends and their interaction between health and social and economic forces.

Objectives:

To be able to

1. gain knowledge on demographic behaviour in social, economic and policy contexts

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Introduction to Demography**	Lecture	1.5
	a.	Concepts and definitions		
	b.	Demography and population studies		
	c.	Interdisciplinary nature		
	02.	**Sources of data & basic measures of demography**	Lecture	3.0
	a.	Population census		
	b.	Sample surveys		
	c.	Vital statistics and other sources		
	d.	Demographic data and their quality		
	e.	Period and cohort measures		

	03. a. b. c. d. e. f. g.	**Fertility measures & transition** CBR, GFR, ASFR, TFR, GRR, NRR Replacement fertility Causes of fertility decline Marriage Contraception Abortions Implications	Lecture	3.0
	04. a. b. c. d.	**Standardization & life table construction** Direct Standardization Indirect Standardization Cohort and period life tables Construction of a life table	Lecture	3.0
	05. a. b.	**Mortality change & contributory factors** Improvement in life expectancy Factors contributed for the mortality decline i. Socio-economic and cultural ii. Health infrastructure iii. Other	Lecture	1.5
Knowledge	**06.** a. b. c.	**Migration & urbanization** Internal International Components of urban growth	Lecture	1.5
	07. a. b. c.	**Population estimates and projections** Exponential model Cohort component method Projected population	Lecture	1.5
	08.	**Population change and health implications**	SGD*	1.5
Assessment = End of term combined assignment				
Total number of slots = 11; Total number of hours = 16.5				
Mode of delivery in hours: Lectures (L) = 15.0; *Small Group Discussions (SGD) = 1.5				
Credit points = 1.0 + 0.05 = 1.05 ≈ 1.0				

Reading Material:

1. Department Of Census and Statistics. (Latest Version). *Sri Lanka Demographic and Health Survey* (Latest Report Available).
2. The World Bank (2012). . (2012). *Sri Lanka's Demographic Transition: Facing the Challenges of an Aging Population with Few Resources. .* Available: http://www.worldbank.org/en/news/feature/2012/09/29/sri-lanka-demographic-transition. Last accessed 6th June 2013.
3. Attanayake, Chandra . (1984). *The Theory of demographic transition and Sri Lanka's demographic experience.* Journal of Arts Science and Letters Special Silver Jubilee Issue February 1984.. Available: http://dl.sjp.ac.lk/dspace/handle/123456789/671?mode=full&submit_simple=Show+full+item +record. Last accessed 6th June 2013.
4. California Department of Public Health. *Population Fertility: Measurement and Limitations.* Available: http://www.ehib.org/page.jsp?page_key=110. Last accessed 6th June 2013.

Demography & Health Implications of Ageing
MSc/CD-03

Component 2: Health Implications of Ageing

Competencies:

1. Initiation of measures to promote healthy ageing
2. Creation of age friendly environments
3. Provision of age friendly healthcare and social services

Objectives:

To be able to:

1. to discuss demographic transition in Sri Lanka with implications to ageing
2. to describe epidemiology of physical and psychological health issues among elderly
3. to discuss strategies to promote healthy ageing
4. to describe services related to health and social welfare of the elderly

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**An overview of ageing**	Lecture	1.5
	a.	Demographic & health implications of ageing		
	b.	Overview of the services for elderly		
	02.	**Healthy ageing**	Lecture	1.5
	a.	Concepts related to health ageing		
	b.	Assessing „Healthy ageing" and its issues		
	03.	**Physical health issues among elderly**	Lecture	1.5
	a.	Priority physical health issues among elders in the region & in Sri Lanka		
	b.	Issues related to assessing physical health issues of elderly		
	c.	Promoting physical health among elders		
	04.	**Psychological health issues among elderly**	Lecture	1.5
	a.	Priority psychological health issues among elders in the region & in Sri Lanka		
	b.	Issues related to assessing psychological health issues of elderly		
	c.	Promoting psychological health among elders		
	05	**Social health issues among elderly & social services available for elderly**	Lecture	1.5
	a.	Priority social health issues among elders in the region & in Sri Lanka		
	b.	Issues related to assessing social health issues of elderly		
	c.	Promoting social health among elders		
	d.	Social services available for elderly in Sri Lanka		
	06.	**Social & financial security of the elderly in Sri Lanka**	Lecture	1.5
	a.	Concepts of socials & financial security & its application for elders		
	b.	Situation of social & financial security of the elderly in Sri Lanka		

Knowledge	**07.** a. b. c.	**Care of the demented** Magnitude of the problem of dementia in the regions & in Sri Lanka Health & social implications of dementia on elders & the care givers Community care services for dementia	Lecture	1.5
Assessment - End of term combined assignment				
Total number of slots = 7.0; Total number of hours = 10.5				
Mode of delivery in hours: Lectures = 10.5				
Credit points = 0.7 ≈ 1.0				

Reading Material:

Ageing Population in Sri Lanka: Issue and Future Prospects, Colombo, *UNFPA Publication*: 7-43.
(2004)

Demography & Health Implications of Ageing

MSc/CD-03

Components		**Slots**	**Delivery Mode[#] (hours)**			**Credit Points**
			L	**SP+P**	**C&F**	
1	Demography	11	15.0	1.5	-	1.0
2	Health Implications of Ageing	07	10.5	-	-	1.0
Total		**18**	**25.5**	**1.5**	**-**	**2.0**

#: L -Lectures; SP+P – Student Presentations + Practical work; C&F – Clinical & Field Work

Applied Epidemiology
MSc/CD-04

1. **Disease Surveillance & Prevention**
2. **Special Campaigns**
3. **Pharmacoepidemiology**

Component 1: Disease Surveillance & Prevention

Competencies:

1. Effective implementation of communicable disease surveillance activities at divisional/District level.
2. Effective implementation of immunization Course activities at divisional/district level
3. Effective control/prevention of communicable diseases at divisional/district level 4. Effectively carrying out outbreak investigations

Objectives:

To be able to

1. Describe principals of applied epidemiology for effective control/prevention of communicable diseases.

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Scope and uses of Epidemiology**	Lecture	1.5
	a.	Introduction to Epidemiology		
	b.	Definition of general purposes & usefulness of epidemiologic inquiries		
	02.	**Disease causation, transmission and control**	Lecture	1.5
	a.	Definition of disease causation: interactions between agent, host and environment		
	b.	Definition of disease transmission & principles of control		
	03.	**Introduction to the principles of disease surveillance**	Lecture	3.0
	a.	Definition of surveillance		
	b.	Definition of different types of surveillance		
	c.	Development of surveillance case definitions		
	d.	Uses & function of surveillance		
	e.	Common sources of surveillance data		
	04.	**Disease Surveillance System in Sri Lanka**	Lecture	3.0
	a.	Disease surveillance system		
	b.	Sentinel site surveillance system		
	c.	Rolls & responsibilities of each member of PHC team in Disease surveillance.		
	d.	Uses of disease surveillance		
	e.	Limitations in surveillance data that impact interpretation		
	f.	Evaluation of validity & reliability of surveillance data at national, district, divisional & institutional levels		
	g.	Objective of carrying out special investigations on Selected diseases		

Knowledge	**05.** a. b. c. d. e.	**Epidemiology of vaccine preventable diseases (VPD) and VPD Surveillance system in Sri Lanka** Epidemiology of Polio/ AFP/Measles/Rubella AFP/Measles/Rubella surveillance activities at the health institution level AFP/Measles/Rubella surveillance activities at the field level Registers and returns related to AFP/Measles/Rubella surveillance Future challenges	Lecture	3.0
	06. a. b. c. d. e. f.	**Expanded Programme on Immunization (EPI)** Objectives of the EPI & EPI programme National Immunization schedule Management of cold chain Monitoring and evaluation of EPI activities Role of RE & MOH in implementation of EPI at different levels (district and divisional) Future challenges	Lecture	3.0
	07. a. b. c. d. e. f.	**Adverse Events Following Immunization (AEFI) surveillance system** Define & categorize AEFI Importance & rationale of AEFI surveillance AEFI surveillance system in Sri Lanka Roles and responsibilities of each member of PHC team In AEFI surveillance Uses of AEFI surveillance system Evaluation of validity of AEFI surveillance data at national, district, divisional and institutional level	Lecture	3.0
	08. a. b. c. d. e. f.	**Disease outbreak management concepts, definitions & steps in investigation** Early warning signals of disease outbreaks Identification of outbreaks at different levels (national, district & divisional) by using routine surveillance system Epidemic preparedness at different levels (national, district and divisional) Operational steps of an outbreak investigation Construction and interpretation of an epidemic curve Types of evidence that need to be collected in the field to compute and interpret outcome of an outbreak (CFR)	**Tutorial I**	3.0
	09.	**Outbreak Report writing** Outbreak report writing Presentation of data and sharing results of survey	Lecture	1.5
Knowledge	**10.** a. b. c. d.	**Epidemiology of water borne diseases & current strategies for control of water borne diseases in Sri Lanka (SL)** Epidemiology of water/food borne diseases Classification of water/food borne diseases Common public health strategies use to control food/ water borne diseases Critical review of diarrhoea control programme activities in SL	Lecture	1.5

	e.	Water quality Surveillance		
	11.	**Epidemiology of dengue fever & current strategies for control of dengue fever in SL**	Lecture	3.0
	a.	Epidemiology of dengue fever		
	b.	Common public health strategies used to control dengue Fever		
	c.	Critical review of dengue fever control programme strategies in SL		
	12.	**Epidemiology of leptospirosis & current strategies for control of leptospirosis in SL**	Lecture	1.5
	a.	Epidemiology of leptospirosis		
	b.	Common Public health strategies used to control Leptospirosis		
	c.	Critical review of leptospirosis control activities in SL		
	13.	**Emerging & re-emerging diseases**	Lecture	1.5
	a.	Factors responsible for emergence of diseases		
	b.	Globally important emerging & re-emerging diseases		
	c.	Emerging & re-emerging diseases important for SL		
	d.	Risk of using micro-organisms as biological weapons		
	14.	**Pandemic preparedness and response**	Lecture	1.5
	a.	Describe the basic steps in pandemic preparedness & Response		
	b.	Describe the ILI surveillance		
	c.	Describe the "One Health" concept		
	15.	**International Health Regulations (IHR)**	Lecture	1.5
	a.	Introduction to IHR		
	b.	Define the scope & purpose of IHR		
	c.	Public health emergencies of international concern (PHEIC)		
	d.	Describe the key core capacities of IHR		
	e.	Challenges of implementation of IHR		
	16.	**Introduction to field visits**	Lecture	1.5
	17.	**Field visits: Curative care institution & MOH office**	Lecture Demons-tration	3.0
	a.	Disease notification process		
	b.	Completeness and timelines of IMMR		
	c.	Role of ICN regarding disease surveillance		
	d.	Disease surveillance process: Infectious disease (ID) register, Notification register, Weekly epidemiological Return; communicable diseases (WRCD)		
	e.	Maps & charts related to disease surveillance		
	f.	AEFI surveillance process		
	18.	**Field visit: Regional Epidemiologist's (RE) office, Colombo**	Lecture Demons-tration	3.0
	a.	disease surveillance process at district level		
	b.	implementation of immunization programme at district Level		
	c.	Control of communicable diseases at district level		
	19.	**Field Visits to: Curative care institution, MOH office & RE office**	Student Presenta-tions (SP)	3.0
	a.	Disease surveillance activities at hospital level		
	b.	Disease surveillance activities at MOH level		

	c. d.	Cold chain maintenance & vaccine stock management at MOH level Organization of epidemiological services at district level		
	20. a. b. c. d.	**Data management in applied epidemiology** Introduction to different types of surveillance data Analysis of different types of surveillance data Interpretation of different types of surveillance data Presentation of different types of surveillance data	Group work & SP	3.0
	21. a. b. c.	**Zoonotic diseases** Global and local epidemiological perspectives Future challenges for controlling zoonotic diseases in SL One health approach in managing zoonotic diseases	Lecture	1.5
	22. a. b. c. d. e. f.	**Clinical epidemiology** Determine differences between sickness and health Determine the accuracy of diagnostic tests Determine the natural history of disease Determine effectiveness of treatment Determine the effect of early detection & treatment on the on the course of diseases Prevention in clinical practice	Lecture	1.5
Knowledge	23. a. b. c. d.	**Preparedness & response for communicable diseases during disaster** Recognition of early warning signals & identification of communicable disease outbreaks preparedness for prevention of communicable diseases during disaster Establishment of disease surveillance system during Disaster Surveillance data management during disaster	Lecture	1.5
Assessments – End of term combined assignment				
Total number of slots = 34.0 ; Total number of hours = 51.0				
Mode of delivery in hours: Lectures (L) = 36 ; Tutorials (T) + Student Presentations (SP) = 3+6 = 9;				
Field visits (FV) = 6				
Credit points = 2.4 (L) + 0. 3 (T +SP)+ 0.1 (FV)= 2.8 ≈ 3.0				

Reading material:

1 Centers for Disease Control and Prevention (CDC), 2006. *Principles of Epidemiology in Public Health Practice: An Introduction to Applied Epidemiology and Biostatistics*, Third Edition. Atlanta, GA 30333**.**

2 Epidemiology Unit, Ministry of Health, Sri Lanka, 2012. *Immunization Handbook*, 3rd Ed. Colombo.

3 Epidemiology Unit, Ministry of Health, Sri Lanka, 2012. Surveillance Case definitions for Notifiable Diseases in Sri Lanka, 2nd Ed. Colombo.

4 Epidemiology Unit, Ministry of Health, Sri Lanka, 2012. *National Guidelines on Immunization Safety Surveillance*. Colombo.

5 Hennekens CH, Buring, JE, 2006. *Epidemiology In Medicine*, 1st ed. Brown and Company, Boston.

Applied Epidemiology
MSc/CD-04

Component 2: Special Campaigns & Public Health Services

Competencies:

1. Effective control/prevention of specific communicable/non-communicable diseases of public health relevance at divisional/district levels

Objectives:

To be able to

1. describe epidemiology of specific communicable/non-communicable diseases of public health relevance
2. discuss application of principals of applied epidemiology for effective control/prevention of specific communicable/non-communicable diseases of public health relevance

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Tuberculosis control in Sri Lanka**	Lecture	1.5
	a.	Epidemiology of TB		
	b.	Common public health strategies used to control TB		
	c.	Milestones and future trends of TB		
	d.	Monitoring mechanism of public health impact of control strategies		
	e.	Critical review of TB control programme strategies		
	f.	Future challenges		
	02.	**Rabies control in Sri Lanka**	Lecture	1.5
	a.	Epidemiology of rabies		
	b.	Common public health strategies used to control rabies		
	c.	Milestones and future trends of rabies		
	d.	Monitoring mechanism of public health impact of control strategies		
	e.	Critical review of rabies control programme strategies		
	f.	Future challenges		
	03.	**Cancer control in Sri Lanka**	Lecture	1.5
	a.	Epidemiology of common cancers		
	b.	Common public health strategies used to control common cancers		
	c.	Important milestones and future trends of cancers		
	d.	Monitoring mechanism of public health impact of control strategies		
	e.	Critical review of cancer control programme strategies		
	f.	Future challenges		
Knowledge	**04.**	**Malaria control in Sri Lanka (SL)**	Lecture	1.5
	a.	Epidemiology of malaria		
	b.	Common public health strategies used to control Malaria		
	c.	Milestones and future trends of malaria		
	d.	Monitoring mechanism of public health impact of		

		control strategies e. Critical review of malaria control programme strategies f. Future challenges		
	05. a. b. c. d. e. f.	**Leprosy control in Sri Lanka** Epidemiology of leprosy Common public health strategies used to control leprosy Milestones of leprosy control programme Future trends of leprosy Critical review of leprosy control strategies Future challenges	Lecture	1.5
	06. a. b. c. d. e. f.	**Filariasis control in Sri Lanka** Epidemiology of filariasis Common public health strategies to control filariasis Important milestones and future trends of filariasis Monitoring mechanism of public health impact of control Strategies Critical review of filariasis control programme strategies Future challenges	Lecture	1.5
	07.	**STD/AIDS control in Sri Lanka & Sexual health**		
	A. a. b. c. d. e. f. g.	**Sexually transmitted disease (STD) control in SL** Epidemiology of STDs Common public health strategies use to control STDs Future trends of STDs Monitoring mechanism of public health impact of control Strategies Collaborations and addressing privacy issues Critical review of STD control programme strategies Future challenges	Lecture	1.5
	B. a. b. c. d. e. f. g.	**National response for HIV/STI control & available services** Overview of National STD/AIDS Control Programme (NSACP) National Strategic Plan Overview of key populations and vulnerable groups Men who have sex with men (MSM), sex workers, transgender, trans sexual & people who use drugs Prisoners & beach boys Youth, , migrant populations, tourist sector & armed forces National AIDS Committee & sub committees	Lecture	1.5
	C. a. b. c. d.	**Overview of HIV/ STIs, Epidemiology of HIV/STI & Evolution of prevention strategies for HIV** Curable STIs Non curable STIs Epidemiology of HIV (Global and Sri Lankan situation) Epidemiology of STIs (Global and Sri Lankan situation)	Lecture	3.0

	e. f.	Abstinence, being faithful, condom use, treatment as child prevention, anti-retroviral therapy, prevention of mother to child transmission, pre prophylaxis Rx, post prophylaxis Rx & prevention of occurrence from blood transfusion Achieving 90 90 90 targets by 2020 & triple zeros by 2030		
	D. a. b. c. d.	**Vulnerable populations, targeted interventions for key** **populations & national response for HIV prevention** Vulnerable target groups Targeted interventions for key population groups & & partnership of NGOs, CBOs & other government sectors Objective of Interventions & current interventions for MSM sex workers, transgender, trans sexual, hard drug users, prisoners, youth, tourist sector & armed forces personnel Challenges for interventions Partnership with multi sectoral agencies for HIV prevention	Lecture	1.5
	E. a.	**Reach to key populations in Sri Lanka** Estimating the size of key populations & predictions for the future – size estimation, mapping & surveillance	Lecture	1.5
	F. a. b. c	**Legislature related to key populations** Vagrant's ordinance, Brothel house ordinance, Penal code 365 A (1995) of the Constitution Legal age of marriage and consent for sex and relevant International conventions Legal judgements relevant to people living with HIV	Lecture	1.5
	08. Port health			
	A. a. b. c.	**National program of the quarantine unit** Main functions of the unit Organization structure Law and acts related to quarantine unit	Lecture	1.5
	B. a. b. c. d.	**International health regulations (IHR) related to Point of** **Entries (PoEs)** IHR (2005) Implication for global health security Sections related to IHR (2005) WHO monitoring framework for IHR (2005)	Lecture	1.5
Knowledge	**C.**	**Management of public health events on board ships (including response in Public Health Emergency of International Concern [PHEIC])**	Lecture	1.5

	a. b. c. d. e. f. g.	Past case scenarios Role & response from WHO during PHEIC Functions of PoEs during PHEIC Management of public health events on board Ship sanitation certificate Core capacity development at PoEs (at all times and in PHEIC) Surveillance activities		
	D. a. b. c. d.	**Management of public health events in air transport (including response in PHEIC)** Functions of PoEs during PHEIC Core capacity development at PoEs (at all times and in PHEIC) Public health events management in air crafts Surveillance activities	Lecture	1.5
	E. a. b.	**Field visit to airport port** Functions of the health office at PoEs Observation of routine procedures ,	Field	3.0
Assessments – End of term combined assignment				
Total number of slots = 19; Total number of hours = 28.5				
Mode of delivery in hours: Lectures (L) = 25.5; Field visits (FV) = 3.0				
Credit points = 1.7 (L) + 0.1 (FV) = 1.8 ≈ 2.0				

Reading material:

1. Web sites of individual campaigns
2. Annual reports of special campaigns
3. Annual Health Bulletin

Applied Epidemiology

MSc/CD-04

Component 3: Pharmaco-epidemiology

Competencies:

1. Promotion of rational drug use
2. Effective monitoring of adverse events related to vaccines

Objectives

To be able to

1. describe principals of pharmaco-epidemiology related to rational use of drugs
2. describe application of principals of pharmaco-epidemiology on vaccine safety

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Introduction to pharmaco-epidemiology & application of pharmaco-vigillance in public health**	Lecture	1.5
	a.	Definition of pharmaco-epidemiology pharmaco-vigillance pharmaco–economics pharmaco-genomics		
	a.	Aims of pharmaco-vigilance		
	b.	Need for pharmaco-vigilance		
	c.	Components of public health programmes		
	d.	Pharmaco-vigilance methods in public health		
	e.	Challenges of pharmaco -therapy in public health		
	f.	Sources of information on drug safety		
	02.	**Vaccine safety basic principles** Importance of vaccine safety Pre-licensure vaccine safety studies Post-licensure surveillance Role of immunization service provider in vaccine safety	Lecture	1.5
	03.	**Vaccine safety: Causality assessment of AEFI**	Lecture	1.5
	a.	Introduction to vaccine causality assessment		
	b.	Factors to consider when assessing the relationship between vaccine & events		
	c.	Categories of relationship between vaccines and events		
	d.	Introduction to vaccine causality assessment mechanism In Sri Lanka		
	04.	**Health policy related to pharmaceutical health promotion, regulation, regulatory body & its function/s in Sri Lanka**	Lecture	1.5
	a.	Introduction to health policy related to pharmaceutical health promotion		
	b.	Regulation of pharmaceuticals		
	c.	Regulatory body & its functions		

Assessment = End of term combined assignment
Total number of slots = 4; Total number of hours = 6.0
Mode of delivery in hours: Lectures = 6.0
Credit points = 0.4 ≈ 0

Reading material:

1. Text Book of Phamacoepidemiology. Brian Strom and Stephene Kimmel.
2. National Guidelines on Immunization Safety Surveillance. Epidemiology Unit, Ministry Of Health Sri Lanka, 2012.

Applied Epidemiology
MSc/CD-04

Components		Slots	Delivery Mode# (hours)			Credit
			L	SP	C&F	
1	Disease surveillance & prevention	34	36.0	09.0	06.0	3.0
2	Special campaigns & public health institutions	19	25.5	-	03.0	2.0
3	Pharmaco-epidemiology	04	06.0	-	-	0.0
Total		**57**	**67.5**	**09.0**	**09.0**	**5.0**

#: L - Lectures; SP+P – Student Presentations + Practical work; C&F – Clinical & Field Work

Environmental Health & Disaster Management
MSc/CD-05

1. **Environmental Health**
2. **Disaster Management**

Component 1: Environmental Health

Competencies:

1. Prioritization of problems related to environmental pollution
2. Promotion of individual and community practices that protect the environment using evidence based methods
3. Enforcement /implementation of current legislation and monitoring their implementation
4. Identification of areas in which legislation is required and advocate for such legislation

Objectives:

To be able to

1. define concept of "Environmental health " & describe environmental health problems common to Sri Lanka and the role of health sector in promotion of environmentally friendly and healthy technologies and behaviours
2. describe factors responsible for air pollution, types of air pollutants & methods of air quality monitoring & the control & prevention
3. describe "Cleaner Production and Energy Management" and its benefits
4. describe factors related to water and soil pollution and methods of water purification
5. describe types and sources of solid and hazardous waste and environment friendly waste disposal methods
6. describe types and methods of disposal of healthcare waste
7. describe food hygiene, food sampling procedures and techniques and Food Legislation & Organization of Food Control Services in Sri Lanka
8. describe the role of Central Environmental Authority in environmental protection

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Scope of Environmental Health**	Lecture	1.5
	a.	Factors that constitute the environment		
	b.	Environment pollutants		
	c.	Water, soil and atmospheric pollution		
	d.	Effects of pollutants on the environment – acute & chronic		
	e.	Major environmental problems in Sri Lanka		
	f.	Control measures		
	g.	Role of health sector in environmental health		
	h.	Factors that constitute the environment		
	02.	**Importance of air quality as a determinant of health**	Lecture	1.5
	a.	Sources of air pollution		
	b.	Outdoor air pollution		
	c.	Sources of outdoor air pollution		
	d.	Trans boundary air pollution		
	e.	Air pollution in Sri Lankan cities		
	f.	Health effects of outdoor air pollution		
	g.	Indoor air pollution		
	h.	Criterion indoor air pollution		
	i.	Urban and rural indoor air pollution and its health effects		
	j.	Sources of indoor air pollution		
	l.	Determinants of pollutant concentration		
	m.	Types of studies in air pollution – ecologic, time series, cohort		
	n.	Health problems due to air pollution		
	o.	Air quality monitoring –active and passive		
	p.	Air quality assessment tools		
	q..	Air quality management principals		
	r.	Mortality trends in air pollution related diseases		
	s.	Approaches to prevent environmental health problems due to air pollution		
	03.	**Waste minimization**	Lecture	1.5
	a.	Passive environment strategies		
	b.	Reactive environmental strategies		
	c.	Proactive environmental strategies		
	d.	Cleaner production practices		
	e.	Benefits of cleaner production		
	f.	Green productivity		
	g.	Energy efficiency		
	h.	Energy conservation		
	i.	Energy supply and demand		
	j.	Planning energy management		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**04.**	**Water environment**	Lecture	1.5
	a.	Water cycle		
	b.	Use and overuse of world water resources		
	c.	Water pollution and its effects		
	d.	Soil pollution and its effects		
	e.	Sources of water and soil pollution		
	f.	Effects of water and soil pollution		
	g.	Water scarcity – global and Sri Lankan		
	h.	Water borne diseases		
	i.	Bio accumulation		
	j.	Water conservation methods		
	k.	Water quality parameters; physical, chemical biological		
	l.	Prevention of water and soil pollution		
	m.	Water pollution control legislation in Sri Lanka		
	05.	**Global and local situation of potable water**	Lecture	1.5
	a.	Methods of water sanitation adopted in community water supplies		
	b.	Water sanitation systems		
	c.	Water treatment		
	d.	Excreta disposal methods		
	e.	Principles in selecting excreta disposal methods in different conditions		
	f.	Current situation of excreta disposal in Sri Lanka		
	06.	**Wastewater treatment (WWT) methods**	Field visit WWT plant	3.0
	a.	Sewerage treatment methods		
	b.	Observation of waste water treatment process in an Industrial setting		
	07.	**Solid waste**	Lecture	1.5
	a.	Types and sources of solid waste		
	b.	Municipal solid waste		
	c.	Solid waste management principles		
	d.	Methods of solid waste management		
	e.	Management of bio degradable waste		
	f.	Plastic, polythene, glass and metal waste management		
	g.	Waste disposal methods – land filling		
	h.	Sri Lankan situation in solid waste		
	i.	National colour code in waste management		
	j.	Legislation on solid waste management		
	k.	Hazardous waste		
	l.	Types of hazardous waste and sources of generation		
	m.	Methods of management of hazardous waste		
	n.	Principles and methods of disposal of hazardous waste		
	o.	Regulations on hazardous waste		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**08.**	**Healthcare waste**	Lecture	1.5
	a.	Types of healthcare waste – Non risk and risk waste		
	b.	Categories of risk waste		
	c.	Management of healthcare waste		
	d.	National guidelines on waste management		
	e.	National colour code on healthcare waste management		
	f.	Collection, storage, transport and disposal of healthcare waste		
	g.	Methods of waste treatment		
	h.	Legislation on healthcare waste management		
	i.	Healthcare waste management programme in Sri Lanka		
	j.	Occupational safety of waste handlers		
	09.	**Visit to a healthcare waste management plant**	Field visit	3.0
	a.	Observation of management of healthcare waste from point of origin to final disposal		
	10.	**Global warming**	Lecture	1.5
	a.	Anticipated climate change effects		
	b.	Global situation on climate change effects		
	c.	Sri Lankan situation on climate change effects		
	d.	Impacts of climate change on health		
	e.	Direct health effects		
	f.	Indirect health effects		
	g.	Impact on food security		
	h.	Measures of prevention and control of climate change		
	11.	**Current legislation on environment health in Sri Lanka:**	Lecture	1.5
	a.	National Environment Act & Coastal Conservation Act		
	b.	Implementing agencies of environment legislation		
	c.	Legislative procedures that should be followed by health the sector when implementing environmental health programmes		
	d.	International conventions on environmental health ratified by Sri Lanka: Montreal protocol, Basal Convention, UNFCCC etc.		
	12.	**Functions and services of the Central Environmental Authority (CEA) in relation to environmental health**	Lecture	1.5
	a.	Functions: Regulatory, Protective, Promotional		
	b.	Implementing mechanisms adopted by the CEA: i Environment protection license ii Scheduled Waste Management License iii Environment Impact Assessment		
	c.	Responsible agencies for environmental health in Sri Lanka & their role in environment protection		
Domain	**Content**		**Delivery Mode**	**Time (hours)**
Knowledge	**13**.	**Definition of Environmental Impact Assessment (EIA)**	Lecture	1.5
	a.	Impacts of environment by development projects		
	b.	Projects that require EIA		
	c.	Initial Environment Examination		
	d.	Major steps in EIA		

	e. f.	Contents of EIA Report Importance of EIA to the health sector		
	14. a. b. c. d. e. f. g.	**Environment & Development** Strategies on Pollution Control National Environmental Act Environmental Protection License components & methods of issuance Scheduled Waste Management License Environmental Standards for Industrial Emissions Current situation of the EPL scheme Future needs to the environment Law	Lecture	1.5
	15. a. b. c. 	**Food Control Service of Sri Lanka** Legislative framework on food safety in Sri Lanka: i Food Act & regulations ii Municipal Ordinance iii Urban Council Act iv Pradeshiya Sabha Act v Other legislation related food safety Powers and roles of Authorized Officers International codes of practices in food safety & hygiene i CODEX ii SPS Agreement iii TBT Agreement	Lecture	1.5
	16. a. b. c. d.	**Principles of food safety & hygiene** Different food sampling procedures and techniques: i Preparation for food sampling ii Formal sample iii Informal sample iv Minimum quantities for sampling v Documentation & record keeping Sample dispatch methods Analytical services provided by the food laboratories Actions to be taken based on results: advice, destroying & legal action	Lecture	3.0
Domain	**Content**		**Delivery Mode**	**Time (hours)**
	17. a. b.	**Analytical services provided by the Government Analyst** Methods of analysis of different types of food samples Observe the reporting and dispatching system of results	Field visit Food laboratory	3.0
	18. a. b.	**Identification of food safety & hygienic measures in a food manufacturing establishment (FME)** Identification of deviations from food safety & hygienic Measures & compliance with food safety legislation	Field visit FME	3.0
Assessment : End of term combined assignment				
Total number of slots = 23; Total number of hours = 34.5				
Mode of delivery in hours: Lectures (L) = 22.5 + Field visits (FV) = 12.0				
Credit points = 1.5 (L) + 0.3 (FV) = 1.8 ≈ 2				

Reading material:

Environmental Health – Refer Occupational Health Module

Environmental Health & Disaster Management
MSc/CD-05

Component 2: Disaster Management

Competencies:

1. Application of basic principles of disaster management in relation to disaster preparedness and response
2. Provision of leadership to address health aspects related to disaster preparedness and response
3. Working in harmony with all stakeholders to bring about effective disaster preparedness and response

Objectives:

To be able to

1. describe basic principles of disaster management
2. describe the disaster management framework in Sri Lanka
3. describe the basic steps of disaster preparedness at divisional level
4. describe the vital health services required to be provided in the aftermath of a disaster
5. discuss critically the role of health Sector and the Medical Officer of Health in disaster preparedness and management
6. list the important stakeholders in disaster management

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Introduction to disaster management**	Lecture	4.5
	a.	History, epidemiology, and impact of disasters		
	b.	Phases of disaster management		
	c.	Disaster management cycle		
	d.	Overview of Disaster Preparedness and Response		
	e.	Role of the health sector in disaster management		
	f.	Role of the medical officer in disaster management		
	g.	Role of the community physician in disaster management		
	h.	Introduction to environmental health in disasters		
	i.	Stakeholders in disaster management		
	j.	Disaster management framework in Sri Lanka		
	02.	**Mass casualty management**	Lecture	1.5
	a.	Introduction to mass casualty incidents		
	b.	Role of the health services in mass casualty management		
	c.	Basic principles of mass casualty management		
	d.	Resources required for effective mass casualty management		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**03.**	**Maternal & child health in disasters**	Lecture	1.5
	a.	Vulnerable populations in disaster situations		
	b.	Impact of disasters on maternal & child health		
	c.	Basic principles of reproductive health in disasters		
	d.	Introduction of Minimum Initial Service Package		
	e.	Health services provided to mothers & children in disaster situations		
	04.	**Disease surveillance & control during disasters**	Lecture	1.5
	a.	Common diseases expected after disasters		
	b.	Common diseases expected among displaced population		
	c.	Role of the community physician in disease control in disaster situations		
	d.	Basic principles of controlling diseases in disaster situations		
	e.	Techniques used for disease surveillance following disasters		
	f.	Resources required for disease surveillance & control in disaster situations		
Assessment : End of term combined assignment				
Total number of slots = 6; Total number of hours = 9.0				
Mode of delivery in hours: Lectures = 9.0				
Credit points = 0.6 ≈ 1				

Environmental Health & Disaster Management
MSc/CD-05

Components		Slots	Delivery Mode[#] (hours)			Credit
			L	SP	C&F	
1	Environmental Health	23	22.5	-	12.0	2.0
2	Disaster Management	06	09.0	-	-	1.0
Total		**29**	**31.5**	**-**	**12.0**	**3.0**

#: L - Lectures; SP+P – Student Presentations + Practical work; C&F – Clinical & Field Work

Occupational Health
MSc/CD-06

Competencies:

1. Carrying out risk assessment: evaluate hazards and risks at the workplace
2. Making the management aware of the legal requirements in relation to health, safety and welfare of workers
3. Provision of advice to the management on the control of hazards and minimizing risks
4. Making workers aware of occupational health hazards and conducting health promotion activities among them
5. Recognition of occupation related diseases, referral of patients for treatment and advice management on the specific preventive measures for identified hazards
6. Collaborating with the Labour Department in matters related to health and safety of the workers

Objectives:
To be able to

1. describe occupational health hazards and the adverse effects
2. discuss prevention of fire hazards
3. describe the regulations applicable to workers and the limitations of existing legislature
4. conduct a walk through survey to identify hazards and available preventive measures
5. describe the different types of personal protective equipment 6.describe the functions of an occupational health service

Domain	Content		Delivery Mode	Time (hours)
	01.	**Introduction to occupational health**	Lecture	1.5
	a.	History of occupational health		
	b.	Aims of occupational health		
	c.	Effects of work on health		
	d.	Effects of health on work		
	e.	Costs associated with occupational diseases/injuries		
	02.	**Introduction to physical hazards**	Lecture	1.5
	a.	Thermal environment and work sites with heat exposure		
	b.	Diseases and injuries due to heat exposure		
	c.	Occupational exposure to excessive noise		
	d.	Auditory, physiological and psychological effects of excessive noise		
	e.	Types of vibration		
	f.	Occupational exposure to vibration		
	g.	Health effects of vibration		
	h.	Poor and excessive illumination		
	i.	Effects of illumination on work and health		
	j.	Occupational exposure to high pressure		
	k.	Adverse health effects of pressure		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**02.**	**Introduction to physical hazards - continuation**		
	l.	Occupational exposure to ionizing &non-ionizing radiation		
	m.	Health effects of radiation		
	n.	Measurement of noise, light, heat stress, pressure & radiation		
	o.	Control methods - Engineering, Administrative & Personal protective equipment		
	03.	**Toxic metals**	Lecture	1.5
	a.	Identification different forms of toxic chemicals		
	b.	Material Safety Data Sheets		
	c.	Adverse effects of chemicals		
	d.	Acute and chronic toxicity		
	e.	Safe use of chemicals		
	f.	Toxic metals commonly associated with occupations: lead, mercury, arsenic, cadmium, chromium, nickel, zinc etc.		
	g.	Specific adverse health effects of exposure to toxic metals		
	h.	Specific preventive measures adopted in occupational settings		
	04.	**Solvents & gases & dusts**	Lecture	1.5
	A.	**Solvents**		
	a.	Classification of solvents		
	b.	Properties of solvents		
	c.	Uses of solvents in industries		
	d.	Specific toxic effects		
	e.	Control and preventive measures		
	B.	**Gases**		
	f.	Simple asphyxiants		
	g.	Chemical asphyxiants		
	h.	Irritant gases		
	i.	Specific toxic/health effects		
	j.	Control and preventive measures		
	C.	**Chemical dusts**		
	k.	Types of chemical dusts		
	l.	Specific toxic/health effects		
	m.	Control and preventive measures		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**05.**	**Pesticides & occupational cancers**	Lecture	1.5
	a.	Classification of pesticides – insecticides, fungicides, herbicides, rodenticides, molluscicides & acaricides		
	b.	Composition of pesticides		
	c.	Occupational exposure pathways		
	d.	Adverse health effects		
	e.	Control & prevention of occupational exposure		
	f.	Types of occupational cancers – skin, bladder, lung, nasal & liver		
	g.	Prevention of occupational cancers		
	06.	**Types of hazardous biological agents: virus, bacteria, fungus and others**	Lecture	1.5
	a.	Occupations associated with biological hazards: agriculture, animal husbandry, food processing, healthcare waste handling etc.		
	b.	Pathways of occupational exposure		
	c.	Disease conditions due to biological hazards – fungal infections, TB, hepatitis, leptospirosis, allergies		
	d.	Handling of hazardous biological waste		
	e.	Prevention and control of occupational exposure to biological hazards		
	07.	**Definition of ergonomics**	Lecture	1.5
	a.	Functions of an ergonomist		
	b.	Structure of an ergonomic programme		
	c.	Work associated ergonomic problems		
	d.	Physical stress due to workplace & equipment design		
	e.	Improvement of work and workplace design		
	f.	Improvement of equipment design		
	g.	Proper design of chairs		
	h.	Proper weight lifting techniques		
	i.	Pushing & pulling techniques		
	j.	Application of ergonomics at workplace		
	08.	**Fire hazards**	Lecture	1.5
	a.	Classification of fire		
	b.	Elements of fire		
	c.	Workplace fire hazards		
	d.	Fire extinguishing methods		
	e.	Fire prevention methods		
	f.	Electrical hazards in an occupational setting		
	g.	Importance of electrical safety in an occupational setting		
	h.	Preventive measures on electrical hazards in an occupational setting		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**09.**	**Machinery related injuries**	Lecture	1.5
	a.	Point of operation guarding		
	b.	Power transmission		
	c.	Guarding of moving parts		
	d.	Rotating shafts and pulleys		
	e.	Lockouts and tag outs		
	f.	Requirements for safe guards		
	g.	Safe work procedures		
	h.	Training of operators		
	10.	**Occupational hazards specific to selected industries**	Lecture	1.5
	A.	**Agricultural workers**		
	B.	**Fishing industry**		
	C.	**Coir industry**		
	D.	**Construction, brick & tile industry**		
	E.	**Healthcare industry**		
		In terms of :		
	a.	Physical, chemical, biological, ergonomic & psychological hazards		
	b.	Methods of occupational exposure		
	c.	Adverse health effects		
	d.	Control and preventive measures		
	11.	**Benefits of industrial ventilation**	Lecture	1.5
	a.	Strategies for air quality improvement		
	b.	Dilution ventilation system		
	c.	Local exhaust ventilation system		
	d.	Requirements in choosing lighting		
	e.	Controlling glare		
	f.	Recommended illumination for different tasks		
	12.	**Introduction to nanotechnology**	Lecture	1.5
	a.	Use of nanotechnology in industries		
	b.	Risk assessment in nanotechnology		
	c.	Occupational exposure & effects of nanomaterial		
	d.	Environment contamination by industrial use of nanomaterial		
	e.	Effects on human health from nanomaterial in the environment		
	13.	**Description of 5S principle**	Lecture	1.5
	a.	Organization, orderliness, cleanliness, standardize & sustain		
	b.	Advantages of 5S		
	c.	Application of 5S in occupational settings		
	d.	Increasing productivity through 5S		

Domain	Content		Delivery Mode	Time (hours)
	14.	**Definition of Quality of Work Life (QWL)**	Lecture	1.5
	a.	Importance of QWL		
	b.	Changing jobs		
	c.	Family and work roles		
	d.	QWL programmes		
	e.	Alternate work arrangements		
	f.	Improving QWL		
	g.	Factors affecting QWL		
	h.	Parameters that ensure QWL		
	i.	Future perspectives of QWL		
	15.	**Concepts of healthy work setting**	Lecture	1.5
	a.	Participation, integration, project management,		
	b.	comprehensiveness		
	c.	Principles of health promotion at workplace		
	d.	Planning, implementation, monitoring and evaluation of health promotion activities at work place		
	e.	Effects of workplace health promotion on worker's health		
	16.	**Occupations associated with lung diseases**	Lecture	1.5
	a.	Respiratory diseases associated with work: i. Obstructive lung disease – occupational asthma, COPD, chronic bronchitis, hypersensitivity pneumonitis i. Respiratory diseases associated with work: asbestosis, silicosis, pulmonary fibrosis		
	b.	Establishing work relatedness of lung diseases – lung function tests, skin tests		
	c.	Prevention and control of occupational lung diseases		
	17.	**Definition of occupational dermatoses**	Lecture	1.5
	a.	Occupations at risk of developing dermatoses		
	b.	Eczematous occupational dermatoses		
	c.	Non eczematous occupational dermatoses		
	d.	Occupational contact urticaria		
	e.	Occupational skin cancers		
	f.	Scleroderma like diseases related to occupational & environmental factors		
	g.	Preventive measures for occupational skin diseases at workplace		
Knowledge	**18.**	**Relationship of work & mental health**	Lecture	1.5
	a.	Common psychological problems at work settings & their effects on worker		
	b.	Causes, effects and management of occupational stress		
	c.	Effects of shift work on workers heath		
	d.	Workplace practices that promote mental health		
	e.	Mental health services available for workers in Sri Lanka		

Domain	Content		Delivery Mode	Time (hours)
	19.	**Different types of occupational accidents & injuries**	Lecture	1.5
	a.	Factors that contribute to accidents: environmental, physiological & psychological		
	b.	Investigation and reporting of accidents		
	c.	Workman's compensation mechanism		
	d.	International commitment on prevention of occupational accidents – conventions & recommendations		
	e.	Workplace practices and measures for prevention of occupational injuries		
	20.	**Common occupational injuries/ disorders that need rehabilitation**	Lecture	1.5
	a.	Methods and main activities in: i. Medical rehabilitation ii. Vocational rehabilitation iii. Occupational rehabilitation		
	b.	Return to work concept		
	c.	Role of physician and paramedical services in occupational rehabilitation		
	d.	Rehabilitation services available in Sri Lanka		
	21.	**History of development of occupational health legislation**	Lecture	1.5
	a.	Factories Ordinance: areas covered & its implementation		
	b.	Rights of an Authorized Officer		
	c.	Obligations of an occupier		
	d.	Duties of persons employed		
	e.	Dangerous occurrences		
	f.	Welfare facilities		
	g.	General Register		
	h.	Notification of industrial accidents and diseases		
	i.	Other enactments on Occupational Health & Safety		
	22.	**Workman's compensation ordinance**	Lecture	1.5
	a.	Mechanism of determination of compensation		
	b.	Employment conditions for state and private sector Employees: leave, probation, confirmation, termination etc.		
	c.	Social security schemes for the state sector employees		
	d.	Social security schemes for the private sector employees & the self employed		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**23.**	**Objectives of an occupational health service**	Lecture	1.5
	a.	Main components of an OH service		
	b.	Prevention		
	c.	Planning		
	d.	Health surveillance, screening & record keeping		
	e.	Assessing fitness for work – pre employment, return to work, routine examination		
	f.	First Aid		
	g.	Health Education and Counseling		
	h.	Record keeping in a OH service		
	i.	Health promotion		
	j.	Role of the Ministry of Health		
	k.	Services provided by the preventive and curative health sectors		
	l.	OH services provided by other sectors		
	24.	**Risk identification in occupational settings**	Lecture	3.0
	a.	Components of a risk audit		
	b.	Methods of conducting a risk audit		
	c.	Managing risks – hazard identification, assessing associated risks, mitigatory actions, monitoring of effectiveness		
	d.	Management systems for occupational health and safety		
	25.	**Aims of standardization**	Lecture	1.5
	a.	Quality certification		
	b.	Quality accreditation		
	c.	Occupational health & safety: Importance of implementing safety management systems		
	d.	Safety Management Systems – OHSAS 18001:2007		
	e.	OHS elements under OHSAS		
	f.	OHS policy		
	g.	Safety Standards and Regulations		
	26.	**Aims of hazard control**	Lecture	1.5
	a.	Identifying the nature and source of hazard		
	b.	Emission sources and nature of emission		
	c.	Characterizing the exposure profile, worker & workplace		
	d.	Current controls & their efficiency		
	e.	Alternative controls that are cost effective, efficient & acceptable to workplace		
	f.	Trialing the anticipated controls		
	g.	Feedback & evaluating the effectiveness of controls		
	27.	**Factors required for exposure**	Lecture	1.5
	a.	Hierarchy of control		
	b.	Elimination		
	c.	Substitution		
	d.	Engineering control		
	e.	Administrative control		
	f.	Personal protective equipment		
	g.	Monitoring & evaluation of hazard control programmes		

	28. a. b. c.	**Personal protective equipment (PPE)** Describe different types of PPE used in different hazardous conditions Describe PPE for head, ear, eye, respiratory, hand, foot & skin protection Demonstrate use of PPE	Lecture	1.5
	29. a. b. c. d. e. f. g. h.	**Steps of a walkthrough survey** Observing and identifying health and safety issues related to tasks performed Observing & identifying health & safety issues related to equipment Evaluation of the work environment Availability & adequacy of PPE Welfare and health facilities Emergency evacuation & conducting fire drills Notification of industrial accidents and diseases Factory inspection report writing	Lecture	1.5
	30. a. b.	**Services provided by Occupational Hygiene Laboratory to the industries** Laboratory tests & environmental assessments carried out : heavy metals, lung function tests, audiometry, sound level testing, heat stress, light, dust etc. Observation and demonstration of operation of testing equipment	Lecture	1.5
Skills	**31**. a. b.	**Critical analysis of an occupational health issue** Description of: i identified issue ii shortcomings that led to the issue Recommend measures that would control & prevent the Identified occupational health problem	Seminar	3.0
	32. a. b. c. d.	**Conduct of a walkthrough survey in a factory** Identification of occupational hazards Identification of available occupational health services Identification of control measures adopted Identification of compliance to occupational health & safety legislation	Practical	3.0
	33. a. b. c. d. e.	**Presentation of factory inspection report** Description of identified hazards Critical evaluation of the identified health and safety issues Description of the health and welfare services provided Description of the level of compliance to the provisions of the Factories Ordinance Recommendation of preventive and promotive measures for the identified health & safety issues	Seminar	1.5

Assessment: End of term combined assignment
Total number of slots =36 ; Total number of hours = 54.0
Mode of delivery in hours: Lectures (L) = 46.5; Student seminars (SS) = 4.5; Practicals (Pr) = 3.0
Credit points = 3.1 (L) + 0.15 (SS) + 0.10 (Pr) = 3.35 ≈ 3

Reading Material (Occupational & Environmental Health):

1. Textbook of Occupational Medicine Practice. David Koh, Chia Kee Seng, J. Jeyarathnam
2. Research Methods in Occupational Epidemiology. Harvey Checkoway, Neil Pearce, David Kriedel
3. Occupational Health – A Manual for Primary Healthcare Workers. World Health Organization
4. Basic Concepts of Industrial Hygiene. Ronald Scott
5. Current Occupational and Environmental Medicine. Joseph LaDou
6. A practical approach to Occupational and Environmental Medicine. Robert. J. McCunney 7.Textbook of Clinical Occupational and Environmental Medicine. Linda Rosenstock, Mark. R. Cullen, Carl.A. Bradkin
7. Clays Handbook of Environmental Health. W.H. Basset

Maternal & Child Health
MSc/CM-07

Competencies:

1. Being an efficient public health manager for delivery of maternal and child health services at all levels

Objectives:

To be able to

1. upgrade knowledge related to Maternal, Newborn and Child Health (MNCH), Reproductive Health (RH) and Family Planning (FP)
2. describe organizational structure and service delivery mechanism of all components of maternal and child health services in Sri Lanka
3. describe the principles and evidence based interventions in MCH/FP
4. discuss the international declarations on MNCH/ RH and their application into Sri Lankan context
5. describe national MCH policy, strategic plans on respective components in MCH
6. acquire skills on practical implementation of all components of MCH/FP programme
7. describe the mechanism of monitoring and evaluation of MCH/FP programme
8. discuss the importance of surveillance systems in MCH programme and its implementation
9. acquire problem solving skills in MCH and improve confidence and presentation skills
10. describe the concepts related to new MNCH projects and programmes implemented in the country

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**A.**	**Family Health Programme**	**Lectures**	**4.5**
	01.	**Family health programme (FHP)**	Lecture	1.5
	a.	Development of Family Health programme		
	b.	Components, objectives, strategies and targets		
	c.	Broad Organization structure at central, district and provincial levels for service delivery		
	d.	Achievements & successes		
	d.	Challenges		
	02.	**Roles and responsibilities of health personnel in the FHP**	Lecture	1.5
	a.	Duties of different categories of health staff/overall functions i MOMCH ii RSPHNO iii MOH iv PHNS v SPHI vi SPHM		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**03.**	**Concepts of Reproductive Health (RH) & Millennium Development Goals (MDG)**	Lecture	1.5
	a.	Concept of reproductive health and its components		
	b.	Integration into MCH programme		
	c.	WHO Reproductive health strategy		
	d.	MDG Targets, achievements &challenges		
	B.	**Maternal care**	**Lectures**	**12.0**
	01.	**Maternal care**	Lecture	1.5
	a.	Pre -Conception care		
	b.	Importance of pre-conception care		
	c.	Package for newly married couples		
	02.	**Safe motherhood concept**	Lecture	1.5
	a.	Importance of safe motherhood		
	b.	History of the safe mother hood		
	c.	Safe mother hood concept		
	d.	International conference for population development (ICPD) action plan		
	03.	**Maternal care programme in Sri Lanka & field maternal care services**	Lecture	1.5
	a.	Objectives of the antenatal and postnatal care		
	b.	Service delivery model		
	c.	Package of evidence based interventions for maternal care		
	d.	Screening during pregnancy		
	e.	Basic investigations		
	f.	Monitoring of maternal and fetal wellbeing		
	g.	Micronutrient supplementation		

	04. a. b. c.	**Common medical & obstetric problems during pregnancy &** **management at community level** Common medical & obstetric problems during pregnancy & post-partum period Their management at community level & institutional level Identification and management of risk factors, at field & institutional level	Lecture	1.5
	05. a. b. **c.** d.	**Nutrition of pregnant & lactating mothers** Importance of proper nutrition during pregnancy and lactation Nutritional requirements during pregnancy and lactation Anthropometric assessment & weight gain monitoring during pregnancy Anaemia during pregnancy	Lecture	1.5
	06. a. b. c. d. e.	**Low birth weight prevention** Definition of low birth weight Causes of low birth weight\ Evidence based interventions for prevention of low birth weight Low birth weight and NCD Socio- economic impact of low birth weight	Lecture	1.5

Domain	**Content**		**Delivery Mode**	**Time (hours)**
Knowledge	**07.** a. b. c. d.	**Prevention & control of preterm births** Definition of pre term birth Causes for pre term birth Evidence based interventions for prevention and control of pre term births Impact of pre term births in later life	Lecture	1.5
	08. a. b. c. d.	**Prevention & control of birth defects** Definition of a birth defect Causes for birth defects Evidence based interventions for prevention & control of birth defects Impact of pre-term births in later life	Lecture	1.5
	C.	**Intra-Natal & Newborn Care Programme In Sri Lanka**	**Lectures**	**6.0**
	01. a. b. c. d.	**Intra-natal & newborn care programme in Sri Lanka** Objectives of the intra-natal and newborn care component of the programme Service delivery model Package of evidence based interventions for intra-natal & newborn care Strategies identified to deliver intra-natal and newborn care	Lecture	1.5
	02. a. b.	**Essential obstetric & newborn care** Definitions of essential obstetric & newborn care Evidence based interventions on essential obstetric & newborn	Lecture	1.5

		care		
	c.	Service delivery model		
	d.	Information system for obstetric & newborn care		
	03.	**Newborn care in the community**	Lecture	1.5
	a.	Key components of newborn care in the community		
	b.	Service delivery model for delivery of newborn		
	c.	care in the community		
	d.	Evidence based interventions		
	04.	**Identification & management of common newborn problems**	Lecture	1.5
	a.	Newborn examination in the field clinic		
	b.	Common conditions in the newborn period		
	c.	Management of newborn conditions		
	D.	**Breast Feeding & Young Child Feeding**	**Lectures**	**12.0**
	01.	**Breast feeding programme in Sri Lanka**	Lecture	1.5
	a.	National policy on breastfeeding in Sri Lanka		
	b.	Current status of breastfeeding in Sri Lanka		
	c.	Strategies adopted by the National Breastfeeding Programme in Sri Lanka		

Domain	Content		Delivery Mode	Time (hours)
	02.	**Infant & young child feeding (IYCF)**	Lecture	1.5
	a.	Current nutritional status of under five children		
	b.	Status of IYCF indicators in Sri Lanka		
	c.	Importance of IYCF		
	d.	Problems of complementary feeding		
	e.	Definition, and objectives of complementary feeding		
	f.	Recommendations on IYCF (10 key recommendations)		
	g.	What is done at national level to promote IYCF (policy, strategy, Capacity building, IEC material etc.)		
	03.	**Lactation management**	Lecture	1.5
	a.	Definitions of breastfeeding		
	b.	Knowledge essential to support breastfeeding		
	c.	Essential skills & competencies to support breast feeding		
	d.	Common problems related to breastfeeding & their management		
	04.	**Growth monitoring & promotion (GMP) programme in Sri Lanka**	Lecture	1.5
	a.	Definitions of GMP		
	b.	Objectives of the programme		
	c.	Importance of GMP		
	d.	Indicators to assess growth		
	e.	Frequencies of weight and length/height measurements		
	f.	Definitions of growth faltering, underweight, stunting, wasting and categories (normal growth & global, moderate, severe malnutrition)		
	g.	Key steps in GM		
	h.	Conducting the programme in the field (CWC, weighing posts)		

	i.	Types of anthropometric equipment used in the national programme		
	j.	Technique of weighing, length & height measurements		
	k.	Relevant records and returns		
	l.	Interpreting growth charts and curves and relevant interventions according to the growth status		
	m.	Advantages of GMP		
	n.	Responsibilities of PHM, SPHM, PHNS, MOH, MOMCH in GMP		
	o.	Supervision of the programme		
	05.	**Child Health Development Record (CHDR)**	Lecture	1.5
	a.	Evolution for the CHDR <u>in brief</u> (from foldable card to current booklet)		
	b.	Importance of CHDR		
	c.	Objectives of the CHDR		
	d.	Brief description of all the sections in the CHDR		
	e.	WHO new growth standards in brief		
	f.	Use of CHDR		
	g.	Estimation of requirement, issue, distribution, procedure in the event of loss of CHDR		

Domain	**Content**		**Delivery Mode**	**Time (hours)**
Knowledge	**D**.	**Breast Feeding & Young Child Feeding continued**		
	06.	**Baby Friendly & Mother Friendly Hospital Initiative (BFHI)**	Lecture	1.5
	a.	Introduction to baby friendly concept		
	b.	Ten steps of BFHI		
	c.	Evidence* for the ten steps of BFHI		
	d.	Implementation of ten steps of BFHI		
	e.	Accreditation of BFH		
	f.	Other components of BFHI		
	07.	**Code for monitoring on breast feeding & related products**	Lecture	1.5
	a.	Brief history of the Code, both international & national		
	b.	Aims of the Code		
	c.	Eight articles & their provisions in the Sri Lanka Code in brief		
	d.	Violations & law enforcement		
	e.	Monitoring of the Code		
	08.	**Supportive structures for promotion, protection & support of breastfeeding**	Lecture	1.5
	a.	Identify supportive structures for prevention, promotion & support of breastfeeding		
	b.	Critically review the strengths & weaknesses of the available structures		
	c.	Recommend improvements for the existing structures		
	E.	**Maternal Death Surveillance System**	**Seminars**	**6.0**
	01.	**Maternal death surveillance system**	Student Seminar	3.0
	a.	Different methods of estimating maternal mortality		
	b.	Trends of maternal mortality and statistics		
	c.	Surveillance system in Sri Lanka		
	d.	Successes & challenges		

	e. f.	Proposed mechanisms Near miss inquiry into maternal deaths		
	02. a. b.	**Prevention of maternal mortality – Case studies** Analysis of cases of maternal deaths Discussion on the issues and preventive strategies	Student Seminar	3.0
	F.	**Infant & Childhood Morbidity & Mortality**	**Lectures**	**7.5.**
	01. a. b. c. d.	**Morbidity** Vision & hearing problems among children Common childhood problems in hearing & vision Management Prevention	Lecture	1.5
	02. a. b. c.	**Integrated management of childhood diseases (IMCI)** WHO strategy on IMCI Sri Lankan situation & adaptation to Sri Lanka National programme	Lecture	1.5
	03. a. b.	**Feto-infant mortality surveillance** Current system & proposed mechanism Benefits & challenges	Lecture	1.5

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**04.**	**Childhood injuries**	Lecture	1.5
	a.	Epidemiology of childhood injuries		
	b.	Identify common causes for childhood injuries		
	c.	Prevention of childhood injuries		
	d.	Notification system of childhood injuries		
	05.	**Birth defects surveillance**	Lecture	1.5
	a.	Common birth defects		
	b.	Birth defects surveillance system in Sri Lanka		
	c.	Success and challenges		
	d.	Proposed revisions		
	G.	**Child Development & Special Needs**	**Lectures**	**6.0**
	01.	**Normal development**	Lecture	1.5
	a.	Normal development & developmental assessment among children		
	b.	National Child Development Programme		
	02.	**Common developmental disorders among children**	Lecture	1.5
	a.	PDD-ASD		
	b.	Learning disorders		
	03.	**Physical disabilities among children**	Lecture	1.5
	a.	Cerebral palsy		
	b.	Other physical problems		
	04.	**Behavioural & emotional disorders among children & adolescents**	Lecture	1.5
	a.	ADHD		
	b.	CD		
	c.	ODD		
	d.	Anxiety		
	e.	Depression		
	H.	**School & Adolescent Health**	**Lectures**	**9.0**
	01.	**School Health Programme in Sri Lanka**	Lecture	1.5
	a.	Programme evolution		
	b.	Importance & objectives of the programme		
	c.	Components and implementation		
	d.	Coverage & challenges		
	02.	**School health programme evaluation & management**	Lecture	1.5
	a.	Information system		
	b.	Current system and MIS		
	c.	Monitoring indicators & programme evaluation		

Domain	Content		Delivery Mode	Time (hours)
	03.	**Adolescent Health**	Lecture	1.5
	a.	Growth & Development during adolescence & its implications on health		
	b.	Common Health issues /risk behaviours among adolescents in In Sri Lanka		
	c.	Adolescent sexual & reproductive health (ASRH) & ASRH rights		
	d.	Health promotion including MH promotion, NCD prevention & substance use prevention		
	e.	Service delivery models for adolescents		
	f.	Roles & responsibilities of health personnel in promoting adolescent health		
	04.	**Child abuse**	Lecture	1.5
	a.	Legal framework related to child protection		
	b.	Prevention of child abuse: Roles & responsibilities of health personnel		
	05.	**Life skills development among children**	Lecture	1.5
	a.	Life skills development & its benefits		
	b.	Components		
	c.	Implementation at all levels		
	06.	**Inter-sectoral coordination in improving school & adolescent health**	Lecture	1.5
	a.	Need for inter-sectoral coordination		
	b.	Elements of inter-sectoral coordination		
	c.	Methodologies & forum of inter-sectoral coordination		
	I.	**Women's Health & Reproductive Health (RH) Problems**	**Lectures**	**7.5**
	01.	**Gender & women's health programme**	Lecture	1.5
	a.	Components of women's health programme		
	b.	Implementation of the programme		
	c.	Monitoring and evaluation of the programme		
	02.	**Reproductive tract malignancies: prevention & management**	Lecture	1.5
	a.	Common reproductive organ malignancies (cervical, breast, Uterine, prostatic cancers etc.)		
	b.	Aetiology & clinical presentation		
	c.	Management and prevention		

Domain	Content		Delivery Mode	Time (hours)
	03.	**Well woman clinic programme**	Lecture	1.5
	a.	Rationale and objectives		
	b.	Implementation of programme		
	c.	Cervical screening laboratories		
	d..	Monitoring and evaluation		

	e.	Challenges		
	04.	**Menopause & its related problems**	Lecture	1.5
	a.	Epidemiology		
	b.	Clinical manifestations		
	c.	Management and health promotion		
	05.	**New packages on women's health**	Lecture	1.5
	a	Health of migrants: proposed strategies		
	J.	**Gender & Gender Based Violence (GBV)**	**Lectures**	**6.0**
	01.	**Gender & gender based violence**	Lecture	1.5
	a.	Concepts, terms & issues related to sex & gender		
	b.	Impact of gender on health		
	c.	Male participation		
	02.	**Reproductive health rights**	Lecture	1.5
	a.	Towards gender equity & equality in health		
	b.	Awareness on GBV		
	c.	Availability of services to combat GBV		
	d.	Roles &responsibilities of the health personnel in preventing/ managing GBV		
	e.	Building partnerships/inter-sectoral collaboration		
	03.	**Women's Charter**	Lecture	1.5
	04.	**Domestic Violence Act**	Lecture	1.5
	K.	**Family Planning**	**Lectures**	**9.0**
	01.	**Family planning (FP)**	Lecture	1.5
	a.	National Family Planning Programme (NFPP)		
	b.	History		
	c.	Objectives and strategies of NFPP		
	d.	Methods available		
	e.	Implementation		
	f.	Achievements and challenges		
	02.	**Health and social benefits of FP**	Lecture	1.5
	a.	Health benefits		
	b.	Social and economic benefits of FP		
	c.	Research evidence		
	03.	**Contraceptive technology**	Lecture	1.5
	a.	Methods available in the NFPP		
	b	Action, benefits, disadvantages, contraindications, success & failure rates		
	c.	Management of side effects		
	04.	**Medical eligibility criteria for FP**	Lecture	1.5
Knowledge	**05.**	**Principles of counseling and FP counseling**	Lecture	1.5
	a.	General principles in counseling		
	b.	Application to FP programme		
	06.	**Subfertility**	Lecture	1.5
	a.	Statistics		
	b.	Aetiology & management		
	c.	Role of PHC staff in subfertility		
	d.	Contraceptive logistics		

	e.	Logistics management system on FP		
	f.	Issues in logistics		
	L.	**Monitoring of MCH & FP Programmes**	**Lectures**	**4.5.**
			Seminars	**6.0**
	01.	**Management of information system on MCH**	Lecture	1.5
	a.	Current Management Information system		
	b.	Records & returns used at different levels		
	c.	Implementation		
	d.	Challenges		
	e.	Way forward		
	02.	**Monitoring & evaluation of MCH programme**	Lecture	1.5
	a.	Methods of monitoring of MCH Course		
	b.	Supervision system and its implementation		
	c.	Evaluation of services using indicators at all levels		
	03.	**Short programme review on MCH**	Lecture	1.5
	a.	Introduction to the methodology		
	b.	Discuss with examples with practical application		
	04.	**Organization of MCH services**	Student Seminar	3.0
	a.	In a newly carved MOH area		
	b.	In special situations		
	05.	**Critical discussion on the roles of:**	Student Seminar	3.0
	a.	Present staff involved in MCH & how they be used to provide comprehensive family care		
	b.	Implications of this on the quality of MCH care		
	M.	**Public Health Management of MCH & Reproductive Health in Emergency Situations**	**Lectures**	9.0
Assessment : End of term combined assignment				
Total number of slots = 70 ; Total number of hours = 105.0				
Mode of delivery in hours: Lectures (L)= 93; Student Presentations (SP) = 12;				
Credit points = 6.2 (L) + 0.4 (SP)= 6.6 ≈ 7.0				

Reading Material:

MCH overall

1. National MCH Policy.
2. Annual reports on Family Health – till 2010.
3. MCH Quarterly– Newsletters of FHB
4. Demographic and Health surveys - 1987, 1993, 2000, 2006/7.
5. Modules of Course planning models 1/2/3.
6. MIS Guide for PHM.
7. Supervision tools on PHM/SPHM/PHNS.
8. Duty lists of Public Health Staff.
9. Reproductive Heath strategy – WHO Geneva.
10. Accelerating progress towards the attainment of international reproductive health goals –WHO Geneva.

11. National Level Monitoring Of theAchievement of Universal Access toReproductive Health. WHO Geneva.

Child Nutrition:

1. Sri Lanka Code for Promotion, Protection, and Support of Breastfeeding and marketing of designated products.
2. Breastfeeding Counseling; A training Course, FHB, 2011.
3. Baby Friendly Hospital Initiative; A 20 hour course for maternity staff.
4. Breastfeeding; A guide for the medical professionals, Lawrence and Lawrence.
5. Child Health Development Record.
6. Medical Research Institute (MRI) publications on Nutrition surveys - e.g. Nutrition & Food Security Assessment in Sri Lanka 2010, Surveys on Vitamin A, Anemia, Iodine, etc
7. Guidelines on IYCF.
8. Protocol for managing malnutrition among under-five children in the community.
9. Guideline for feeding infants and preschool children (1-5 yrs.) including orphans during an emergency situation.
10. Guideline on De-worming children and pregnant women in community setting.
11. Circulars on Vitamin A, BMS Code, Thriposha.
12. Management of Severe Acute Malnutrition - Manual for Health Workers.
13. Indicators for assessing IYCF practices- WHO document.

Adolescent Health:

1. ABC of Adolescence - BMJ series.
2. Adolescent Job Aid -WHO publication.
3. Preventing early pregnancy and poor reproductive outcomes among adolescents in developing countries -WHO guidelines.
4. Lancet series on Adolescent Health -2012 [includingworldwide application of prevention science in adolescent health].
5. Making services Adolescent Friendly -WHO guide.

Maternal and Newborn Health:

1. Packages of interventions for family planning, safe abortion care, maternal, newborn and child health _WHO publication.
2. Born Too Soon- The global action report on pre-term birth.
3. Maternal Care Package – A Guide to Field Healthcare Workers, Family Health Bureau, Ministry of Health (2011).
4. Home deliveries in Sri Lanka – FHB publication.
5. Postpartum care; a guide for field MCH staff, FHB, 2007.
6. Labour Room Management Guideline, FHB, 2007.
7. National Strategic Plan on Maternal and Newborn Health, 2012-2016.
8. Pregnancy, Childbirth, Postpartum and Newborn Care; A guide for essential practice.
9. WHO Essential Newborn Care Course; Training Manual.
10. Lancet Neonatal Series.

Maternal Mortality:

1. *Beyond the numbers: reviewing maternal deaths and complications to make pregnancy safer*. Geneva: World Health Organization; 2004.
2. Maternal Mortality Reduction in Sri Lanka. Dr N.W. Vidyasagara. Pub: WHO, 2003. VishvaLekha Printers, Ratmalana, Sri Lanka. ISBN: 955-599-359-9.
3. Maternal Care Package – A Guide to Field Healthcare Workers, Family Health Bureau, Ministry of Health (2011).
4. Measuring maternal mortality: An overview of opportunities and options for developing countries, WJ Graham, S Ahmed, C Stanton, CL Abou-Zahr and OMR Campbell, BMC Medicine 2008, 6:12 (Available from: http://www.biomedcentral.com/1741-7015/6/12).

Feto-Infant Mortality:

1. Fetal and Infant Mortality Review Manual: A Guide for Communities (2nd Edition) http://www.nfimr.org/publications/Fetal_and_Infant_Mortality_Review_Manual_A_Guidefor_Communities_2nd_Edition.
2. Surveillance on Perinatal Mortality- General Circular No: 1 05/2006.
3. The Lancet Stillbirths Series Papers (2011) - http://www.thelancet.com/series/stillbirth.

Nutrition
MSc/CM-08

Competencies:

1. Application of knowledge on nutrition for conducting nutritional surveys and identification of problems.
2. Planning, implementing, monitoring and evaluation of public nutrition programmes
3. Planning nutrition programmes during emergency situations
4. Advocacy, research and networking with relevant stakeholders

Objectives:

To be able to

1. describe the nutritional situation and ongoing interventions of the country
2. describe the assessment of nutritional status at individual and population levels
3. discuss the role of nutrition in infection
4. describe food composition tables, and diet planning concepts
5. describe food additives and its advantages
6. describe prevention and control measures in relation to non-communicable diseases and micro nutrient deficiencies

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.** a. b.	**Introduction to nutrition** Prevalence / present nutrition scenario Multi-sectoral approach in improvement of nutritional status	Lecture	1.5
	02. a. b. c.	**Understanding causes of malnutrition** Immediate causes Underline causes Basic causes	Lecture	1.5
	03. a. b. c.	**Measuring malnutrition in populations** Rapid assessment Surveillance Surveys	Lecture	1.5
	04. a.	**Measuring malnutrition in individuals** Importance of measuring malnutrition Direct: i anthropometry ii biochemical & biophysical iii clinical Indirect: i vital statistics ii dietary surveys	Lecture	1.5

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**05.**	**Nutrition & NCD**	Lecture	1.5
	a.	Importance of nutrition in the origin of NCD		
	b.	Importance of life cycle		
	c.	Effect of overweight, obesity		
	d.	Fast foods & its contents		
	e.	How to prevent NCD		
	06.	**Nutrition requirements in life cycle**	Lecture	1.5
	a.	Key concepts in making energy & nutrient recommendations		
	b.	Energy & nutrient requirements of different age groups		
	07.	**Nutrition & infections**	Lecture	1.5
	a.	Vicious cycle of malnutrition		
	b.	Effects of nutrition on immunity		
	c.	Effects of immunity on nutrition		
	d.	Types of malnutrition which influence infection		
	e.	Physical & psycho social effects of malnutrition		
	f.	Mechanisms by which infections affect nutrition		
	08.	**Diet & disease**	Lecture	1.5
	a.	Trends in chromic disease & possible reasons		
	b.	Dietary approaches to present chronic disease		
	09.	**Supplementary feeding**	Lecture	1.5
	a.	Definition & objectives of supplementary feeding types, bench marks used to guide interventions, on site & take home rations		
	b.	Examples for supplementary foods (Thriposha & super cereal plus) feature of supplementary foods		
	c.	Admission criteria for SFP for MAM child <5 yrs.		
	d.	Follow up of SFP & MAM children		
	e.	Discharge criteria for SFP for MAM children		
	10.	**Food based dietary guidelines (FBDG)**	Lecture	1.5
	a.	Why we need a guideline?		
	b.	Components of FBDG		
	c.	Food groups & serving sizes		
	11.	**Dietary concepts**	Lecture	1.5
	a.	What is a balanced diet?		
	b.	Diet concepts; food groups, food portions		
	c.	Diets around the world and its concepts		
	12.	**Basics in food processing, functional foods & health**	Lecture	1.5
	a.	Why we need to process food?		
	b.	Traditional & new processing techniques: scientific background		
	c.	Definition of functional foods, with examples & principle Mechanisms		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**13.** a. b.	**Introduction to food composition tables** Food databases & amounts of nutrients represented, why we choose these nutrients Errors in using food composition tables/databases applications: household survey, nutritional epidemiology, research, food balance sheets, consumer intake studies & food safety studies	Lecture	1.5
	14. a. b. c. d.	**Therapeutic feeding** Different stages of malnutrition: GAM, MAM, SAM Types of supplementary therapeutic foods Diagnosis of malnutrition stage for therapeutic feeding Locally available therapeutic foods	Lecture	1.5
	15. a. b. c. d. e.	**Nutrition surveillance** What is surveillance? Difference between surveys & surveillance How to develop surveillance system Sri Lankan situation Uses of surveillance system	Lecture	1.5
	16. a. b. c. d.	**Nutrition strategic plan & District Nutrition Action Plan (DNAP)** Why need a policy? Sri Lankan situation Implementation of nutrition policy How to develop strategic plan and DNAP	Lecture	1.5
	17. a. b.	**Nutrition in emergencies** Types of emergencies Measures adopted	Lecture	1.5
	18. a. b.	**Micro-nutrient malnutrition** Vit. A deficiency Iron deficiency	Seminar	1.5
	19. a.	**Micronutrient malnutrition** Iodine deficiency disorders (IDD)	Seminar	1.5
	20.	**Nutrition interventions**	Seminar	1.5
	21.	**Prevention and control of NCDs**	Seminar	1.5
Assessment: End of term combined assignment				
Total number of slots = 21; Total number of hours = 31.5				
Mode of delivery in hours: Lectures (L) = 25.5 : Student seminars (SS) = 6.0				
Credit points = 1.7 (L) + 0.2 (SS) = 1.9 ≈ 2.0				

Reading Material:

1. Food Based Dietary Guidelines -Nutrition Division. Ministry of Health.
2. National Nutrition Policy -Ministry of Health.
3. Assessment of Nutritional Status of School Children Reference Growth Charts- FHB 2010.
4. The National policy & Strategic Framework for Prevention and control of chronic NCDs – Ministry of Health 2010.
5. Desk Review on Nutrition Surveys 2006-2011 - Nutrition Coordination Division/UNICEF.
6. Maternal care package –A guide to Field Healthcare workers - FHB 2011.
7. Guidelines for NCD prevention -Ministry of Health.
8. Guideline for Management of NCDs in Primary Health Care (Total Risk Assessment Approach) Ministry of Health 2012.
9. Manual for NCD screening Ministry of Health 2012.
10. Demographic and Health Survey (DHS) 2006-07.
11. Assessment of Anaemia Status in Sri Lanka – MRI.
12. Management of severe under nutrition- Manual for health workers in Sri Lanka- Ministry of Health 2007.
13. Factors associated with Complementary feeding in Sri Lanka Ministry of Health 2008.
14. Iodine deficiency status in Sri Lanka – MRI 2010.
15. Assessment of Nutritional Status and Food Security Levels among Resettled Families- MRI 2010.
16. Overview of the International food safety Authority Network [INFOSAN] in the Member States of the WHO South –East Asia Region –WHO.
17. Nutrition and Food Security Assessment in Sri Lanka- MRI 2010.
18. Health Sector Guidelines to Prepare District Nutrition Action Plan (DNAP) - Nutrition Coordination Division/ WHO.

Non Communicable Diseases
MSc/CD-09

Competencies:

1. Initiation of programmes directed towards life style modification
2. Prevention and management of NCDs at community level
3. Strengthening screening for NCDs and the risk factors at the community level

Objectives:

To be able to

1. describe categorization of major NCDs
2. describe global and local epidemiology of NCDs
3. describe global action plans and indicators and targets for NCD prevention
4. discuss national NCD policies and its implementation
4. evaluate evidence based interventions for prevention of NCD
5. describe surveillance systems available for NCDs

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Introduction: Chronic NCD**	Lecture	3.0
	a.	Difference between acute & chronic NCDs		
	b.	Distribution of NCDs globally & compared with the SEAR		
	c.	Distribution & trends of NCDs in Sri Lanka		
	d.	Socioeconomic dimensions in the development of NCDs		
	02.	**Risk factors for NCD**	Lecture	3.0
	a.	Risk factors for NCD i Smoking ii Alcohol iii Unhealthy diet iv Physical inactivity		
	b.	Commonality of four major risk factors for development of major NCDs		
	03.	**Interventions to reduce NCDs**	Lecture	3.0
	a.	Evidence based interventions to reduce NCD risk factors		
	b.	Introduction of “Best Buys” and “Good Buys”		
	04.	**NCD Action Plan**	Lecture	3.0
	a.	Global strategy for prevention of NCD		
	b.	Introduction to current indicators & targets		
	c.	Challenges (local) in achieving the targets		
	d.	NCD policy in Sri Lanka & its implementation		
	05.	**Surveillance**	Lecture	3.0
	a.	NCD surveillance systems and limitations		
	b.	Challenges for developing good surveillance systems		
	c.	Suggestions for improvement		
	d.	Introduction of STEP surveillance		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**06.**	**National response**	Lecture	3.0
	a.	Introduction to the National NCD programme		
	b.	Use of primary health care for NCD management		
	c.	Introduction to the "Healthy life style centers"		
	07.	**Multiple risk factor approach**	Lecture	1.5
	a.	Introduction to the WHO/ISH risk prediction chart		
	b.	Introduction to the management protocol for NCD		
	c.	Discuss the challenges in implementing new initiatives		
	08.	**Global, Regional & National initiatives for NCD prevention**	Lecture	1.5
	09.	**Introduction to acute NCD**	Lecture	3.0
	a.	Intentional & unintentional injuries		
	b.	Definitions & classifications of unintentional injuries		
	c.	Epidemiology of unintentional injuries		
	d.	Epidemiological triad in injury causation		
	e.	Introduction to Haddon matrix as injury prevention model		
	10.	**Role of NCD Unit/Ministry of Health on injury management**	Lecture	1.5
	11.	**Role of other systems in the health sector on injury prevention**	SGD[a]	1.5
	12.	**Strengthening organizational capacity for injury management** i Pre-hospital care ii Emergency care iii Rehabilitation	SGD	1.5
	13.	**Injury surveillance system**	Lecture	1.5
Assessments: End of term combined assignment				
Total number of slots = 20 ; Total number of hours = 30.0				
Mode of delivery in hours: Lectures (L) = 27.0 ; *Small Group Discussions (SGD) = 3.0				
Credit points = 1.8 + 0.1 = 1.9 ≈ 2.0				

a-Small group discussion

Reading Material:

1. Global status report non-communicable diseases-2010
2. Scaling up action against non-communicable diseases: How much will it cost? WHO 3.WHO report on global tobacco epidemic 2011
4. Brief profile on tobacco control in Sri Lanka-ministry of Health Care and Nutrition
5. Prevention and control of selected NCDs in Sri Lanka-*Policy Options and Action.* 2010. Michael Engelgau, Kyoko Okamoto, Kumari Vinodhani Navaratne and Sundararajan Gopalan.
6. WHO. Diet, Physical Activity and Health. Geneva: World Health Organization, 2002
7. Low- and Middle-Income Countries From Burden to "Best Buys**":** Reducing the Economic Impact of Non-Communicable Diseases

General Administration & Public Health Management
MSc/CD-10

1. **Healthcare Delivery System**
2. **General Administration**
3. **Management**
4. **Health Information System**
5. **Planning**
6. **Global Health**
7. **Public Health Policy**
8. **Health, Human Rights and Ethics**
9. **Basic Health Economics**

Competencies:

1. Function effectively as an administrator of an institution by demonstrating knowledge in office management
2. Being and effective and efficient manager in administering institutions/programmes
3. Provision of leadership skills as a middle level manager
4. Development of plans for the institution using principles of planning
5. Effectively contribute to policy making
6. Efficiency in planning, implementing and monitoring of programmes/projects
7. Implementing innovative, quality and productivity programmes in the relevant institution
8. Function effectively in centralized and decentralized institutions
9. Ability to carry out disciplinary procedures
10. Function as an efficient financial manager

Objectives:

To be able to

1. discuss principles of human resource management
2. describe office management practices
3. describe disciplinary procedures
4. describe basic principles of management
5. describe leadership skills in relation to motivating staff, team building, conflict resolution, supervision and change management
6. discuss principles of human resource management
7. discuss the health information system at present
8. discuss preparation of a proposal for a selected donor for funding
9. demonstrate use of planning and costing of software

Component 1: Healthcare Delivery System				
Domain	**Content**		**Delivery Mode**	**Time (hours)**
Knowledge	**01.**	**Introduction to healthcare delivery system**	Lecture	1.5
	a.	Available healthcare delivery systems in the government & private sectors		
	b.	Strengths & weaknesses of each system		

	c.	Functioning of healthcare delivery system within decentralized systems		
	02. a. b. c. d. e. f. g. h. i. j.	**Allopathic healthcare delivery system** Organizational structure Curative health care delivery system Re-categorization of health institutions Services provided by each level of care Reorganization of PHC Preventive health services Organization of preventive health services Role of line ministry programmes/directorates Role of regional level health staff Private healthcare system	Lecture	1.5
	03. a. b.	**Other healthcare delivery systems** Government & private sector Ayurveda/Siddha/Unani healthcare delivery systems Government & private sector Homeopathic healthcare delivery systems	Lecture	1.5
Assessment - End of term combined assignment				
Total number of slots = 3; Total number of hours = 4.5				
Mode of delivery in hours: Lectures = 4.5				
Credit Points = 0.3				

Component 2: General Administration				
Domain	**Content**		**Delivery Mode**	**Time (hours)**
Knowledge	**01.**	**Human Resource Management (HRM)**	Lecture	3.0
	a.	HRM, its role, scope and importance in management		
	b.	Factors influencing HRM and key functions of HRM		
	c.	Theoretical and conceptual framework of HRM		
	d.	HRM in practice		
	02.	**Maintaining lines of communication**	Lecture	3.0
	a.	Letter writing		
	b.	Letter writing for different levels		
	c.	Organizational hierarchy		
	d.	Lines of authority		
	e.	Forms of communication		
	f.	Interpretation of circulars		
	03.	**File, vehicle , inventory & consumables management**	Lecture	3.0
	a.	File management		
	b.	Vehicle management		
	c.	Inventory management		
	d.	Consumable management		
Knowledge	**04.**	**Supervision**	Lecture	1.5
	a.	What is supervision		
	b.	What is supervisory authority?		
	c.	Supervisory functions		
	d.	Supervisory skills, rules & principles		
	e.	The supervisory skills needed by a medical administrator		
	05.	**Delegation of power according to the constitution**	Lecture	1.5
	a.	Powers of the Government of Sri Lanka		
	b.	Powers delegated to provinces with regard to health		
	c.	Powers with regard to human resource management		
	d.	Powers with regard to research		
	e.	Powers with regard to capital expenditure/projects		
	06.	**Disciplinary inquiries**	Lecture	3.0
	a.	What is a disciplinary inquiry?		
	b.	Steps in a preliminary investigation		
	c.	Who is disciplinary authority?		
	d.	Preparation of investigation reports		
	e.	Preparation of a charge sheet		
	f.	Disciplinary punishments		
Assessment - End of term combined assignment				
Total number of slots = 10; Total number of hours = 15.0				
Mode of delivery in hours: Lectures = 15.0				
Credit points = 1.0				

Component 3: Management				
Domain	**Content**		**Delivery Mode**	**Time (hours)**
Knowledge	**01.**	**Introduction to Management**	Lecture	1.5
	a.	What is management?		
	b.	Who are managers?		
	c.	Levels of management		
	d.	Management process		
	e.	Management skills		
	02.	**Leadership**	Lecture	1.5
	a.	What is leadership?		
	b.	Trait theory of leadership		
	c.	Style and behavioural theories		
	d.	Types of leadership		
	03.	**Staff motivation**	Lecture	1.5
	a.	What is motivation		
	b.	Theories of motivation		
	c.	Early theories		
	d.	Contemporary theories		
	e.	How to motivate employees		
	f.	Motivating factors		
	g.	Demotivating factors		
	h.	Challenges		
Knowledge	**04.**	**Management of conflicts at workplace**	Lecture	1.5
	a.	Outline the generation of conflict in the workplace		
	b.	Define conflict management and discuss the advantages & disadvantages of conflicts in organization		
	c.	Identify types of organizational conflict		
	d.	Identify sources of organizational conflict		
	e.	Outline styles of conflict management		
	f.	Define negotiation, mediation & arbitration		
	g.	Discuss conflict preventing strategies		
	05.	**Japanese management practices, productivity and quality**	Lecture	1.5
	a.	5S & Kizen in hospital management		
	b.	Current productivity and quality programme		
	06.	**Implementation of productivity programme at MOH level**	Lecture	1.5
	07.	**Organizational change**	Lecture	1.5
	a.	What is organizational change?		
	b.	Forces of change		
	c.	Three stage approach to organizational change		
	d.	Dealing with resistance to change		
	08.	**Role of a Public Health Manager**	Lecture	1.5
	a.	Present health status		
	b.	Challenges faced by curative health sector		
	c.	Challenges faced by public health sector		
	d.	How to face challenges		
Assessment - End of term combined assignment				
Total number of slots = 8; Total number of hours = 12.0				
Mode of delivery in hours: Lectures =12.0				
Credit points = 0.8				

Component 4: Health Information System (HIS)				
Domain	**Content**		**Delivery Mode**	**Time (hours)**
Knowledge	**01.**	**Development of HIS in Sri Lanka**	Lecture	3.0
	a.	The strengths & weakness of the present HIS		
	b.	e-health initiatives taken in the health sector		
	c.	Discuss the planned HIS for the future		
Assessment - End of term combined assignment				
Total number of slots = 2; Total number of hours = 3.0				
Mode of delivery in hours: Lectures = 3.0				
Credit points = 0.2				

Component 5: Planning				
Domain	**Content**		**Delivery Mode**	**Time (hours)**
Knowledge	**01.**	**Introduction to planning**	Lecture	1.5
	a.	What is a plan?		
	b.	Why planning is needed		
	c.	Advantages & disadvantages of planning		
	d.	Types of plans		
	e.	What is a project & a programme		
	f.	Results based planning		
Knowledge	**02.**	**Definition of key terms**	Lecture	1.5
	a.	What are vision, mission, goals, objectives, targets, strategy, Inputs, outputs &outcome?		
	b.	Vision, mission, goals, objectives, targets, strategy, inputs, outputs & outcome of selected programmes		
	c.	What is an Indicator?		
	d.	Defining indicators		
	e.	Setting up targets		
	f.	Interpreting progress/ understanding situation based on indicators		
	03.	**Situation analysis**	Lecture	1.5
	a.	What is situation analysis		
	b.	Different methods used in situation analysis		
	c.	Identification of a problem/ gap		
Skills	**04.**	**Situation analysis of a selected:** MOH area Programme Hospital	Practical	1.5
Knowledge	**05.**	**Use of logical framework analysis (LFA) & Logical Framework Matrix (LFM) in planning**	Lecture	3.0
	a.	What is LFA?		
	b.	How to complete LFA?		
	c.	What is LFM?		
	d.	How to complete LFM?		

Component 5: Planning Continuation				
Domain	**Content**		**Delivery Mode**	**Time (hours)**
Skills	**06.**	**Application of LFA to the selected problem**	Practical	1.5
	07.	**Structure and content of an activity plan**	Practical	1.5
	a.	Components of a plan		
	b.	Development of the plan accordingly		
Knowledge	**08.**	**Risk management**	Lecture	1.5
	a.	What is risk management?		
	b.	Why is risk management necessary?		
	c.	How to maintain risk management register?		
	d.	How to develop a risk management plan?		
	09.	**Monitoring & evaluation**	Lecture	1.5
	a.	What is monitoring?		
	b.	What is evaluation?		
	c.	Why is it necessary to carry out monitoring an evaluation?		
	d.	How to carry out monitoring & evaluation?		
	e.	Comparison of Advantages and disadvantages of monitoring & evaluation		
Skills	**10.**	**Time management and demonstration of Microsoft (MS) project software & a planning & monitoring tool**	Practical	3.0
	a.	What is time management		
	b.	How to carry out time management (activity on nodes method & arrows method)		
	c.	How to develop a Gantt chart		
	d.	How to use MS project in time management		
	11.	**A software health tool to cost public health plans**	Practical	10.5
	a.	How to use the tool		
	b.	What are the assumptions		
	c.	How to forecast cost using the tool		
	d.	Completion of "plans"		
	12.	**Presentation of "plans"**	Seminar	1.5
Assessment - End of term combined assignment				
Total number of slots = 20; Total number of hours = 30.0				
Mode of delivery in hours: Lectures (L)= 10.5; Practicals (Pr) = 18.0; Student presentations (SP) = 1.5				
Credit points = 0.7 (L) + 0.7 (Pr + SP) = 1.4				

Component 6: Global Health				
Domain	**Content**		**Delivery Mode**	**Time (hours)**
Knowledge	**01.**	**International donors & their contribution to health**	Lecture	1.5
	a.	Role of WHO, UNICEF, UNFPA, World Bank, JICA, KOICA & INGOs in the health sector		
	b.	Bi lateral donors		
	c.	Partners in the development of health sector		
	02.	**National planning priorities & process of funding**	Lecture	1.5
	a.	How to apply for funding through External Resources Department		
	03.	**How to develop a proposal for funding**	Lecture	1.5
	a.	How to identify a donor for a health project		
	b.	How to write a proposal to suit the donor requirements.		
Assessment - End of term combined assignment				
Total number of slots = 3; Total number of hours = 4.5				
Mode of delivery in hours: Lectures = 4.5				
Credit points = 0.3				

Component 7: Public Health Policy

Objectives:

To be able to

1. Demonstrate knowledge regarding policy formulation process and the role of public health personal in policy formulation

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.** a. b.	**Policy making process in Sri Lanka** Describe the process of policy making in Sri Lanka Explain the role of public health personal in the process of Policy making	SP[a] Case studies	4.5
	02. a. b.	**Government role in regulating health sector** Identify the Government's role in delivering public goods Analyze the government role in health service regulation in Sri Lanka	Lecture	3.0
	03. a. b.	**Basic principles in interpreting a legal text** Structure of a legal text Different components	SP/SGD[b]	6.0
	04. a. b. c. d. e.	**Legal framework for public health in Sri Lanka** Exiting legal framework on public health Enforcement/ implementing current legislation & monitor their implementation Review of national & international health related legislation Advise on updating existing legislation Identify areas in which legislation is required & advocate for such legislation	SP/SGD	9.0
	05. a. b.	**International treaties & public health** International trade agreements related to health Current debate on health as a commodity	Lecture	3.0
	06.	**Public private partnerships (PPP) in health systems** Principles of public private partnerships Role of public sector in health the health partnerships Case studies in PPP	Lecture	3.0
Assessment - End of term combined assignment				
Total number of slots = 19; Total number of hours = 28.5				
Mode of delivery in hours: Lectures (L) = 9.0 ; Student presentations (SP) = 19.5				
Credit points = 0.6 + 0.7 = 1.3				

a – Student presentations; b – Small group discussions

Component 8: Health, Rights and Ethics

Objectives:

To be able to

1. describe rights based approach to public health
2. critically analyze public health services in the country in relation to human rights

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Health & human rights**	SP[a] SGD[b]	9.0
	a.	International conventions of human rights and health		
	b.	Elements of rights base approach to health		
	c.	Patients charter and global movement on right to health		
	d.	Case studies from global, regional and local		
	02.	**Concepts of equity, equality, liberty and security in relation to public policy**	Lecture	3.0
	a.	Equity, equality, liberty & security in relation to public health		
	b.	Application of each of these concepts in public policy		
	03.	**Ethics in public health practice**	Lecture	3.0
	a.	Evaluation of ethical issues in public health practice		
	b.	Recognize ethical issues pertaining to providing services to special groups (eg: HIV/STI, contraceptives to premarital youth)		
	04.	**Medical negligence and litigation**	Lecture	3.0
	a.	Concept of medical negligence		
	b.	Legal aspects of medical negligence		
	c.	Measures to prevent medical negligence & litigation		
	05.	**Consumer activism in public health**	Lecture	3.0
	a.	History & evolution of consumer rights movement		
	b.	Consumer's right in obtaining Public Health Services		
	c.	Consumer's role in development of public health services		
	d.	Consumer's role in advocacy for public friendly policies in health sector		
Assessment - End of term combined assignment				
Total number of slots = 14; Total number of hours = 21.0				
Mode of delivery in hours: Lectures (L) = 12.0; Small group discussions (SGD) = 9.0				
Credit points = 0.8 (L) + 0.3 (SGD) = 1.1				

Component 9: Basic Health Economics

Competencies:

1. Ability to cost healthcare services and application of economic principles in healthcare

Objectives:

To be able to

1. describe economic concepts related to market behaviour in healthcare
2. discuss basic tools of health economics analysis

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.** a. b.	**Demand & supply of healthcare** Utility, derived demand, price & other determinants of demand & supply Elasticity	Lecture	1.5
	02. a.	**Production of health care** Combining factors of production and determining optimal output	Lecture	1.5
	03. a.	**Market structure in the health sector** Analysis of outcomes given alternative market structures	Lecture	1.5
	04. a.	**The health sector and the macro-economy** Relationships between macroeconomic variables & the health sector & health outcomes: i growth ii unemployment iii inflation iv budget deficits	Lecture	1.5
	05. a. b. c. d.	**Costing of diseases, interventions & health institutions** Concepts related to costing Methods of costing inputs & services Step down cost accounting Scenario building technique	Lecture	1.5
	06. a. b. c. d.	**Introduction to techniques of economic evaluation** Cost minimization Cost- effectiveness Cost-benefit Cost-utility analyses	Lecture	1.5
Assessment - End of term combined assignment				
Total number of slots = 6; Total number of hours = 9.0				
Mode of delivery in hours: Lectures = 9.0				
Credit points = 0.6				

General Administration & Public Health Management
MSc/CD-10

Components		Slots	Delivery Mode# (hours)			Credit Points
			L	SP	C&F	
1	Healthcare delivery system	03	04.5	-	-	0.3
2	General administration	10	15.0	-	-	1.0
3	Management	08	12.0	-	-	0.8
4	Health information system	02	03.0	-	-	0.2
5	Planning	20	10.5	19.5	-	1.4
6	Global health	03	04.5	-	-	0.3
7	Public health policy	19	09.0	19.5	-	1.3
8	Health, human rights and ethics	14	12.0	09.0	-	1.1
9	Basic health economics	06	09.0	-	-	0.6
Total		**85**	**79.5**	**48.0**	**-**	**7.0**

#: L - Lectures; SP+P – Student Presentations + Practical work; C&F – Clinical & Field Work

Reading Material:

Healthcare Delivery System, General administration, Management, Health Information System, Planning, Global Health:

1. Quantum Leadership: Advancing Information, Transforming Health Care. Tim Porter-O'Grady,Kathy Malloch.
2. Understanding Healthcare Financial Management. Louis C. Gapenski,George H. Pink.
3. Health Policy Issues: An Economic Perspective. Paul J. Feldstein
4. Evidence-Based Practice in Nursing & Healthcare: A Guide to Best Practice. BernadetteMazurek Melnyk,Ellen Fineout-Overholt.
5. Ethics in Health Administration: A Practical Approach for Decision Makers. Eileen E. Morrison.
6. Health Economics and Financing. Thomas E. Getzen.
7. Leadership Competencies for Clinical Managers: The Renaissance of Transformational Leadership. Anne M. Barker,Dori Taylor Sullivan,Michael J. Emery.
8. Essentials of Health Care Marketing. Eric N. Berkowitz.
9. Project Planning and Management: A Guide for CNLs, DNPs and Nurse Executives. James L.Harris,Linda A. Roussel,Sandra Walters, Catherine Dearman
10. Human Resource Management. Gary Dessler, Biju Varkkey 11th edition.
11. Management. Stephen P. Robins, Mary coulter, Neharika Vohra. 10th edition.
12. Organizational behaviour. Robins Judge. 13th edition.
13. Organizational Behavior, Theory, and Design in Health Care. Nancy Borkowski.
14. Understanding Health Policy, A Clinical Approach. Thomas Bodenheimer,Kevin Grumbach.
15. Economics for Healthcare Managers. Robert H. Lee.
16. Value Based Health Care: Linking Finance and Quality. Yosef D. Dlugacz.
17. Interpersonal Conflict. William Wilmot, Joyce Hocker.

18. The Well-Managed Healthcare Organization. Kenneth R. White, PhD, FACHE and John R.
Griffith.
19. Managing Health Services Organizations and Systems. Beaufort B. Longest, Kurt Darr.
20. Delivery excellence in health and social care. Max Million.
21. Management principles for health. Joan Gretto Libbe, Charler Mcconnell.
22. Healthcare Operations Management. Daniel B. McLaughlin, John R. Olson.
23. Healthcare Strategic Planning. Alan M. Zuckerman.
24. Healthcare Facility Planning: Thinking Strategically. Cynthia Hayward

Public Health Policy & Health, Human Rights & Ethics:

1. Weerasinghe, M C., Concerns for policy: Comprehensive Economic Partnership Agreement in relation to health sector. Journal of Community Physicians of Sri Lanka. 2008, 13 (1)
2. Website of World Trade organization- Legal text of GATS and TRIPS agreements- http://www.wto.org/
3. Website of Third World Network-http://twnside.org.sg/fta.archives.htm
4. Keane C R., Weerasinghe, M C., Public Private Mix in Health Systems. In: Kris Heggenhougen and Stella Quah, editors International Encyclopedia of Public Health, Vol 5. San Diego: Academic Press; 2008. pp. 440-447. (available in Faculty of medicine Colombo Library)

Health Economics:

1. Economics.Begg, David, Fischer, Stanley and Dornbusch, Rudiger, McGraw-Hill Publishers Inc. 2005
2. Economics. Samuelson, Paul A and Nordhaus, William D, Irwin-McGraw-Hill 2009 - www.ips.lk/talkingeconomics/2011/04 www.ips.lk/talkingeconomics/2013/04
3. Central Bank of Sri Lanka, Annual Reports
4. http://www.ram.com.lk/reports/0313_healthcare_final.pdf(on private sector)
5. Rannan-Eliya, Ravi P., and Lankani Sikurajapathy. 2008. Sri Lanka: "Good Practice" in Expanding Health Care Coverage." Research Studies Series, Number 3, Colombo, Institute for Health Policy.
6. Drummond, M.F., O"Brien, B.J., Stoddart, G.I and Torrance, G.W – Methods for the Economic Evaluation of Health Care Courses
7. de Silva, Amala, Samarage, S.M and Somanathan, Aparnaa, Review of Costing Studies in Sri Lanka 1990-2004, National Macroeconomics and Health Commission publication, 2007

Social Welfare & Rehabilitation Services
MSc/CD-11

Competencies:

1. Recognition of social welfare and rehabilitation needs of the community
2. Referring the disabled for appropriate care
3. Provision of advocacy

Objectives:

To be able to

1. Identify the social welfare and rehabilitation needs of the community
2. Outline the social welfare and rehabilitation services available
3. Advise on the social services and rehabilitation services available to the disabled

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Introduction to social welfare & rehabilitation**	Lecture	1.5
	a.	Definitions : Social welfare & rehabilitation		
	b.	Conceptual basis for understanding the structure & dynamics of the social welfare system		
	c.	Legislative & policy framework & human rights		
	02.	**Roles & functions of the Ministry of Social Welfare**	Lecture	1.5
	a.	Vision, mission & objectives		
	b.	Structure & functions		
	c.	Institutions & services		
Skills	**03.**	**Role of the community & NGOs in rehabilitation**	Lecture	1.5
	a.	Concept of community based rehabilitation		
	b.	Basic principles of CBR		
	c.	Multi-sectoral support		
	04.	**Social rehabilitation**	Lecture	1.5
	a.	Meaning of social rehabilitation		
	b.	Main social sectors involved		
	c.	Social context of rehabilitation		
	d.	Scope of social rehabilitation		
	05.	**Disability & development**	Lecture	1.5
	a.	Definitions: Disability – social, physical, impairment & handicap		
	b.	Models of disability		
	c.	Dimensions of disability		
	d.	Development		
	e.	Issues related to disability: poverty, attitudes		
	f.	Involving people with disabilities		
	g.	Economics of disability		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**06.**	**Rehabilitation of differently-abled** Misconceptions Conventions, Policies & Legislation Empowerment & Education Social integration Livelihood support Mobility devises Phsiotherapy	Lecture	3.0
	07.	**Prosthetic & Orthotic School & Workshop at RVS**	Field visit	3.0
	08.	**Rehabilitation of drug dependents** National Dangerous Drugs Control Board Roles & Functions Rehabilitative services Research	Lecture	1.5
	09.	**Treatment & Rehabilitation Centre, Talangama**	Field visit	3.0
Assessment - End of term combined assignment				
Total number of slots = 12; Total number of hours = 18.0				
Mode of delivery in hours: Lectures (L) = 12.0; Field visits (FV) = 6.0				
Credit points = 0.8 (L) + 0.1 (FV) = 0.9 ≈ 1.0				

Reading Material:

1. Alailima P., Provision of Social Welfare Services, Sri Lanka Journal of Social Sciences, 1995, 18(1 & 2)
2. National policy on disability for *Sri Lanka* - Ministry of *Social* Services
3. MendisPadmini, Disability and Community Based Rehabilitation (in Sinhala)
4. MendisPadmini, Community Leadership and Community Based Rehabilitation in Sri Lanka
5. www.**socialwelfare**.gov.lk/web/images/stories/pdf/.../disability_policy.pdf
6. http://www.businessdictionary.com/definition/social-welfare.html#ixzz2TbLUMuJ4
7. http://www.nisd.lk/web/index.php/en/component/content/article/122-article3.html
8. http://www.nddcb.gov.lk/index.html
9. http://www.nddcb.gov.lk/services.html

Health Promotion
MSc/CD-12

Competencies:

1. Educate and motivate people at individual and family level to adopt positive health behaviours
2. Plan, implement and evaluate health promotion programmes
3. Effective use of participatory approach in health education and health promotion
4. Conduct counseling sessions and follow up of counselees
5. Identification and use of community based resources to promote health, ensuring inter sectoral collaboration and community participation
6. Carrying out advocacy in public health related issues

Objectives:

To able to:

1. describe the definitions of health, health promotion, health education, primary health care and public health
2. discuss the meaning of community, society, community health and public health
3. identify the organization of health education services in Sri Lanka
4. identify the concept, process, types and barriers for communication
5. identify basic communication skills and how to improve them
6. discuss the factors affecting human behavior
7. identify the concept, steps and uses of Behaviour Change Communication (BCC)
8. identify the concept, steps and uses of Social Marketing
9. describe the objectives, principles and methods of health education
10. define counseling and list the steps in counseling
11. identify situations for counseling of individuals, families and groups
12. conduct counseling sessions and follow up counselees
13. identify the main characteristics and principles of preparation of IEC (Information, Education and Communication) Material / Health Learning Material (HLM)
15. describe definition, importance and levels of inter sectoral cooperation
16. identify the principles of making a community diagnosis and an educational diagnosis
17. discuss the definition and process of advocacy
18. define health promotion settings
19. discuss settings approach in health promotion especially in the community, occupational settings, schools and hospitals
20. discuss the features of health promotion policy and the challenges for its implementation
21. describe the definition, types and uses of participatory methods

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Introduction to the basic concepts**	Lecture	1.5
	a.	Health & public health		
	b.	Community health		
	c.	Health promotion		
	d.	Health education & primary health care		
	e.	Community & society		
	02.	**Organisation of health education services in Sri Lanka**	Lecture	1.5
	a.	Structure and the functions of Health Education Bureau (HEB)		
	b.	Organization of the provincial health educational services		
	c	Hospital health education activities		
	03.	**Introduction to communication**	Lecture	1.5
	a..	The concept of communication		
	b.	Process of communication		
	c.	Types of communication		
	d.	Communication barriers		
	e.	Requirements for effective communication		
Skills	**04.**	**Communication skills**	Lecture	3.0
	a.	Reading skills (SQR4 method)		
	b.	Checking one's reading speed		
	c.	Active listening skills		
	d.	Skills in delivering a health education talk		
	e.	Checklist for assessing a health education session/ communication skills		
	f.	Technical writing		
	g.	Use of pronunciation marks		
	h.	Study skills		
	i.	Effective note taking		
	j.	Electronic communication skills: surfing internet, email, blogging, social networking, web publishing & tweeting		
	k.	Conducting a group discussion		
	l.	Checklist to assess the effectiveness of a group discussion		
Knowledge	**05.**	**Human behavior & behaviour change**	Lecture	1.5
	a.	Factors affecting human behavior: genetics**,** core faith & culture, social norms, attitudes, emotions, values, ethics authority, rapport, hypnosis, persuasion & coercion		
	b.	Explaining human behaviour: theoretical principles & models used to understand & influence the behavioral aspects of health & illness		
	06.	**Behaviour change communication (BCC)**	Lecture	3.0
	a.	What is BCC		
	b.	Process of BCC		
	c.	BCC steps		
	d.	Development of a BCC intervention		
	e.	BCC pyramid		
	f.	Uses of BCC		
	g.	Limitations of BCC		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**07.**	**Social marketing**	Lecture	1.5
	a.	What is social marketing?		
	b.	Applications		
	c.	Types		
	d.	COMBI (Communication for behavioural impact)		
	e.	IEC (Information, education & communication)		
	f.	Communication Strategic Plan		
	08.	**Introduction to health education**	Lecture	3.0
	a.	Definition & objectives of health education		
	b.	Principles of health education		
	c.	Methods of health education		
	d.	Steps in planning a health education programme		
	e.	Evaluation of community based health education programmes		
	09.	**Human behavior & social sciences**	Lecture	3.0
	a.	What is science?		
	b.	When the knowledge is considered scientific?		
	c.	Scientific method,		
	d.	Difference between social and physical sciences		
	e.	How human behaviour is analyzed in the social sciences: Anthropology, Sociology, Economics, Politics, Geography/Ecology & Linguistics		
	10.	**Community diagnosis & educational diagnosis**	Lecture	1.5
	a.	Definition		
	b.	Importance		
	c.	Methods		
	d.	Instruments for community diagnosis & educational **diagnosis**		
	11.	**IEC & Health Learning Materia (HLM)**	Lecture	3.0
	a.	Definitions		
	b.	Characteristics of good IEC / HLM		
	c.	Classification		
	d.	Principles of preparation		
	e.	Pretesting of IEC/HLM		
Skills	**12.**	**Counselling**	Lecture + SP#	1.5 1.5
	a.	Definition		
	b.	Models of counseling		
	c.	Client-centered (humanistic) counseling		
	d.	Empathy		
	e.	Identification of situations for counseling		
	f.	Steps in counseling		
	g.	Evaluation of a counseling session		

- Student presentations

main	Content		Delivery Mode	Time (hours)
Knowledge	**13.**	**Inter-sectoral cooperation**	Lecture	1.5
	a.	Definition		
	b.	Importance of inter-sectoral cooperation		
	c.	Levels		
	d.	Other sectors of importance with regard to health development & their contribution to health development		
	14.	**Advocacy**	Lecture	1.5
	a.	Definition		
	b.	Forms		
	c.	Advocacy groups		
	d.	Public health advocacy		
	15.	**Health Promotion**	Lecture	3.0
	a.	Definition		
	b.	Ottawa Charter		
	c.	Differences between health education & health promotion		
	d.	Ottawa Charter's health promotion action areas		
	e.	Health promotion settings		
	f.	Health promoting schools		
	16.	**Community participation & participatory methods**	Lecture	3.0
	a.	Definition of participation		
	b.	Definition of participatory methods		
	c.	Types of participatory methods		
	d.	Their uses & limitations		
	e.	Ensuring community participation		
	17.	**Mental health promotion & life skills**	Lecture	1.5
	a.	Mental health promotion: what is it?		
	b.	Evidence based approached to mental health promotion		
	c.	Indicators of improved mental health		
	d.	Child friendly schools		
	e.	Life skills		
	f.	Training on life skills		
	g.	Collaboration of health & educational sectors		
	18.	**Health Promotion in the community: community empowerment**	Lecture	3.0
	a.	What is empowerment?		
	b.	Challenges in empowering individuals		
	c.	Success stories in health promotion in the community		
	19.	**Hospital health promotion**	Lecture	1.5
	a.	Definition		
	b.	Health promoting hospital guidelines: Budapest declaration		
	c.	Activities of a health promoting hospital		
	d.	Quality in patient care		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**20.** a. b.	**Health promotion policy** Introduction to the health promotion policy Applications & challenges for its implementation	Lecture	1.5
Assessment - End of term combined assignment				
Total number of slots = 29; Total number of hours = 43.5				
Mode of delivery in hours: Lectures (L) = 42.0; Student presentations (SP) = 1.5				
Credit points = 2.8 (L) + 0.05 (SP) = 2.85 ≈ 3.0				

Reading Material:

1. The Ottawa Charter for Health Promotion: http://www.who.int/healthpromotion/conferences/previous/ottawa/en/
2. Draft Sri Lanka National Health Promotion Policy http://whosrilanka.healthrepository.org/bitstream/123456789/290/1/Sri%20Lanka%20National%20Health%20Promotion%20Policy-%20final%20draft-.pdf
3 Client-centered therapy http://en.wikipedia.org/wiki/Person-centered_therapy
4 Health Education Bureau: Services http://www.healthedu.gov.lk/web/index.php?option=com_content&view=article&id=43&Itemid =34&lang=en
5 Communication Skills: Fran Beisler, Hermine Scheeres, David Pinner, available at the NIHS Library.

Mental Health
MSc/CD-13

Competencies:

1. Promotion of mental wellbeing/health in the community and among specific settings: home, schools, work place
2. Prevention of development of mental illness in the community and among specific settings
3. Screening and referral of persons with mental illness for appropriate care and rehabilitation

Objectives:

To be able to:

1. describe the concepts of mental wellbeing and the full spectrum of mental health
2. describe the principles of promotion of mental health and prevention of mental illnesses
3. promotion of mental wellbeing and prevention of mental illness at home, schools, work place
4. discuss the stressors in life
5. develop skills of counseling
6. describe common mental illnesses and their epidemiology: global/regional/Sri Lankan
7. discuss the role of the MOH, PHM and PHI in promotion of mental health and prevention of mental illnesses
8. describe the organization of mental health services: preventive, curative and rehabilitation services in the country
9. describe epidemiology, methods of prevention of alcohol related harm and substance abuse, violence and suicide

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**An overview of mental wellbeing**	SGP# + Role play	1.5
	a.	Concept of complete health		
	b.	Concept of mental wellbeing		
	c.	Spectrum of mental health		
	02.	**Mental health promotion & prevention of mental illnesses**	SGP + Role play	1.5
	a.	Concept of promotion of mental wellbeing eg: role of recreation, exercise & food		
	b.	Happiness and contentment		
	c.	indicators of happiness-eg-Gross national happiness & Gross domestic happiness		
	03.	**Promotion of mental health in the community**	Role play	1.5
	a.	Epidemiology of mental health		
	b.	Concept of promotion of mental health status of a community		
	e.	Strategies for mental health promotion in the community e.g. meditation, happiness training, peer group training		

– Small group discussions

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**04.**	**Stressors in life**	Lecture	1.5
	a.	Stressors in day to day life: relationship issues anger, dissatisfaction & unhappiness		
	b.	Dealing with stressors		
	05.	**Mental health promotion in the family**	Lecture	1.5
	a.	Strategies for mental health promotion in the family: Family education on marital harmony, parenting, management of family economy		
	06.	**Mental health promotion among children**	Lecture	1.5
	a.	Role of schools in promoting mental health among children: friendly & non-harassing & non- violent environment		
	b.	How to link with the education system to promote mental health		
	c.	Preventing mental illnesses among children		
	d.	Services available for children with mental illnesses		
	07.	**Mental health promotion at the work place**	Lecture	1.5
	a.	Concept of mental health promotion at work place		
	b.	Strategies for mental health promotion at work place: Eg; effect of physical environment		
	c.	Worker friendly, positive, non-harassing management,		
	d.	Preventing mental illness related to work place		
	08.	**Early detection of deterioration of mental health**	Lecture	1.5
	a.	Early detection of mental ill health at population level: increasing trends in the crime rate, road traffic accidents		
	b.	Human psychological index		
	c.	Early detection of mental ill health among individuals: unhappiness		
	d.	Methods of detection/screening: at schools, primary care settings, work place		
	09.	**Role of the public health team in mental health promotion & prevention of mental illness**	Lecture	1.5
	a.	Role of different categories of public health staff in promotion of mental wellbeing: MOH, PHM, PHI		
	b.	Role of different categories of public health staff in prevention of mental ill health		
	10.	**National mental health policy & organization of mental health services in Sri Lanka**	Lecture	1.5
	a.	Objectives & strategies of the national mental health policy		
	b.	Operationalization of the national policy		
	c.	Role of different stakeholders-health (curative & public health) & non health		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**11.**	**Promotion of mental wellbeing among those with mental illness**	Lecture	1.5
	a.	Overview of minor and major mental illness		
	b.	Prevalence and distribution: global, regional & Sri Lankan situation		
	c.	Care for persons with mental illnesses including rehabilitation		
	d.	Role of public health staff in proving care for persons with mental illnesses including rehabilitation in the community		
	12.	**Community support centers & rehabilitation centers**	Lecture	1.5
	a.	Community support centers		
	b.	Rehabilitation centers		
	13.	**Prevention of alcohol related harm & substance abuse**	Lecture	1.5
	a.	Epidemiology of alcohol related harm & substance abuse: global/regional/Sri Lankan situation		
	b.	Methods of prevention		
	c.	Services available for care and rehabilitation of persons with alcohol related harm & substance abuse		
	14.	**Prevention of violence**	Lecture	1.5
	a.	Types of violence & epidemiology: global/regional/Sri Lankan situation		
	b.	Risk factors among different groups: school children & youth		
	c.	Methods of prevention of violence		
	d.	Services available for care and rehabilitation		
	15.	**Prevention of suicide**	Lecture	1.5
	a.	Epidemiology of suicide & self-harm: global/regional/ Sri Lankan situation		
	b.	Risk factors		
	c.	Methods of prevention		
Assessment: End of term combined assignment				
Total number of slots = 15; Total number of hours = 22.5				
Mode of delivery in hours: Lectures (L) = 18.0 ; Student presentations (SP) = 4.5				
Credit points = 1.2 (L)+ 0.2 (SP) = 1.4 ≈ 1.0				

Reading Material:

1. Mental health policy of Sri Lanka, 2005-2015, Ministry of Health,
2. Mental Health Care in Sri Lanka, New Directions-Jayan Mendis & Shehan Williams,Published by the Sri Lanka College of Psychiatry, 2011
3. National report on violence and health in Sri Lanka, Ministry of Health and WHO jointpublication, 2008
4. Strengthening primary care to address mental and neurological disorders, WHO/SEARO,2012
5. Perfect Mental Health-An Exposition of Contemplative Neuro-Scientific Reality of Mindand Body Consciousnes. Dr. Wasantha Gunathunga. Published 2010 by Department of Community Medicine, Faculty of Medicine, Colombo

6. Oxford textbook of Psychiatry-Chapter on Community Psychiatry
7. Text book of Community Psychiatry-Graham Thornicroft, George Szmukler, 2001,Oxford University Press

Personal & Professional Development
MSc/CD-14

Competencies:

a. Being equipped with soft skills necessary to effectively function as a medical professional

Objectives:

To be able to

1. Describe the need for professional development
2. Describe the soft skills needed for a professional

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.** a.	**Introduction to personal & professional (PPD) module** Need for personal & professional development	Lecture	1.5
Skills	**02.** a.	**Negotiating skills** Negotiate for a win-win outcome	Role play	1.5
Knowledge	**03.** a. b. c. d.	**Soft skills of a professional (I)** Patience Concentration Being free from personal biases & prejudices Training the mind	Lecture	1.5
Skills	**04.**	**Soft skills of a professional (II)**	SGP#	1.5
	05. a.	**Debating & advocacy skills** A debate on a current topic		1.5
Knowledge	**06.** a. b. c.	**Professionalism** Professional manner in dealing with people Being a team member, Leader with modern professional etiquette	Lecture	1.5
	07. a.	**Change catalyst** Making changes & maintaining change	Lecture	1.5
	08. a.	**Giving an effective oral presentation** Communicate effectives to an audience using verbal, nonverbal languages with effective audiovisual use	Lecture	1.5
	09. a.	**Being a self directed learner** Continuous self improvement with reflective practice	Lecture	1.5
	10. a.	**Positive thinking** Seeing the positive aspects and opportunities in relation to professional and personal matters	Lecture	1.5
	11. a.	**Time management** Effective use of time by planning, and managing & improving unit time performance	Lecture	1.5

– Small group presentations

Assessment: End of term combined assignment
Total number of slots = 11; Total number of hours = 16.5
Mode of delivery in hours: Lectures (L) = 12.0 ; Student presentations (SP) = 4.5
Credit points = 0.8 (L) + 0.2 (SP) = 1.0

Reading material:

1. Handbook of Workplace Spirituality and Organizational Performance [Hardcover].RobertGiacalone,Carole L. Jurkiewiez(Editors).
2. Perfect Mental Health. Wasantha Gunathunga.
3. http://www. Mindtools.com
4. www.perfectmentalhealth.org
5. http://www.skillsyouneed.com/ips/negotiation.html
6. https://www.ldsjobs.org/ers/ct/articles/effective-negotiation-skills?lang=eng7.http://www.mindtools.com/CommSkll/NegotiationSkills.htm

Medical Sociology & Anthropology
MSc/CM-15

Competencies:

1. Being aware of factors that affect the use of health care facilities by individuals
2. Appraise current national and local policies designed to reduce inequalities in health

Objectives:

To be able to

1. describe concepts of health, illness and sickness
2. discuss health and healing as a part of culture
3. appraise pluralistic nature of healthcare system
4. describe the impact of social and economic factors on health and ill-health
5. analyze market forces in reshaping health and illness
6. describe the relevance of ethnography in public health

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Basic concepts in social aspects of health**	Lecture	1.5
	a.	Concepts of health, illness and sickness		
	b.	Health and healing as a part of culture		
	02.	**Health seeking behaviour**	Lecture	3.0
	a.	Pluralistic nature of healthcare system		
	03.	**Medicalization of health**	Lecture	3.0
	a.	Impact of social & economic factors on health & ill health		
	b.	Market forces in reshaping health & illness		
	04.	**History & utility of ethnography in public health**	Lecture	3.0
	a.	Relevance of ethnography in public health		
Assessment: End of term combined assignment				
Total number of slot = 7; Total number of hours = 10.5				
Mode of delivery in hours: Lectures = 10.5				
Credit points = 0.7 ≈ 1.0				

Reading Material:

1. Helman Cecil. 2007. Culture Health and Illness 5th Edition, Hodder Arnold, London
2. Kleinman, A., 1980, Patients and Healers in the context of Culture: An Exploration of the Borderland between Anthropology, Medicine and Psychiatry, University of California Press, Berkeley.
3. Ivan illich. The Medicalization of life in Journal of Medical Ethics, Volume 1, Issue 21975;1:73-77
4. Chandani Liyanage. 2002. Treatment seeking behaviour in Health sector in Sri Lanka: Current status and challenges published by Health development and Research Programme, University of Colombo.
5. Nettleton, Sarah. 1995. The Sociology of Health and illness. United Kingdom, Polity Press.
6. Weerasinghe M C, Fernando, D N., Paradox in Treatment Seeking: An Experience From Rural
   Sri Lanka, *Qualitative Health Research*, 2011, 21(3), 365-372.
   DOI:10.1177/1049732310385009

Dental Public Health
MSc/CD-16

Competencies:

1. Use WHO Basic Methods in a standardised manner in field surveys
2. Screen populations to detect oral potentially malignant oral disorders and organise screening programmes and train health workers to carry out such procedures.
3. Provide leadership, expertise and advice in the prevention of oral cancer in Sri Lanka
4. Carry out epidemiological surveys of oral disease, critically interpret and adapt existing epidemiological information when planning dental services, participate in future national oral health surveys.
5. Undertake both clinical and community prevention of common oral diseases
6. Inform and educate relevant authorities about the importance of health considerations in economic policy formulation
7. Contribute to human resource development in oral health and argue the case for the wider utilization of dental auxiliaries in Sri Lanka
8. Critically assess local oral health care provision and propose innovations based on strategies that have been effective in other parts of the world
9. Plan, implement and evaluate a Oral Health Care Programme

Objectives:

To be able to

1. Describe the epidemiology of common oral diseases and conditions
2. Describe the different strategies and techniques for prevention of oral diseases at community and individual levels
3. Describe oral health survey methods and indices used in oral epidemiology
4. Describe the oral health care work force - their duties, limitations and potential for their expanded use
5. Have an understanding of planning and organization of different types oral health care delivery systems globally, their structure, methods of financing, remuneration and limitations

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Introduction to dental public health**	Lecture	1.5
	a.	Principles of dental public health		
	b.	Role of social determinants of health		
	c.	Contemporary challenges to oral health priorities		
	02.	**Oral health survey methods & indices in oral epidemiology**	Lecture	1.5
	a.	Clinical indices used to estimate periodontal disease		
	b.	Criteria & application of the WHO Basic Methods for surveys of dental caries		
	c.	Criteria & application of the WHO CPI, indices of dental fluorosis and malocclusion		
	03.	**Diet & dental caries**	Lecture	1.5
	a.	Evidence for role of diet & nutrition in oral health		
	b.	Dietary advice to be given to the public for the prevention of oral diseases		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**04.**	**Oral cancer epidemiology & prevention**	Lecture	1.5
	a.	Aetiology & global epidemiology of orofacial neoplasms with special reference to risk factors		
	b.	Impact of screening on oral cancer mortality & prevention of oral cancer		
	c.	Techniques and strategies for prevention of oral cancer		
	05.	**Oral disease patterns in Sri Lanka (National Oral Health Survey)**	Lecture	1.5
	a.	Oral disease patterns in Sri Lanka		
	b.	Research methods used for national surveys of oral health in Sri Lanka		
	06.	**Epidemiology of dental caries**	Lecture	1.5
	a.	Global burden of dental caries		
	b.	Risk factors including its social determinants		
	c.	Risks to health posed by dental caries		
	d.	Impact of changing patterns of dental caries worldwide on the tasks of oral health workers.		
	07.	**Epidemiology & prevention of periodontal disease**	Lecture	1.5
	a.	Risk factors for chronic periodontitis		
	b.	Global distribution of periodontal disease		
	c.	Advances in the progression of periodontal disease		
	d.	Strategies and approaches in the prevention of periodontal disease		
	08.	Principles and practice of oral health promotion	Lecture	1.5
	a.	Key principles of oral health promotion		
	b.	**Application of strategies mentioned in the Ottawa charter for Health Promotion in oral health promotion**		
	c.	Partners and settings for oral health promotion		
	09.	**Dental care delivery systems worldwide**	Lecture	1.5
	a.	Range & diversity of oral health care systems globally		
	10.	**Oral health inequalities & human poverty**	Lecture	1.5
	a.	Evidence for social inequalities in oral health		
	b.	Explanations for social inequalities in oral health & poverty		
	11.	**Public health approaches for prevention**	Lecture	1.5
	a.	Upstream/downstream perspective on disease prevention		
	b.	Whole population &risk approaches to prevention		
	c.	Common risk factor approach to prevention of oral disease		
	d.	Screening		
	12.	**Organization of dental services in Sri Lanka:**	Lecture	3.0
	a.	Structural & functional aspects of oral health services at national & regional level		
	b.	Limitations of oral health care services in the provision of oral health care		

Domain	Content		Delivery Mode	Time (hours)
	13.	**Fluorides & oral health**	Lecture	3.0
	a.	Different modalities of use of fluorides in both clinic & Community in the prevention of dental caries		
	b.	Remineralization action of fluoride		
	c.	Nature & mechanisms of dental fluorosis		
	d.	WHO conclusions & recommendations pertaining to fluoride use		
	14.	**Population strategies for prevention of oral diseases**	Lecture	1.5
	a.	Critically assess the various options to prevent common oral diseases		
	b.	Preventive and health promotion approaches to appropriate for prevention and control of oral diseases		
	15.	**Monitoring & evaluation of dental services**	Lecture	1.5
	a.	Criteria for evaluating dental services		
	b.	Barriers to receipt of oral health care		
	c.	Quality in oral health care; clinical audit, clinical governance		
	16.	**Planning of dental public health services in Sri Lanka**	Lecture	1.5
	a.	Description of structure, features & functions of dental public health services in Sri Lanka		
	17.	**Population strategies for prevention of oral diseases**	Lecture	1.5
	a.	Description of the stages in planning a preventive strategy		
	b.	Designing a strategy to tackle a major oral health problem		
	18.	**Integration of oral health care within MCH & school medical services**	Lecture	1.5
	a.	Description of the role of MCH & school medical services in oral health promotion		
	19.	**Human resources for oral health & planning of dental services**	Lecture	1.5
	a.	Outline of the basic steps in the planning cycle		
	b.	Description of the different methods of dental work force planning		
	c.	Description of the range of information needed in planning dental services		
	20.	**Economics of dental care**	Lecture	1.5
	a.	Definition of health economics		
	b.	Understand why health economics are a part of modern health services		
	c.	Description of the main types of economic analyses		
	21.	**Filed visits to: Preventive Dental Unit, Dental Institute Colombo, Institute of Oral Health, School Dental Clinic & Adolescent Dental Clinic**	Field visits	16.5
	a.	Overview of the organization, functions and duties of personnel attached to these units		
Assessment - End of term combined assignment				
Total number of slots = 33; Total number of hours = 49.5				
Mode of delivery in hours: Lectures (L) = 33.0, Field training (FT) = 16.5				
Credit points = 2.2 (L) + 0.4 (FT) = 2.6 ≈ 3.0				

Reading material: Trainees will be provided with a dossier containing latest journal articles on the above topics.

Research Methodology
MSc/CD-17

Competencies:

1. plan and conduct a research project conforming to scientific reasoning
2. preparation of a research report based on principles of scientific writing
3. ability to critically appraise a research article
4. disseminate the findings through publishing a scientific article in a peer reviewed journal

Objectives:

To be able to

Develop knowledge and skills of the trainee to plan and conduct a research project based on scientific and ethical principles, analyze data using appropriate statistical methods, derive conclusions and recommendations applicable to the findings and to present the findings in a scientific report conforming to principles of scientific writing.

Domain	Content		Delivery Mode	Time (hours)
Knowledge	01. a. b. c. d. e. f.	What is research? Defining a research Importance of research evidence Scope of the research to be conducted Research priorities of Sri Lanka Published lists of research priorities Advantages in researching prioritized themes	Lecture	1.5
	02. a. b. c.	Identifying a research topic How to identify a research topic Factors to consider when identifying a research topic Discussion on research topics identified by trainees	Lecture	1.5
	03. a. b. c.	Development of a conceptual framework for research problems Advantages of a conceptual framework Developing a conceptual framework for the research Discussion on developing conceptual frameworks for research identified by the trainees	Lecture	1.5
	04. a. b. b.	Literature review Sources of literature Identification of literature relevant to research topic chosen Critical reviewing and identification of and extraction of relevant information Critical reviewing and identification of and extraction of relevant information	Lecture	1.5

Domain	Content		Delivery Mode	Time (hours)
Knowledge	05.	Formulating objectives/hypothesis	Lecture	1.5
	a.	Importance of objectives		
	b.	Rules of formulating objectives		
	c.	General vs specific objectives		
	d.	Discussion on formulating objectives for research identified by the trainees		
	06.	**Managing references**	Lecture	1.5
	a.	Managing references using different techniques		
	b.	Demonstration of a reference managing software Discussion on managing references		
	07.	**Operationalizing the variables**	Lecture	1.5
	a.	Need to operationalize variables		
	b.	Issues related to operationalizing variables		
	c.	Discussion on operationalizing variables for researches identified by the trainees		
	08.	**Identifying dependent and independent variables**	Lecture	1.5
	a.	Importance of identifying dependent and independent variables		
	b.	Identifying dependent and independent variables with relevance to the analysis and interpretation of results		
	c.	Discussion		
	09.	**Deciding on the study design**	Lecture	1.5
	a.	Selection of study design based on the objectives		
	b.	Discussion on study designs for research topics identified by the trainees		
	10.	**Selecting study population, sample size & sampling techniques**	Lecture	1.5
	a.	Concepts of reference, target population & study population & sample Calculation of sample size based on		
	i.	Study design – descriptive and analytical studies		
	ii.	Sampling technique – simple random, systematic, stratified & cluster sampling		
	b.	Discussion on study populations, sample size & sampling techniques applicable for research identified by the trainees		
	11.	**Data collection tools for quantitative research**	Lecture	1.5
	a.	Types of study instruments		
	b.	Development & validation of study instruments: judgmental validity		
	c.	Internationally available instruments & scales & reported Validity & reliability		
	d.	Discussion on study instruments identified by the trainees		

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**12.**	**Data collection tools for qualitative research**	Lecture	1.5
	a.	Uses of qualitative research		
	b.	Types of study instruments available for qualitative research		
	c.	Development of qualitative study instruments		
	d.	Collection and analysis of qualitative data		
	13.	**Identifying & addressing ethical issues in research**	Lecture	1.5
	a.	Identifying ethical issues"		
	i.	Generic – common to all studies(justice, autonomy, beneficence and non-maleficence)		
	ii.	Specific – in relevance to studies related to sensitive topics e.g., Intimate partner violence, contraceptive practices, mental illness, sexual behaviour		
	b.	Strategies to minimize ethical issues in research		
	c.	Applying for ethics clearance from a recognized Ethics, Review Committee		
	14.	**Planning for data analysis**	Lecture	1.5
	a.	Importance of working out data analysis during planning stages		
	b.	Identifying data analysis plans according to objectives		
	c.	Development of dummy tables		
	c.	Discussion on planning for data analysis for research identified by the trainees		
Knowledge	**15.**	**Formulation of a research proposal**	Lecture	1.5
	a.	The need to have a good research proposal		
	a.	Components of a research proposal		
	b.	Specifications for the research proposal		
	16.	**Discussion on identifying a research topic**	SGD#	3.0
	a.	Presenting the identified research topics		
	b.	Critically appraisal of the research topics		
	c.	Clarifying issues related to identified research topics		
	d.	Discussion on developing conceptual frameworks for research projects identified		
	17.	**Discussion on formulating objectives/hypothesis**		
	a.	Presenting the research objectives	SGD	3.0
	b.	Critical appraisal on general and specific objectives		
	c.	Clarifying issues related to identified research objectives		

- Small Group discussions

Domain	Content		Delivery Mode	Time (hours)
	18.	**Discussion on study design, study population, sample size & sampling techniques, data collection tools of Individual research topics**	SGD#	3.0
	a.	Presenting the planned study design, study population sample size & sampling techniques, data collection tools for own research		
	b.	Critically appraisal on the study design, study population, sample size, sampling techniques, data collection tools of research by others		
	c.	Clarifying issues related to study design, study population sample size & sampling techniques, data collection tools For own research		
Skills	**19.**	**Presenting the research plan**	Seminar	12.0
	a.	Title, objectives, study designs, study population sample size & sampling technique for comments of others		
	b.	Outline of the final proposal for comments of others		
	20.	**Hands on practice on data management & use of statistical software for data entry & analyses**	Practical session	6.0
	a.	Data management tips		
	b.	Creating a data entry format		
	c.	Practice entry of data		
	d.	Practice of simple data analysis techniques		
Knowledge	**21.**	**Overview of the Dissertation**	Lecture	1.5
	a.	Specific aspects		
	b.	Submission procedure		
	c.	Regulations regarding the dissertation		
	22.	**Principles of scientific writing**	Lecture	1.5
	a.	General principles of scientific writing		
	b.	Principals of dissertation writing		
	c.	Common mistakes made by trainees		
	23.	**Writing Chapter 1 (Introduction)**	Lecture	1.5
	a.	Background to the research problem		
	b.	Definitions, magnitude, consequences, risk factors, control measures applied		
	c.	Justification		
	i.	Need to the do the study		
	ii.	Potential benefits of the findings		
	d.	Organization of the chapter		
	i.	Global, regional and local situation		
	e.	Tips on formulating the Introduction chapter		
	c.	Critical evaluation of a sample chapters on Introduction		

– Small group discussions

Domain	Content		Delivery Mode	Time (hours)
	24.	**Writing Chapter 2 (Literature Review)**	Lecture	1.5
	a.	Content		
	i.	Literature related to the research problem -		
	ii.	individual article to be described giving relevant core data Compare/contrast - methods, theories & approaches & results of different studies reported		
	iii.	Critical appraisal of the literature		
	b.	Need to avoid plagiarism -In-text citation/Reference list		
	c.	Organization: chronologically, thematically or methodologically		
	d.	Critically evaluating sample chapters		
	e.	Common mistakes made by trainees		
	25.	**Writing Chapter 3 (Methods)**	Lecture	1.5
	a.	Content of the chapter under each subheading		
	b.	Critically evaluating sample chapters on Methods		
	c.	Common mistakes made by trainees		
	26.	**Presenting Chapter 4 (Results)**	Lecture	1.5
	a.	Scientific presentation of results		
	b.	Content: Text & Illustrations (tables, charts, figures)		
	c.	Text is the vehicle & need to refer to all inclusions in text		
	d.	Salient points of all variables to be described in text in the preceding or proceeding paragraph		
	e.	Need to refer to tables/charts in the paragraph preceding		
	f.	Features of simple and composite tables/figures		
	g.	Tables/Figures to be self-explanatory		
	h.	Organization		
	i.	Opening paragraph – brief account on response rate		
	ii.	Next section: Sociodemographic characteristics of the sample		
	iii	Next: detailed account of findings in relation to the specific objectives		
	i.	Critically evaluating sample chapters on Results		
	j.	Common mistakes made by trainees		
	27.	**Writing Chapter 5 (Discussion)**	Lecture	1.5
	a.	Opening paragraph - summary of findings		
	b.	Content:		
	i.	Meaning of findings		
	ii.	Alternative explanations to findings		
	iii.	How findings relate to previous research		
	iv.	Implications/clinical/practical relevance of findings		
	v.	Bias		
	vi.	Limitations – bias and measures taken to minimize		
	vii.	Internal & External validity		
	viii.	Recommendations for future research		

Domain	Content		Delivery Mode	Time (hours)
	Continuation of Writing Chapter 5 (Discussion)			
	c.	All above described in terms of relevant methodological aspects		
	d.	Critically evaluating sample chapters on Discussion		
	e.	Common mistakes made by trainees		
	28.	**Writing Chapter 6 (Conclusions & Recommendations)**	Lecture	1.5
	a.	Principles of writing Conclusions & Recommendations		
	i.	Conclusions – answers to the specific objectives in summary		
	ii.	Recommendations – to derived from findings & practicality and feasibility of recommendations made		
	b.	Critically evaluating sample chapters on Conclusions & Recommendations		
	c.	Common mistakes made by trainees		
	29.	**Writing the Abstract**	Lecture	1.5
	a.	Structured according IMRAD format		
	b.	Introduction – optional		
	c.	Objective – compulsory & general objective to be included		
	d.	Methods – study design, study units/setting computed sample size, sampling technique, study instrument/s, statistical analysis, how results are expressed (in brief)		
	e.	Results – salient findings to specific objectives to be included		
	f.	Discussion – main conclusion and recommendation to be Included in brief		
	g.	Critically evaluating samples of Abstracts		
	h.	Common mistakes made by trainees		
Outcome: Development of 1) Project Proposal 2) Dissertation				
Total number of slots = 42 (Research methods-33; Dissertation writing-9) ; Total number of hours = 63.0				
Mode of delivery in hours: Lectures (L)= 36.0; Student Presentations (SP) = 21.0; Practical (Pr) = 6.0				
Credit points = 2.4 (L) + 0.7 (SP) + 0.2 (Pr) = 3.3 ≈ 3.0				

Reading Material:

1. C Sivagnanasundaram, 1999. Learning Research- A guide to medical students, Junior doctors and related professionals.
2. JH Abramson, ZH Abramson, 1999. Survey methods in Community Medicine.
3. A research instrument: the questionnaire, PGIM, University of Colombo, 2003
4. M.A. Fernando. 2002. Guidelines For The Preparation Of A Thesis/Dissertation. PGIM, University of Colombo.
5. M.A. Fernando. 2003.A research instrument: The Questionnaire PGIM, University of Colombo.
6. M.A. Fernando. 2005.Style in Writing. PGIM, University of Colombo.

NB: Prof. MA Fernando‟s books are available at the PGIM

MSc/CD-18

Field Training In Clinical And Practical Skills

Competencies:

1. Effective management of emergencies in the preventive health care settings
2. Competency in performing clinical procedures relevant to preventive health care settings
3. Provide quality field health services through proper supervision and guidance of all categories of healthcare providers

Objectives:

To be able to

1. critically review selected field health services/activities at the field level
2. develop selected practical competencies which are pertinent to preventive oral healthcare delivery

Domain	Content		Delivery Mode	Time (hours)
Knowledge	**01.**	**Delivery of field health services**	SP#	
	a.	Immunization programme		
	b.	Poly clinic		
	c.	Status of a PHM office		
	d.	Status of a PHI office		
	e.	Disease surveillance		
	f.	Status of a MOH office		
	g.	School health programme		
	h.	Health education session		
	i.	Health education programme		
	j.	Progress review meeting		
	k.	Food sanitation programme		
	l.	A selected health promotion project		
	m.	A special health programme at Divisional Level		
	n.	Inter-sectoral cooperation for health development		**1 + 2**
Skills	**02.**	**Competency to perform selected procedures**	Practical	**‖**
	a.	Screening for oral cancer & oral potentially malignant	Sessions	**120**
		disorders		
	b.	Application of fluoride gels		
	c.	Application of fluoride varnishes		
	d.	Application of fissure sealants		
	e.	Screening pregnant mothers for oral disease		
	f.	Dietary counseling for high risk groups		
Assessments –				
1. submission of duly completed "Log Book" & 2. submission of duly completed "Portfolio"				
Total number of slots = 80; Total number of hours = 120				
Mode of delivery in hours: Student presentations (SP) = 60.0 + Clinical training (CT) = 60 + 60 = 120				
Credit points = 2.0 (SP) + 1.3 (CT) = 3.3 ≈ 3.0				

– Student presentations

Reading Material:

1. Thirteenth Amendment to the Constitution, the Constitution of the Democratic Socialist Republic of Sri Lanka.http://www.priu.gov.lk/Cons/1978Constitution/AMENDMENTS.html
2. Duties and Responsibilities of Public Health Inspectors, Public Health Inspector‟s Manual. http://www.health.gov.lk/Circularshealth.htm
3. Relevant circulars given on Family Health Bureau Website.http://www.familyhealth.gov.lk/web/
4. Duties and responsibilities of different categories of public health professionals given in different circulars of Ministry of Health, Sri Lanka.

ANNEX II - CONSENT FORM

Supervision of MSc Community Dentistry Research Project

Consent Form

1	Name of supervisor	:		
1.	Official address	:		
2.	Email address	:		
3.	Phone numbers	:	Official	Mobile
4.	Training Centre	:		
5.	Name of trainee	:		
6.	Title of project	:		

I consent to supervise the above mentioned trainee's research project and the dissertation:

Signature of supervisor: ……..

Date: ……/……/……

ANNEX III - ROLES & RESPONSIBILITIES OF SUPERVISORS

All supervisors are expected to read this document and be aware of their roles and responsibilities.

1. Introduction

The general role of supervisors is to guide and assist trainees through the academic research projects. A supervisor plays a key role in the trainee's professional development, inculcating the scientific approach, and ethics of research. These can be achieved through an iterative cycle of development of trainee's skills of reflection, conceptualization, planning and practical experience. Practically, a supervisor is responsible for providing help, support and mentoring a postgraduate trainee in order to enable the trainee to complete the research and produce a dissertation/thesis of good quality. Supervisor behaviours need to reflect varying levels of direction and facilitation.

A supervisor will normally be appointed from among those with requisite qualifications, knowledge, time, commitment and access to resources to undertake the supervision. The supervisor should possess recognized subject expertise, skills and experience to monitor, support and direct research. They are expected to assess formally their subject-specific and personal and professional skills on a regular basis and ensure that these needs are met.

2. Major Roles

The Board of Study in Community Medicine has identified the major roles of the supervisor as follows:

1. Provide academic guidance.
2. Establish a good rapport with the trainee and a conducive environment for designing and conducting research?
3. Allocation of time for the meetings between the supervisor and trainee.
4. Confirm that the administrative requirements are met with.
5. Provide guidance to carry out activities in accordance with the ethics of the discipline of Community Medicine and the research area

2.1Responsibilities regarding "Provision of academic guidance"

a. Provide guidance and encouragement and bear overall responsibility for the direction of the research on behalf of the BOS.
b. Verify that the topic is feasible, given the candidate's abilities and the available resources in terms of time, funds and the need for collection of primary data of good quality.
c. Assist in the development of the trainee's dissertation/thesis beginning from the early stage of designing, until the dissertation/thesis is written and submitted in accordance with the stipulated requirements.

d. Facilitate the process in accessing current literature including seminal works in the area and local research, and stay abreast of the cutting-edge ideas in the field.
e. Closely monitor the research work, results obtained and allocate sufficient time and effort for discussion on the interpretation of the results.
f. Read the trainee's dissertation/thesis as and when necessary in draft form, give constructive feedback in time, suggest revisions, and ensure that the dissertation is of the expected standard.
g. Encourage communication of research at conferences.
h. Help trainees to develop professional skills in writing reports, papers, and grant proposals.
i. Encourage the trainee to participate actively in seminars, colloquia, conferences and other relevant meetings and conferences at the local (training unit) or at national level etc. in areas related to the research.
j. Establish professional networks and make use of professional contacts for the benefit of trainees.

2.2Responsibilities regarding "Development of good rapport and a conducive environment?"

a. Develop good working relationships with trainees that stimulate their creativity.
b. Provide regular feedback on the progress, including constructive criticism if the progress does not meet expectations.
c. In case trainees faces personal problems, supervisors should try as far as possible to assist them to avoid eventual drop-out.

2.3Responsibilities regarding "Time allocation"

a. Time allocation will depend on the stage of the research reached.
b. There will probably be a need for more intensive supervision in the initial planning stage and at the writing-up stage.
c. The nature of the supervision can be face-to-face meetings, contact via email/fax/telephone, and reading of submitted material.
d. A minimum time allocation of 120 hours of supervision per year for a full-time research trainee (MD).

2.4Responsibilities regarding "Administrative requirements"

a. Be familiar with the guidelines on the format of the dissertation/thesis. These have been given to the trainee and a copy is attached.
b. Forward all correspondence regarding the trainee to the Director PGIM with observations of the supervisor.
c. Information of issues that may arise related to the trainee, or research etc. promptly to the Board of Study.

Annex IV. ACOMMUNITY DENTISTRY - GUIDANCE TO RESEARCH PROJECT

The following recommendations were based on the decisions of a panel of experts on research methodology

No.	Issue	Guidance	Additional Comments
01.	**AREA OF STUDY**		
A.	Proposed study is similar to previously carried out MSc/MD research studies & **differs only by the setting**	**Allowed if,** a. the specific objectives are not identical AND b. the other study/s is not done within the last five years in the same setting OR the study setting or its people have undergone drastic changes over the last five years **N.B**. In keeping with the research done 5 years ago, there should be some reason, new aspects, new instruments etc. & enough variation within the major area & not a repetition of previous studies	Within a broad area, there, may be aspects that have not been researched (not merely doing the same thing in a different group)& those should be allowed a. The best would be if the new research could actually advance knowledge from the point left off by the previous study E.g. New insights developed from the previous work that needs exploration; previous work leading to formulation of hypothesis b. Conclusions & new areas suggested for further study by the previous researcher/s should be considered when deriving specific objectives on similar topics
B.	Proposed study is similar to previously carried out MSc/MD research studies & **differs only by the study**	**Allowed if,** a. the specific objectives are not identical AND	

	population E.g. Burnout among teachers (previously on burnout among nurses)	b. the student can justify that the two populations are likely to be different in relation to the expected findings & also their implications on public health **N.B.** Duplication of the same study Methods is not allowed.	E.g. Cross sectional data on associations of previous studies can be tested further by conducting a case control

Table continued

No.	Issue	Guidance	Additional Comments
1.	**Continuation of AREA OF STUDY**		
C.	Proposed study is similar to previously carried out MSc/MD research studies &**differs only by the time** **period** E.g. QOL among disabled soldiers in post war period (previously on disabled soldiers during the civil civil war)	**Allowed if,** it is a follow up to look at change & reasons for change in the same Target population. In such situations allowed if, a. the other study/s is not done within the last five years OR if the trainee can justify that the status of the population & situation in the study area related to the topic has changed drastically since the original study **N.B.** In keeping with the research done 5 years ago, there should be some	

		reason, new aspects, new instruments etc. & enough variation within the major area & not a Repetition of previous studies.	
2.	**OBJECTIVES**		
A.	A purely descriptive study. E.g. KAP (Knowledge, Attitudes & Practices) studies	**Not allowed.** Suggestion: a. Add objective/s to assess Relationships between knowledge, attitudes & practices OR b. with any other attribute assessed in the study	
B.	Wording to be used:		
I.	'Associations', 'Relationships' 'Factors associated' 'Associated factors'	To be used if it is a cross sectional study where the time relationship cannot be ascertained, & when studying significance of associations of the main variable with other variables collected concurrently in the study	
II.	'Risk factors'	To be used only if it is a case control study	
III.	"Outcomes"	To be used if it is a prospective or retrospective cohort or interventional study	
IV.	"Prognostic factors Predictive factors"	To be used for case control &/or cohort studies	

Table continued

No.	Issue	Guidance	Additional Comments
2..	**Continuation of OBJECTIVES**		
B.V.	"Correlates"	This term is to be used for when assessing correlations between two Numerical variables.	It should be avoided as much as possible when describing associations in cross sectional studies

3.	**STUDY DESIGN**		
A.	Cross sectional studies where only the prevalence or patterns of attributes are assessed	Cross sectional descriptive study **N.B.** This is not allowed. (Refer Section No.2A)	
B.	Cross sectional studies where the significance of associations between Variables are also assessed. I.e. The study is initiated as a cross sectional study, but comparative groups are assessed for significance during analysis	Cross sectional analytical study	
C,	Using the term 'cross sectional comparative Study"	Should avoid using this term.	
D.	Using the term 'retrospective cohort study'	Should be used if the study is initiated with comparison groups based on exposure status (not as cross sectional)	Ideally the exposures should be based on past information preceding the outcomes so that there is a time period from the assessment of the exposure to the occurrence of outcome which is present at the time of data collection.
4.	**STUDY SETTING**		
A.	Selected by convenience E.g. using a non-probability sampling method	**Allowed if,** the student is planning to use thereafter a probability sampling method within the selected area	

B.	Size of the setting	For Studies to be useful, they should be generalizable beyond a very small unit. Thus, the setting selected should not be confined to: a. an area smaller than one MOH or DS area in community based studies (e.g. study in one PHM area/GN division) b. one hospital smaller than a Base hospital in hospital based study c. one school in school based studies	The consideration should be based on the adequacy of the study population, sample size & generalizability of findings. Study setting should not be limited due to convenience.

Table continued

No.	Issue	Guidance	Additional Comments
4..	**Continuation of STUDY SETTING**		
B.		If the setting is restricted to one large institution (e.g. garment factory, bank) in institution based studies, generalization of data should not be allowed.	
5.	**SAMPLE SIZE**		
A.	Equations used for calculating sample size	Sample size calculation should be appropriate for the study objectives and study design Selected (E.g. cross sectional study, case control study). However, in a cross sectional study, it is not essential to calculate the sample sizes separately for prevalence & associations (equations are not taught in	When planning a study trainees should be encouraged to go beyond what is taught in class. Therefore, if a trainee prefers to apply the most appropriate equations, it should not be discouraged as long as the trainee understands the procedure used.

		the MSc course in detail). Since the sample size calculated for associations, the latter is recommended as the final sample size. If done so, the trainee should acknowledge the limitations when interpreting data. E.g. If the associations do not become statistically significant, this may be highlighted as a limitation attributed to inadequate sample Size & made a recommendation for future studies.	
B.	Applying design effect (DE) when sample is obtained using cluster sampling	Homogeneity of the sample needs to be considered as the sample calculation without DE is for simple random sample with a higher variance. However, calculating DE is not essential (not taught in the MSc course in detail). The decision whether to apply DE or not should be based on the total study population available, the type of study instrument used (self or interviewer administered), availability of funds and only one month allocated for data collection	If the sample size calculated is large enough (close to maximum expected proportion in a cross sectional study), DE as Low as 1.1 can be considered. If the sample size is smaller than this, it is better to consider a higher DE. In both situations, the trainee should acknowledge the limitations & implications of the method adopted.

Table continued

No.	Issue	Guidance	Additional Comments
5.	**Continuation of SAMPLE SIZE**		
C.	Study setting does not have the calculated sample size	Study setting should be expanded to a larger area. E.g. Two similar MOH areas instead of one However, if the study population cannot be further expanded cannot be further expanded (example: stroke patients attending outpatient clinics in a hospital), it should not be allowed unless the minimum sample size is at least 200.	
6.	**SAMPLING METHOD**		
A.	Use of PPS	It is not essential to apply PPS in sampling. Should depend on the study objective.	Convenience sampling should be discouraged. It should be Considered only in the absence of
B.	Use of systematic sampling in clinic/OPD settings	Considering the absence of a sampling frame owing to a dynamic population, systematic sampling can be applied based on the order in which the patients are seated, registered in the clinic register or arrival at the MO's desk. If the clinic attendance is by prior appointments, random sampling	any seating order or clinic registration

		can be applied on the available sampling frame.	
7.	**STUDY INSTRUMENTS**		
A.	Use of already validated & translated tools	If there are already validated tools in local languages, the trainee should use them.	If such tools are used, the trainee should also be able to justify its use in the context of the local population. I.e. appropriateness in our setting, & to understand & review the reliability and validity reported in literature.
B.	Validation of tools used	If already validated tools in local languages are not available, the trainee should translate it & assess its judgmental validity & also pre-test it before administering it.	
C.	Qualitative methods in a sub-sample	Can be carried out to complement the findings of a study done using quantitative methods, but not to be used as the main component.	

Table continued

No.	Issue	Guidance	Additional Comments
7.	**Continuation of STUDY INSTRUMENTS**		
D.	Length of questionnaire	This needs to be decided on the basis of coverage of the content & not on the number of questions. This will have to be based on rational grounds.	Place and mode of administration, etc. also need to be taken into account when deciding on the time taken for completing the questionnaire.

		Suggestion: If the tool is an already validated one which is long, administer it on two occasions.	
8.	**DATA COLLECTION**		
A.	Use of data collectors with PI playing only a supervisory role	Supervisory role is not acceptable. The trainee should collect the main data to gain experience & be available in the field at the time of data collection. Trainee may use assistants for data collection. In such instances, the identification of eligible persons/sample & cross checking the data in a small but adequate subsample should be done by the Trainee.	At all times, the PI should be present in the field during data collection
9.	**DATA ANALYSIS**		
A.	Multivariate analysis	It is not essential to do regression analysis. But it could be made Optional.	Appropriate multivariate procedures should be encouraged to extend beyond class based knowledge. Self learning should be encouraged & provision should be made to help trainees in this area.
B.	Presenting the significance of the associations	All estimates should have confidence limits. Cross sectional study – should present the significance of factors	In all instances where statistical tests have been used, it should specify the direction of association without just stating its statistical significance.

		associated with a variable using appropriate statistical tests. If the risk associated with each factor is also ascertained, should present prevalence odds ratio & 95% confidence intervals (CI). Case control study – should Present the risk factors using crude OR with 95% CI	Comparison of several categories using Chi-square test should be should be done sparingly.

ANNEX IV B- GUIDELINES FOR RESEARCH PROPOSAL WRITING

The objective of the research component is to develop knowledge and skills of the trainee to plan and conduct a research project based on scientific and ethical principles, analyze data using appropriate statistical methods, derive conclusions and recommendations applicable to the findings and to present the findings in a scientific report conforming to principles of scientific writing.

The guidelines with regard to formulating the research proposal are given below. Reference to Annex VII (Guidelines on Dissertation Writing) is strongly recommended during preparation of the proposal, for details of each section of it.

A. General

The research project should be based on "quantitative research" and the data should be "primary data". The trainee should personally be involved with data collection.

B. Proposal writing

The contents of the proposal is given below. The should be prepared under the main sections of Introduction and Methods. It should be written in the future tense.

B. <u>The content</u>

a. Title page - Title
b. Introduction –
   i Background
   ii Justification
   iii Objectives
c. Methods (for details refer Section no. C/c)
d. Reference list
e. Annexes:
   i. Budget
   ii. Gantt chart
   iii. Any other that is relevant

a. Title –

It should be short and accurate and reflect on the main theme of the research carried out (Refer Annex for the features of research title)

b. Introduction - Should consists of three main components:

1. **Background information**: Description of the research problem should be organized under subheadings as per relevance. It should comprise the background information with relevant statistics and literature (a separate section on literature is not required).
2. **Justification** - This should include 1) the need to do the study and 2) the potential benefits of the research findings. Should be confined to two paragraphs and focused.
3. **Objectives:** General objective and Specific objectives

c. Methods – Should include details regarding the following in the given sequence:

1. Study type/design
2. Study setting
3. Study period
4. Study population/s with Inclusion /Exclusion criteria according to relevance
5. Calculation of sample size
6. Sampling technique
7. Intervention – describe briefly the proposed intervention (applicable only to an intervention study) and clear statement of outcomes
8. Study instruments-
9. Questionnaire – type of the questionnaire and broad components to be briefly described
10. Other data collection tools - broad components to be briefly described
11. Study implementation/ Plan for data collection – a brief account including pre testing
12. Data analysis – A brief account of data processing, software and statistical methods (in comparison descriptive and inferential statistics).
13. Administrative requirements
14. Ethical issues and clearance
15. Definitions of variables specific to the study (excluding socio demographic variables) defined in operational terms.

d. Reference list - should use the Harvard System, American Psychological Association Style (APA).

e. Budget – To be included as an Annex (a sample budget is included below).

Items	**Estimated Cost**
Stationery	
Travel	
Printing	
Consumables	
Miscellaneous	
Total	

f. Timetable - Gantt chart (Figure 1). To be included as an Annex.

Activity	Activity					
	March	April	May	June	July	August
Literature survey						
Proposal writing						
Ethics clearance						
Planning data collection						
Data collection						
Data entry						
Data analysis						
Report writing						

Figure 1 – A sample Gantt chart

g. Any other relevant annexes

C. Formatting instructions

The proposal should be word-processed and printed on both sides of A4-size paper.

Margins - 1 inch / 2.5 cm on all four sides
Font Style – Times new roman
Font Size – 12
Line Spacing -Single
Proposed Supervisor – Name to be included
Number of Pages – Not exceeding four (4) pages excluding Annexes
Number of Copies – Three (3)

D. Date of Submission

The date of submission shall be as specified by the Board of Study, which is generally during the last week of April.

ANNEX V - RESEARCH PROJECT: TIMELINE

This is the format that has been approved by the Board of Study in Community Medicine to monitor the progress of the trainees with regard to the research project.

It is the responsibility of the trainee to complete each task by the stipulated date and submit the form for supervisor's signature. Any deviations/ delays should be communicated to the supervisor to be recorded in the form when obtaining the signature. The completed form should be submitted to the PGIM along with the Dissertation when it is submitted for the MSc Examination (as a separate document not attached to the dissertation).

Name of Trainee: ……
Dissertation Title
Original:
……
……
……
Revised (If relevant):
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……

Name of Supervisor:
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Task	Scheduled Time to Complete Task & Submit for Approval	Date of Submission for Approval by Supervisor	Remarks of Supervisor* (Reasons for any delays)	Signature of Supervisor
Appointing a supervisor &approval of tentative title	Last week of March			
Submission of proposal to BoS for approval	Last week of April			
Finalizing data collection tools	Last week of May			
Submission for Ethical Clearance	Last week of May			
Completion of first draft of Chapter 1 (Introduction)	Last week of June			
Completion of first draft of Chapter 2 (Literature Review)	Last week of July			
Completion of first draft of Chapter 3 (Methods)	Last week of August			
Completion of data collection	Last week of September			
Completion of data entry (to be performed by the trainee along with collection of data)	Last week of September			
Data analysis and Interpretation	6 weeks prior to report submission date			
Completion of first draft of Chapter 4 (Results)	4 weeks prior to report submission date			
Completion of first draft of Chapters 5 & 6 (Discussion & Conclusions and Recommendations)	2 weeks prior to report submission date			
Completion of List of References	1 week prior to report submission date			
Completion of Abstract		1 week prior to report submission date		

Specific remarks of the trainee*

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Signature of the Trainee……
Date: *……/……/……*

Specific remarks of the supervisor*

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Signature of the Supervisor:
Date: *……/……/……*
*Please use additional paper as per requirement

ANNEX VI - RESEARCH PROPOSAL ASSESSMENT FORM

Name: Dr……..

Title /Running Title of the Research Project:

……..
……

Details of Assessment (please strike off the inappropriate response)**:**

1.0 Title

a.	Does the title make the general objective clear?	Yes	Partially	No
b.	Does it refer to the study population?	Yes	Partially	No
c.	Does it reflect the study setting?	Yes	Partially	No
d.	Is it free of phrases such as: "a study on" & abbreviations & acronyms?	Yes	Partially	No
e	Is the title too long?	Yes	Partially	No

Comments:

……..
……
……

2.1 **Introduction: Background**

a.	Does **it provide a c**oncise description of the nature of the problem?	Yes	Partially	No
b.	Does it refer to the existing situation of the research problem?	Yes	Partially	No
c.	Is the literature supported by relevant references?	Yes	Partially	No

Comments:

……..
……
……

2.2 **Introduction: Justification**

a.	Does it address the need for the study?	Yes	Partially	No
b.	Does it refer to the potential benefits of the research findings?	Yes	Partially	No
c.	Is it focused?	Yes	Partially	No

Comments:

……
……

2.3 **Introduction: Objectives**

a.	Does the general objective clearly address the aims of the study?	Yes	Partially	No
b.	Are the specific objectives derived from the general objective?	Yes	Partially	No
c.	Are they arranged in a logical sequence?	Yes	Partially	No
d.	Are they stated in measurable terms using action verbs?	Yes	Partially	No
e.	Do they refer to the study population and the study area?	Yes	Partially	No
f.	Do they reflect adequate scope for the MSc?	Yes	Partially	No

Comments:

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3.1 **Methods: Study design**

a.	Is it the appropriate design to achieve the stated objectives?	Yes	Partially	No

Comments:

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……

3.2 **Methods: Study population/s**

a.	Adequately described?	Yes	Partially		No
b.	Inclusion criteria stated correctly as per relevance?	Yes	No	Not Applicable	
c.	Exclusion criteria stated correctly as per relevance?	Yes	No	Not Applicable	

Comments:

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3.3 **Methods: Sample size calculations**

a.	Has it being worked out using an appropriate formula?	Yes	Partially	No
b.	All components of the formula are described adequately?	Yes	Partially	No
c.	Relevant estimates used in calculation/s justified based on references?	Yes	Partially	No

Comments:

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3.4 **Methods: Sampling technique**

a.	Is it the appropriate technique for the study?	Yes	Partially	No
b.	Are all relevant steps described adequately?	Yes	Partially	No

Comments:

……
……

3.5 **Methods: Study instruments**

a.	All relevant study instruments required to achieve objectives included?	Yes	Partially	No
b.	Does the trainee describe standardization of all study techniques?	Yes	No	Not Applicable

Comments:

……
……

3.6 **Methods: Study instruments/Intervention (Applicable only for intervention studies)**

a.	Intervention has been described briefly but clearly	Yes	Partially	No
b.	Outcome measures clearly stated	Yes	Partially	No

Comments:

……
……

3.7 Methods: Study instruments/Intervention (Applicable only for intervention studies)

a.	Intervention has been described briefly but clearly	Yes	Partially	No
b.	Outcome measures clearly stated	Yes	Partially	No

Comments:

……
……

3.8 Methods: Data analysis

a.	Plan of analysis is described for each specific objective?	Yes	Partially	No
b.	Are the proposed analyses appropriate?	Yes	Partially	No

Comments:

……..
……

4. Ethical clearance

a.	General ethical aspects that need to be considered are addressed?	Yes	Partially	No
b.	Ethical aspects specific to the study are addressed as per relevance?	Yes	No	Not Applicable
c.	Briefly indicated measures to be taken to minimize ethical issues?	Yes	No	Not Applicable

Comments:

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5. Definition of variables

a.	Variables specific to the research problem have been defined	Yes	Partially	No
b.	Variables have been operationalized?	Yes	Partially	No

Comments:

……

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6. Referencing

a.	Harvard APA style has been used	Yes	Partially	No
b.	In-text citations have been written correctly?	Yes	Partially	No
C.	Reference list has been written correctly?	Yes	Partially	No

Comments:

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7. Gant chart

a.	All main activities are included & time line is appropriately designed?	Yes	Partially	No

Comments:

……

……

8. Budget

a.	All main likely expenditure have been included?	Yes	Partially	No
b.	The proposed amounts are realistic?	Yes	Partially	No

Comments:

……

……

Outcome of Evaluation

Based on the evaluation indicate your decision with regard to each aspect given in the format below. (Please strike off the inappropriate response)

Item	**Justification (if response is negative)**
Title: Appropriate / Needs Revision	
Introduction Acceptable/ Needs Revision	
Justification: Acceptable/ Needs Revision	
Objectives: Formulated Correctly/ Incorrectly	
Scope : Adequate/ Inadequate	
Methods: Overall Acceptable/ Needs Revision	
References: Correctly done / Incorrect	
Gantt budget Formulated Correctly/ Incorrectly	
Budget Formulated Correctly/ Incorrectly	

Decision:

Overall Decision	**Reviewer**	**Subcommittee**	**BoS**
Approved			
Approved with revisions suggested			
Resubmission with revisions suggested			

Reference: Guidelines on Dissertation Writing (Annex VII)

Signature: …….
Chairperson/ Secretary

Date……

ANNEX VII - GUIDELINES ON DISSERTATION WRITING

The objective of the research component is to develop knowledge and skills of the trainee to plan and conduct a research project based on scientific and ethical principles, analyze data using appropriate statistical methods, derive conclusions and recommendations applicable to the findings and to present the findings in a scientific report conforming to principles of scientific writing.

In keeping with the above, the following guidelines are issued with regard to the writing of the dissertation:

1. General:

The dissertation should be written in the past tense, in a readable manner with no grammatical errors or spelling mistakes. The word count should be between 8000-10 000, It needs to be formatted according to instructions issued by the PGIM (Section 13). The same font should be used throughout the dissertation. Care should be taken not to repeat the same statements over and over again. It should also be free from any evidence of plagiarism.

Plagiarism means indication of ideas or words of another person as one's own.
It is avoided by adopting any one of the following three methods:

a. Quoting - using quotation marks to indicate exactly what someone else wrote and referencing the original source.
b. Paraphrasing (acceptable paraphrasing) - Formulating a passage from source material into your own words by changing the wording, sentence structure, and the order of ideas (which may be of the same length as the original) with a reference to the original source.
c. Summarizing: in your own words the ideas written by someone else and referencing the original source (what is summarized is shorter than the original statement).

All relevant citations should be written conforming to the Harvard APA style (Refer Section No. 10).

Writing text

Text is the main vehicle of a written document. The text of the dissertation comprises six chapters and each should be organized into sections under subheadings. A section may consist of several paragraphs, and a paragraph is formed by several sentences which describes a single idea. Sentence are formed by a group of words which expresses a complete idea.

There are certain rules that needs to be followed with regard to formation of sentences in scientific writing. Sentences should be short and written in simple English. Sentences should be begun with a word and therefore, if a sentence is formulated with a numerical value, it should be written as a word and not as a numeral (e.g., "Ten percent of the population were asthmatics" and not as "10% of the population were asthmatics"). All numbers below 10 (1-9) should be spelt.

Only standard abbreviations can be used without a description as to what it refers to. All the other abbreviations should be fully described with the abbreviation proposed being included with in parentheses when it appears for the first time in the text. An acronym/abbreviations at the beginning of a sentence should be fully written. All abbreviations used has to be included as a list in the "Front matter". Use of abbreviations are recommended only if a given name/phrase appears more than thrice in the text. However, the rule of thumb should be to use abbreviations sparingly.

2. Title

The title should be clear and concise. It should reflect the essence of the study and make the general objective clear and specify what study population or the universe is studied.

The title **should not** contain the following:

a.A full stop, unless it is an informative title

b Phrases such as

i. "An investigation into."

Ii "A study on

c.Abbreviations, formulas and acronyms

3. Abstract

Should be structured under the following headings:

Introduction/ Background, Objectives (to include the general objective only), Methods (a concise version of study design, study population, sample size, sampling technique, study instruments and statistical analysis), Results (pertaining to the specific objectives in a concise form) and Conclusions and Recommendations. **It should not exceed 350 words.**

Key words: Should be derived from the title. A minimum of three key and a maximum of five key words should be included at the end of the abstract.

4. Chapter 1- Introduction

Refers to the statement of the problem and consists of three main components:

A. **Background information** : may include subheadings under this as per relevance to the description of the research problems
B. **Justification**
C. **Objectives**

A. Background information

a. It should be developed under subheadings as per relevance
b. The first section could begin by defining the research problem (central concept of the study or the dependent variable). E.g. if the study is on "intimate partner violence" define what is meant by it.
c. A description of the nature of the problem (the discrepancy between what is and what should be) and of the size and severity (magnitude) and distribution

of the problem (who is affected, where, since when, and what are the consequences for those affected and for the services).

d. An analysis of the major factors that may influence the problem (probable causes) and the unknown factors and a discussion of why certain factors need more investigation if the problem is to be fully understood.
e. A description of any solutions to the problem that have been tried in the past, how well they have worked, and why further research is needed (justification for your study).
f. A description of socio-economic and cultural characteristics and an overview of health status and the healthcare system in the country/district, as far as these are relevant to the problem.
g. Include relevant statistics, if available, to help describe the context in which the problem occurs.

B. Justification (Sub heading)–Should consist of a convincing argument on the following:

a. Need for the study based on the gaps identified,
b. Potential benefits of the study findings - how the knowledge generated will be useful and generally applicable to solve the research problem identified.

C. Objectives: "General" and "Specific".

All objectives should be clearly phrased in **operational terms** using **action verbs** and indicating what is done, where (study area/setting) and on whom (study population).
General objective is a broad statement of what is to be achieved at the end of the study.
Specific objectives should cover all aspects included in the general objective and if required additional areas that may be specifically needed to cover areas related to the general objective. It should be logically sequenced.

5. Chapter 2 - Literature review

a. This is the chapter where previous research done on the research topic is described.
b. The chapter should begin by describing the search strategies.
c. The first one to two paragraphs may refer to the historical background to the research topic
d. It should be organized in an orderly manner according to the specific objectives as far as feasible.
e. Overall organization of the chapter can be done according to one of the following:
   i) chronological order (according to time period ii) thematic (according to themes) and iii) according to methods (e.g according to study designs)
f. Under above it may further be subdivided as global, regional and local studies as per relevance.
g. Each relevant article referred to should be described giving adequate information for the reader to form his/her opinion about the findings and conclusions.

h. The following are the areas that should be included in relation to each article: aim of the study, methods (study design, study population, computed sample size, sampling technique, study instruments, quality of data or psychometric properties of study tools and statistical analysis), essential results (e.g: prevalence, Odds Ratios with Confidence Intervals or P values) and conclusions arrived by the authors. All of the afore mentioned together is referred to as "core information". This is required for the reader to determine the validity of the data presented and conclusions arrived by the authors of the article.
i. A critical assessment of the studies: your opinion on how persuasive the conclusions are in reference to the information provided in the article.
j. If the essential information mentioned above are not included in the article by its author, it is your responsibility to state it under your critical review of that particular article.
k. Inclusion of may be a summary of comparison of the findings reported in different studies in terms of consistencies and inconsistencies.
l. In-text citations to the articles.
m. Avoidance of repetition and verbosity

6. Chapter 3 - Methods

Should consist of the following:

A. Study design – the chosen study design to be stated.

B. Study setting – details of the study area and the specific location at which the study was conducted.

C. Study period – the time period during which the study (data collection) was conducted.

D. Study population/s - should be clearly defined

a. Descriptive studies – generally one study population

Analytical studies – minimum of two study populations in terms of study and control groups

b. Application of "Inclusion" and "Exclusion" criteria or both or none, as per relevance, to select the sample from the study population/s

E. Sample size calculations - The appropriate formula based on the study design should be described in detail including the terms, variables and the parameters of the formula (e.g., in the formula to determine the prevalence of a given condition, the estimate of prevalence referred from a previous article should be described giving name of the variable and the reference to the article. If a statistical package is used, indicate the name of it and the inputs required to compute the sample size using the package. Describe step by step how the final sample size was computed (by substitution of the formula with relevant values) incorporating the non-response rate as well.

In case of a descriptive study:

a. The variable selected to compute the sample size with relevant proportions (the SD if the variable selected is quantitative) should be specified with rationale for selection of the given proportions.
b. The required precision
c. The confidence level

Following should be described in case of an analytical study:

a. Proportions relevant to the two groups
b. The power
c. The ratio of study :control

Following should be described if cluster sampling is used

a. The design effect
b. Number of clusters and number of study units/cluster (cluster size)

All study designs

i. Minimum sample size computed
ii. Allowance added for non-response
iii. Final sample size

Intervention Studies – describe all steps of the intervention, applied to the study group and the measures applied/not applied to the control group and definitions of outcome variables (applicable only for intervention studies)

F. Sampling technique

General - describe the technique used, step by step in detail. e.g., Probability sampling:

Refer to the source of the sampling frame, application of inclusion/exclusion criteria, the final sampling frame and its size, source of random numbers

Analytical studies – describe the sampling technique used for the study/control groups separately (the sampling technique need not be the same for the two groups)

G. Study instruments – All instruments including their English translations should be annexed.

1. Questionnaire –

1.1 Type of questionnaire - interviewer/self-administered

1.2 Type of questions open /close ended or mixed

1.3 Main components of the questionnaire should be described broadly:

e.g.:

Section 1 - Personal data,

Section 2 - Socio-demographic characteristics,

Section 3 - Knowledge, Attitudes and Practices

1.4 Construction of questionnaire: should be described in detail to provide information on:

a. Source of questions – borrowed from similar questionnaires or designed by the trainee or a combination of both

b. Language - the language it was originally designed and the method adopted to translate it to either English or the language in which it was administered as applicable.

1.5 Scaling of questionnaires – if the responses were assessed using a scale (e.g: Likert Scale) describe how the scores were assigned

1.6 Measurements, Laboratory methods and Clinical examination

a. If protocols are used for above – reference to the protocol should be given.

b. Use of equipment for measurements - details including calibration of equipment used and

The degree of accuracy specified for the measurement (e.g: measurement of weight: to the nearest 0.01 kg) need to be described including each step of the technique which should be either described or referred to or included as an Annex (e.g., as a formula).

c. Use of laboratory instruments – Assessment of validity (by verifying with known standards) and precision (by duplicate assessment of sub sample of the analytic and computing coefficient of variation [COV])

Pilot study/Pre testing

Pre testing (has to be conducted) and pilot study (if conducted) need to be described in relation to the following aspects:

The sample size, study setting, degree of similarity between the pilot study population and the proposed study participants of the main study, and the relevant administrative procedures.(please note that the trainee is expected to do pretesting by him/her self).

H. Study implementation

Under this, it is important to describe data collecting procedures, the profile of the data collectors, the type of training given to them, how the consent was obtained from participants, how privacy was provided if applicable, how completeness was assessed (especially in case of self-administered questionnaires) how you dealt with non-respondents and how you defined them and other relevant aspects to data collection should be described.

I. Quality of data –

a. Methods adopted to ensure/assess validity (in terms of face and content validity and consensual validity if feasible) to be described. If the tool used is a validated one (e.g. GHQ30) a brief description regarding validation (how the psychometric properties have been assessed [validity and reliability] and the values reported) to be included giving the reference. If it has not been validated by others, discuss the implications of using a non-validated tool under “limitations” in the chapter on Discussion.

b. Reliability - may be assessed (e.g: test re-test reliability by repeating the questionnaire on a sub sample of the study group), if time permits such assessment, and if so, it should be described giving details. If not implications of non-assessment of reliability should be discussed under "limitations" in the chapter on "Discussion".

I. Data analysis – "Descriptive" and "Inferential" statistics appropriate to the type of data collected should be applied.

Descriptive statistics –

I.a Quantitative data:

i. if normally distributed: as mean (SD) [eg: 22.1 (SD = 3.5) years] and the range
ii. if skewed: as median (IQR) and the range

I.b Qualitative data: expressed as proportion or percentage (preferably) and respective 95% confidence interval (95% CI).

I.c. Variables which are assessed using a scoring system (e.g., knowledge & attitudes) -

Describe what the minimum and maximum possible overall scores and the basis for the cutoff levels selected to classify the sample in to two or more sub groups (e.g. based on GHQ 30 distressed will be classified as those having a total score of ≥16 and normal as <16 or ≤15).

Inferential statistics –

Quantitative data: T test/s (paired and independent sample T tests) and Z test based on the sample size

Qualitative data: chi square test or Fisher's exact test depending on the sample size.

All statistical associations should be described with the respective *p* (written using simple *p*) value.

Probability level *(p* value): report the exact *p* value (e.g. *p* = .001 and not as *p*< .01).

Probability (*p)* **values givenas. 000/.0000 in the computer output, report it as less than the reported probability level (e.g. *p*< .001 for *p* reported as *p* = .000).**

n.b.: *p* value is written in lower case and the probability levels are reported without placing the zero value before the decimal points (optional).

Strength of association between dependent and independent variables:

Strength of association may be tested and reported as odds ratio (optional) with the respective 95% confidence interval and the *p* value.

Statistical software that was used should be mentioned.

N.B.

The above is a general account of the statistical analysis that should be performed. The overall analysis should be according to the study design conducted.

J. Administrative requirements – A description of the hierarchy from whom permission has to be sought

K. Ethical issues –

Describe ethical issues specific to the study and the measures taken to overcome them (if relevant) and the general ethical aspects such as written informed consent, maintenance of confidentiality, assurance of nondiscrimination if declined to participate and referral for further management (if required). The institution from which ethical clearance was obtained to conduct the study should be included as the final statement only.

L. Definitions of relevant variables –

This should cover operationalization of the variables specific to the research study but not the common socio demographic variables. However, for example, if socio economic status is assessed using a composite score, the details of this has to be included.

7. Chapter 4 - Results

General

This section provides answers to the problem stated in the introduction/objectives. Presentation of the data gathered during the investigation is included here.

Presenting results

Commence the chapter by including a general statement about the total sample size and the response rate. It should be followed by description of the sample in terms of relevant socio demographic characteristics. The rest of the chapter should be organized as far as feasible according to the sequence of the specific objectives.

Tables/Figures

Binary data need **not be** presented using tables/figures. The detailed results should be presented mostly as table/tabulated form. Figures/charts may be used sparingly according to the need (e., to demonstrate trends and relationship between variables). Only one type of illustrative forms (table or figure and not both) should be used to describe an individual variable.

Text

All variables should be described in the text. Despite the use of tables/figures , the **salient points** relevant to the variable must be written in the text always (the narrative) and it should be stand alone, where the reader is able to obtain an **idea about the essential features of the variable of interest**, just by referring to the narrative text (but not the table) .

Tables and figures should be numbered according to the order in which it appears in the text. As text is the main vehicle guiding the reader, reference should be made to the tables/figures in the text, and such reference should precede the relevant table/ figure. Text which describes the data in the table/figure may be placed either before or after the relevant illustrative form.

When presenting results, confine to just one decimal point, unless having two or more has some relevance in relation to the interpretation. Always the percentages described in the text should be supported by the relevant raw data (frequencies) in parenthesis and frequencies described in the text by respective percentages in parenthesis.

Statistical analysis

Relevant descriptive and inferential statistics should be presented in detail, with an interpretation of findings in the text (Refer Section I.c. of this annex).

Features common to Tables:

Should be presented clearly with the following:

a. Tables should be self-explanatory (the reader should be able to read and understand the information provided in the tables without referring to the text).
b. Tables should be numbered according to the order in which it appears in the text, using Arabic numerals.
c. Title should be simple and concise (Keep it short and simple/specific [KISS]), with a clear description of the key elements shown in the table such as study groups, classifications, variables etc.
d. Title has to be placed above the table and space left between the last line of the title and the table
e. The captions (legends/titles) of columns /rows should be clearly labeled with the relevant units.
f. The font size may be reduced to Times New Roman 10 if required, but maintain consistency throughout the document with regard to the font size of the text in the tables.
g. The results reported may be center or right aligned and having selected one , maintain consistency throughout the document
h. If totals do not add up to the original value (due to missing data) indicate the frequency of missing data.
i. Column wise totals and percentages are considered better than row wise totals and percentages.
j. Give the exact percentage value for the totals computed (e.g. 99.9% or 100.1%).
k. Try to have the tables as close as possible to the text.
l. Preferred orientation for tables is **portrait,** against landscape. However, latter may be used due to unavoidable circumstances (due to the need to present several columns of data, which is not feasible with portrait orientation, but, having made the maximum effort by reducing the font size of text to Times New Roman 10 and by other measures)
m. Confine tables to one page as far as feasible. Failing this, the table can be extended to a second or more pages ensuring that following features are adhered to:

i Table title in the extended pages to be indicated as: Table No. X Continued (no need to repeat the title of the table given in the first page of the table).
ii All captions (titles) of the Column Heads need to be included in the extensions to the table on each new page.

n. Abbreviations may be included anywhere in the table (body, columns and row heads) and denoted using symbols, but the full description of it should be included as a footnote indicated by the same symbol [asterisk (*), hatch (#) or stacked cross (±) or alphabetical letters (in lower case) according to your preference].
o. All vertical lines in the tables should be removed, but horizontal lines may be left when necessary to separate major sections of the table.
p. If the data are not original, their source should be given in a footnote.
q. Reference to the statistical test used should be included in the text/table, along with the other relevant features of the test which is necessary to interpret the data. (e.g., chi square test: degrees of freedom, chi square value and the *p* value).

Features common to all Figures including Charts:
The figure/chart **titles** have to be placed below the figure.

Units:
SI units (International System of Units) should be used except for blood pressure measurements (mmHg). The unit symbols are not altered in the plural (milligrams is "mg" and not "mgs") and not followed by a period unless at the end of a sentence (centimeter is "cm" and the full stop (**cm.**) is used only if it appears at the end of a sentence) Refer below for further details:

Symbols of selected units

Definition	Symbol
Seconds	s
Minutes	min
Hours	h
Grams	g
Milligrams (10^{-3}g)	mg
Kilogram	kg
Micrograms (10^{-6}g)	µg
Liter	L
Milliliter (10^{-3} L)	mL

Avoid doing the following:
a. Do not discuss the results in this chapter but include the interpretation.
b. Do not present the same data more than once.
c. Text should complement any figures or tables, but not repeat the same information in detail.

8. Chapter 5 - Discussion
It is important that the commencing paragraph of this chapter is based on a brief account of the main results/findings in relation to the objectives of the study. However, it should contain only minimal statistical data. Rest of the discussion should cover all the aspects mentioned below as per relevance and should be organized according to the flow of the information (It is the trainee's responsibility

to discuss with supervisor and organize the chapter in a meaningful and scientifically relevant manner with a good flow).

The main purpose of the discussion is to explain the results and address the question "so what?' by making reference to the relevant results to support the discussion. Repeating chunks of results which is useless is not its objective. Reference to tables depicting the relevant results/outcomes is recommended in order to make it examiner/reader friendly.

a. The first paragraph: inclusion of a brief account of the main results.
b. An account on quality/psychometric properties of data
Validity: discussed in terms of own study or as reported in literature
Reliability: discussed in terms of own study or as reported in literature
d. Reference to both positive and negative results
e. Justification of research methods and the statistical analysis selected as per relevance
f. Problems related to the design of the study: choice of research design, sampling issues, non-response, and data collection etcetera as per relevance. However, these aspects of Methods should be addressed only by making reference to the relevant aspect, and not by repeating what has been written under Methods.
g. Discussion on effect measures/outcomes (if applicable) in terms of strength of association, precision in terms of 95% CI etcetera.
h. Provision of scientifically plausible explanations to the positive findings of the study
i. Explanation/discussion on negative findings in terms of sampling, measurements, procedural issues, confounding variables etc.
j. Description of bias in terms of selection, information and confounding
k. Measures taken to minimize bias
l. Implications of not minimizing bias such as confounding due to feasibility issues
m. **Limitations** discussed in terms of bias, quality of data and other relevant factors
n. Description of strengths of the study (optional).
o. Explanation, interpretation and implications of the findings
p. Discussion on public health relevance of the findings
q. Compare and contrast the findings to other studies (local and global): in terms of consistency/inconsistency of findings
r. Discussion on recommendations
s. Discussion on suggestions for future research
t. Internal validity: discussion on how it may or may not be affected based on presence/ability/inability to minimize relevant bias
u. External validity: discussion on ability/inability to generalize/study findings giving reasons
v. In summary discuss everything but be brief and specific

9. Chapter 6 - Conclusions and Recommendations

Conclusions:

Conclusions should be the answers to the specific objectives written in summary form with minimal statistical information.

Recommendations:
Recommendations should be relevant and arising out of the study. They should be practical and clearly stated in terms of implementation as described below:

i. Remedial action to solve the research problem
ii. Further research to fill in gaps (one essential component).

10. Citations and Reference list
The Harvard APA style (sixth edition) should be used.
Reference: Enquire Guide to Harvard APA Style Bibliographic Referencing

11. Annexes
Should be numbered using Roman numerals according to the order in which it appears in the text and referred to in the text in the appropriate place.

Note: All documents which contain the identity of the trainee should be removed including the ethical clearance certificate.

12. Structure of a Research Report
A. Front Matter
B. Body
C. End material

Affronts Matter
a. Cover
b. Title page
c. Declaration (Refer Section No. 14)
d. Abstract
e. Acknowledgements
f. Table of contents
g. List of tables
h. List of figures & illustrations
i. List of annexes & appendices
j. List of abbreviations & symbols

Body
a. Chapter 1 - Introduction : background statement, justification and objectives
b. Chapter 2 - Literature review
c. Chapter 3 - Methods
d. Chapter 4 - Results
e. Chapter 5 - Discussion: Including Limitations,
f. Chapter 6 - Conclusions and Recommendations

C. End Material
a. List of references
b. Annexes / Appendices

12.1 Page Numbering

Front Matter: In Roman numerals (using low case) starting from the Title Page (i, ii, iii,iv…….). The number (i) is not inserted on the Title Page.

Body and End material: Arabic numerals (1, 2, 3, 4…….)

Numbering of Annexes: In Roman numerals (Annex I, II, III, IV……)

13. Formatting of the Dissertation

The dissertation should be word processed on both sides of the page on good quality A4 size paper using font style **Calibri with a font size of 11**. Line spacing should be 1.5. A margin of not less than 40 mm should be left on the left hand side to facilitate binding and margins of not less than 20 mm should be left on the top, right hand side and at the bottom.

Chapter headings should be capitalized and centered and the subdivision headings should be placed at the left hand margin in lower case bold type lettering.

14. Submission of dissertation for the examination

It is compulsory to submit on or before the stipulated date of submission as decided by the PGIM.

Both the supervisor and the candidate have to sign the "Declaration" (three copies) which should be handed over (but not attached to the dissertation) to the Examination Branch/ PGIM along with three copies of the dissertation (Refer Section No. 14).

All details relevant to identification of the Candidate/ Supervisor should be removed from the Dissertation.

These include:

a. Ethical Clearance Certificate (one copy of the original certificate with all names intact to be handed over to the PGIM with the 3 copies of dissertations).
b. Letters granting permission issued by the relevant authorities
c. Acknowledgements

Final Submission:

a. Three copies of the dissertation
b. Three letters of declaration signed by the supervisor
c. Ethical clearance certificate

Three copies of the dissertation should be submitted in loose bound form in the first instance. Only the index number of the candidate should be included, but not the candidate's name and degrees.

15.Declaration

Both supervisor and the candidate have to sign the declarations stated as below which should appear together on a separate page.

A. Candidate

"I declare that the work presented here is my original work, and generated from the research conducted by me to fulfill the part requirement of the degree of MSc Community Medicine.

Signature of Candidate:
Name of Candidate:
Date:

B. Supervisor

"I confirm that I supervised the above indicated work of the candidate".

Signature of Supervisor:
Name of Supervisor:
Date:

16. Submission of the final dissertation

Once the corrections suggested by the examiner have been made and certified by the supervisor, it should be bound in hard cover with the author's name, the degree and year printed in gold on the spine (bottom upwards). The cover should be in black. The front cover should carry the title on top, the author's name in the centre and the year at the bottom printed in gold. Three copies of the dissertation should be submitted to the Director, PGIM within a period of two months after the release of results. Two copies shall be the property of the PGIM while the third copy will be returned to the trainee.

Important – All of the above mentioned documents should be attached to the hard bound copy of the dissertation handed over to the PGIM when the candidate passes the MSc Community Medicine examination.

ANNEX VIII -DISSERTATION ASSESSMENT FORM

Index Number: ……..

Title / Running Title of Dissertation:

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Instructions to Examiners:

This evaluation form consists of separate sections under the main headings of the components that comprise the Dissertation. Each section has a maximum and a minimum mark assigned, which varies from 40% to 50%. However, **a minimum mark to pass the dissertation is essential only for Objectives, Methods, Results and Discussion, with an overall aggregate of ≥50%.**

A. Title	**Total Marks Assigned = 05**			
1.	Makes the general objective clear	Yes	Partially	Not at all
2.	Refers to the study population		Yes	No
3.	Refers to the study setting		Yes	No
4.	Concise	Yes	Partially	Not at all
5.	***Allocated marks*** *=*			

Comments

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B. Abstract	**Total Marks Assigned = 10**			
1.	Structured		Yes	No
2.	**Objective:** General objective clearly stated	Yes	Partially	Not at all
3.	**Methods:** brief account on study design & population, sample size, sampling technique, study tools and statistical analysis included	Yes	Partially	Not at all
4.	**Results:** provide answers to specific objectives - incidence, prevalence, effect measures etc., with respective 95% CI P values (as per relevance)	Yes	Partially	Not at all
5.	**Conclusions & Recommendations**: arising from results	Yes	Partially	Not at all
6.	***Allocated marks*** *=*			

Comments:

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C. Introduction	Total Marks Assigned = 20			
a)	**Background = 14**	**Minimum Mark Required (40%) = 06**		
1.	Defines research problem clearly	Yes	Partially	Not at all
2.	Describes research problem adequately	Yes	Partially	Not at all
3.	Relevant statistical information are provided	Yes	Partially	Not at all
4.	***Allocated marks*** =			
b)	**Justification = 6**	**Minimum Mark Required (40%) = 02**		
1.	**Justification**: Focused	Yes	Partially	Not at all
2.	**Justification**: describes need for the study	Yes	Partially	Not at all
3.	**Justification**: describes potential benefits of study findings	Yes	Partially	Not at all
4.	***Allocated marks*** =			

Comments

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D. Objectives	Total Marks Assigned = 10			
1.	**General Objective**: covers the scope of study	Yes	Partially	Not at all
2.	**Specific objectives**: covers general objective	Yes	Partially	Not at all
3.	**Specific objectives:** logically sequenced	Yes	Partially	Not at all
4.	All objectives: stated in measurable terms using action verbs	Yes	Partially	Not at all
5.	All Objectives: refer to study population and study setting	Yes	Partially	Not at all
6.	***Allocated marks =***			

Comments

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E. Literature Review	Total Marks Assigned = 20			
1.	Well organized	Yes	Partially	Not at all
2.	Key studies relevant to the field of research (addressing specific objectives) are included	Yes	Partially	Not at all
3.	Core information provided in relation to each article is adequate & is relevant to the research study/objectives	Yes	Partially	Not at all
4.	Articles related to methodological aspects relevant to the study have been included (e.g., study instruments – General Health Questionnaire [GHQ])	Yes	Partially	Not at all
5.	Critical analysis of the literature is included as per relevance	Yes	Partially	Not at all
6.	In- text citations have been done according to the Harvard system/APA style (6th Edition)	Yes	Partially	Not at all
7.	***Allocated marks =***			

Comments

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F. Methods	Total Marks Assigned = 55	*Minimum Mark Required (50%) = 27.5*		
1.	**Study design/s appropriate to achieve objectives**	Yes	Partially	Not at all
2.	**Study population:**			
	Defined clearly & adequately	Yes	Partially	Not at all
	Inclusion criteria	Relevant		Irrelevant
	Inclusion criteria adequately described	Yes	Partially	Not at all
	Exclusion criteria	Relevant		Irrelevant
	Exclusion criteria adequately described	Yes	Partially	Not at all
3.	**Sample size calculation:**			
	Correct formula/formulae used	Yes	Partially	Not at all
	Formula/formulae described adequately	Yes	Partially	Not at all
	Demonstrates a clear understanding of principle/s related to sample size calculations	Yes	Partially	Not at all
	For cluster sampling, design effect has been used to inflate sample size	Yes	Partially	Not at all
4.	**Sampling technique:**			
	Applicable to the study	Yes	Partially	Not at all
	All steps described in detail relevant to the sample technique	Yes	Partially	Not at all
	Cluster sampling (if relevant): selection of clusters described in detail	Yes	Partially	Not at all

F.	**Methods continued**			
5.	**Data collection tools (Questionnaires other /instruments):**			
	All relevant instruments required to achieve objectives have been mentioned	Yes	Partially	Not at all
	Techniques are described in detail	Yes	Partially	Not at all
	Techniques/methods of standardization of data collection procedures described as per relevance	Yes	Partially	Not at all
	Calibration method/s mentioned as per relevance	Yes	Partially	Not at all
	Correct procedure has been carried out when formulating the questionnaire	Yes	Partially	Not at all
	Variables and the broad components are described adequately & clearly	Yes	Partially	Not at all
	Has described the scoring system (if relevant)	Yes	Partially	Not at all
	Techniques & methods of collecting data using instruments are described adequately	Yes	Partially	Not at all
6.	**Questionnaires:**			
	Translation procedure described	Yes	Partially	Not at all
	Translations correctly done	Yes	Partially	Not at all
	Broad components described clearly & adequately	Yes	Partially	Not at all
	Describes scales used (e.g., Likert scale) adequately if relevant	Yes	Partially	Not at all
	Describes the scoring system adopted clearly: e.g., KAP studies; Tools used for screening of disease (e.g., GHQ)	Yes	Partially	Not at all
7.	**Data collectors/collection:**			
	Profile of data collectors & how they were trained is described adequately	Yes	Partially	Not at all
	Data collection procedure described adequately	Yes	Partially	Not at all

8.	**Pre testing:**			
	Pre testing has been conducted	Yes	Partially	Not at all
	Appropriate study population chosen for pre testing	Yes	Partially	Not at all
9.	**Quality of data**			
a.	**Validity:**			
	Judgmental validity appraised & described: face & content &	Yes	Partially	Not at all
	Construct validity described (as reported in literature)	Yes	Partially	Not at all
	Criterion validity described (as reported in literature)	Yes	Partially	Not at all
b.	**Reliability:**			
	Internal consistency (e.g., Cronbach's alpha): as reported in literature	Yes	Partially	Not at all
	Test re-test reliability: Kappa coefficient as reported in literature	Yes	Partially	Not at all
	Test re-test reliability: computed for the study (**optional)**	Yes	Partially	Not at all
10.	**Statistical analysis:**			
a.	**Computation of scores (knowledge, attitudes etc.) as applicable**			
	Details of scoring each item, the overall score & the overall categorization (e.g., poor/moderate/good knowledge) has been described adequately	Yes	Partially	Not at all

F.	**Methods continued**			
10.	**Statistical analysis continued :**			
b.	**Descriptive statistics:**			
	Quantitative data (as applicable**) :** Summarized as:			
	Mean, SD & range	Yes	Partially	Not at all
	Median, IQR & range	Yes	Partially	Not at all
	Qualitative data (as applicable**):**			
	Proportions/percentages with 95% CI	Yes	Partially	Not at all
	Incidence & prevalence with 95% CI	Yes	Partially	Not at all
c.	**Inferential statistics:**			
	Has mentioned the tests used for statistical analysis	Yes	Partially	Not at all
	Tests chosen are appropriate for the type of data analysed	Yes	Partially	Not at all
	Method of controlling confounding factors included (optional) e.g., multivariate analysis	Yes	Partially	Not at all
	Stated how results will be expressed (e.g., *p* value and odds ratio & the 95% confidence limits)	Yes	Partially	Not at all
11.	**Administrative requirements** – described	Yes	Partially	Not at all
12.	**Ethical clearance:**			
	Generics described:			
	Informed consent, confidentiality, freedom to withdraw from study or non participation with no penalty, referral for further treatment as per relevance etc.	Yes	Partially	Not at all
	Specific measures addressed (if applicable): e.g., addressing sensitive issues, obtaining parental consent and assent form <18 year olds	Yes	Partially	Not at all
	Place from where ethical clearance has been obtained is mentioned	Yes		No

13.	**Variables**			
	Defined	Yes	Partially	Not at all
	Operationalized appropriately	Yes	Partially	Not at all
14.	**Methods described cover all specific objectives**	Yes	Partially	Not at all
15.	**Methods described are verifiable:**			
	All details required to duplicate study is given	Yes	Partially	Not at all
16.	***Allocated marks*** =			

Comments

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Comments continued

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G. Results	**Total Marks Assigned = 45**	***Minimum Mark Required (50%) = 22.5***		
1.	Commences describing total sample and response rate	Yes	Partially	Not at all
2.	Sample: socio-demographic data described	Yes	Partially	Not at all
3.	**Text:**			
	Well organized according to major components/specific objectives	Yes	Partially	Not at all
	All relevant variables are described in text under a subheading	Yes	Partially	Not at all
	Reference made to each table/figure in the text	Yes	Partially	Not at all
	Text referring to individual tables/figures precedes relevant tables/ figures	Yes	Partially	Not at all
	Salient findings related to each variable depicted in tables/figures described in text & is self-explanatory	Yes	Partially	Not at all
	Association of variables are described in text with a clear/correct interpretation based on effect measure, 95% confidence limits & P value	Yes	Partially	Not at all
	Described control of confounding factors (optional)	Yes	Partially	Not at all

G. Results continued				
4.	**Tables:**			
	Properly formatted	Yes	Partially	Not at all
	Numbered according to sequence of tables	Yes	Partially	Not at all
	Titles placed above the table	Yes	Partially	Not at all
	Titles reflect the essence of data included in table	Yes	Partially	Not at all
	Column & Row titles are clearly stated	Yes	Partially	Not at all
	Frequencies are presented with relevant percentages	Yes	Partially	Not at all
	Percentage calculations are done in a meaningful way	Yes	Partially	Not at all
	Denominators to compute percentages are clearly stated	Yes	Partially	Not at all
	Associations are based **on** appropriate statistical analysis	Yes	Partially	Not at all

	Amalgamated (pooled data) levels of data indicated clearly (if applicable)	Yes	Partially	Not at all
	Odds ratios/effect measures are described according to the manner data have been presented in 2 by 2 tables	Yes	Partially	Not at all
	Statistical tests mentioned with relevant details (test statistic, degrees of freedom & P value)	Yes	Partially	Not at all
	Data depicted in tables should be self- explanatory (reader should understand all information depicted without referring to text)	Yes	Partially	Not at all
5.	**Figures/Charts**			
	Has been used sparingly	Yes	Partially	Not at all
	Numbered according to sequence of figures	Yes	Partially	Not at all
	Title placed below the figure/chart	Yes	Partially	Not at all
	Titles reflect the essence of data included in figure/chart	Yes	Partially	Not at all
	Key/legend includes a clear description of variables	Yes	Partially	Not at all
	The figure/chart is self-explanatory (understood without referring to text)	Yes	Partially	Not at all
	No duplication of data by presenting both a table & a figure/chart	Yes	Partially	Not at all
6.	**Results have provided answers to the research objectives**	Yes	Partially	Not at all
7.	***Allocated marks*** *=*			

Comments

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H. Discussion	**Total Marks Assigned = 40**	***Minimum Mark Required (45%) = 18.0***		
1.	Commencing paragraph summarizes research findings	Yes	Partially	Not at all
	Ensure that rest of the chapter addresses what is described below, but not in a particular sequence			
2.	**Quality of data**			
	Validity: discussed in terms of own study or as reported in literature	Yes	Partially	Not at all
	Reliability: discussed in terms of own study or as reported in literature	Yes	Partially	Not at all
3.	Refers to both positive and negative results	Yes	Partially	Not at all
4.	Provides scientifically plausible explanations to the findings of the study results	Yes	Partially	Not at all
5.	Compared and contrasted results adequately with similar studies reported (both local and international)	Yes	Partially	Not at all
6.	Research methods chosen have been justified adequately: study design, sample size, sampling, tools, data collection etc.	Yes	Partially	Not at all
7.	Statistical analysis is justified as per relevance	Yes	Partially	Not at all
8.	Effect measures/outcomes are discussed in terms of strength of association and precision in relation to 95% CI.	Yes	Partially	Not at all
9.	**Bias**: identified in terms of selection, information & confounding			
10.	Described type of bias correctly & clearly	Yes	Partially	Not at all
11.	Need to control of confounding factors discussed : essential even if not analyzed	Yes	Partially	Not at all

12.	Described measures taken to minimize relevant bias	Yes	Partially	Not at all
13.	Effect measures/outcomes are discussed in terms of strength of Association and precision in relation to 95% CI.	Yes	Partially	Not at all
14.	**Limitations:** described in terms of bias & other relevant factors	Yes	Partially	Not at all
15.	Describes the public health relevance of findings	Yes	Partially	Not at all
16.	Describes the implications of the findings if any	Yes	Partially	Not at all
17.	Recommendations are discussed in terms of practicality	Yes	Partially	Not at all
18.	Refers to relevant tables numbers pertaining to the results discussed	Yes	Partially	Not at all
19.	**Internal validity**: described in terms of controlling bias	Yes	Partially	Not at all
20.	**External validity:** discussed ability generalize study findings	Yes	Partially	Not at all
21.	In text citations included (Harvard/APA style, 6th Edition)	Yes	Partially	Not at all
22.	***Allocated marks*** *=*			

Comments

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I. Conclusions	**Total Marks Assigned = 05**			
1.	Research findings described in summary form	Yes	Partially	Not at all
2.	Internal validity : mentioned	Yes	Partially	Not at all
3.	External validity/mentioned	Yes	Partially	Not at all
4.	***Allocated marks =***			

Comments

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J. Recommendations	**Total Marks Assigned = 05**			
1.	Arises from study findings	Yes	Partially	Not at all
2..	Proposed future research	Yes	Partially	Not at all
3.	***Allocated marks*** *=*			

Comments

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K. Reference List	**Total Marks Assigned = 15**			
1.	**Conforms to Harvard system/APA style (6th Edition)**			
	Organized according to alphabetical order	Yes	Partially	Not at all
	Source material (journals, books etc.) has been *italicized*	Yes	Partially	Not at all
	References are indented (1st line)	Yes	Partially	Not at all
2.	***Allocated marks*** *=*			

Comments

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L. Overall presentation	**Total Marks Assigned = 20**			
1.	Front matter (e.g., Table of contents etc.) satisfactory	Yes	Partially	Not at all
2.	"List of abbreviations" is included in front matter	Yes	Partially	Not at all
3.	Reader friendly – easy location of information	Yes	Partially	Not at all
4.	Abbreviations are used sparingly	Yes	Partially	Not at all
5.	Full description of the abbreviated term is included in the first instance it is used	Yes	Partially	Not at all
6.	No duplication/repetition of text	Yes	Partially	Not at all
7.	No grammatical mistakes	Yes	Partially	Not at all
8.	No spellings mistakes	Yes	Partially	Not at all
9.	Logical and rational link between component parts of the dissertation	Yes	Partially	Not at all
10.	Annexes are numbered according to the sequence annexes appear in text	Yes	Partially	Not at all
11.	Tables are numbered according to the sequence tables appear in text	Yes	Partially	Not at all
L. Overall presentation continued				
12.	Charts are numbered according to the sequence charts appear in text	Yes	Partially	Not at all
13.	***Allocated marks*** *=*			

Comments

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Final Marks

Component		Marks				
		Total Marks Assigned Per Section	Minimum % To Pass Each Section	Minimum Marks To Pass Each Section	Marks Assigned	Pass/ Fail Status Of Each Section
A.	**Title**	05	-	-		
B.	**Abstract**	10	-	-		
C.	**Introduction**	20	-	-		
D.	**Objectives**	10				
E.	**Literature Review**	20	-	-		
F.	**Methods**	55	50%	27.5		
G.	**Results**	45	50%	22.5		
H.	**Discussion**	40	45%	18.0		
I.	**Conclusions**	05	-	-		
J.	**Recommendations**	05	-	-		
K.	**Reference List**	15	-	-		
L.	**Overall presentation**	20	-	-		
Total		250	-	125.0		
Total expressed as a percentage		100%	-	50%		
Total aggregate required to pass = ≥50%						

ANNEX IX - LOG BOOK

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA

LOG BOOK

MASTER OF SCIENCE (MSc)
IN
COMMUNITY DENTISTRY

2017

BOARD OF STUDY INCOMMUNITY MEDICINE

LOG BOOK ENTRIES
==========
Field Training in Practical Skills in Community Care

MSc/CD-18
Health Services Delivery in the Field Setting

The trainees are expected to observe and critically review each of the following field activities at the divisional (MOH) level. The critical review will be based on a power point presentation (10 – 15 slides) made by a group of 2 -3 trainees followed by a discussion involving the whole group.

The trainer/s will have to certify that each individual trainee has attended to the following:

1. Observed each individual field activity related to service delivery (Table 1).
2. Contributed to developing and presenting at least one critical review (analyzing the factors affecting the quality and coverage) of one such service delivery (Table 2).
3. Actively participated in the discussion that ensued (Table 2).

Table 1 – Observation of Field Activity

Field Activity		**Date**	**Signature**	**Name / Trainer**
01	Immunization programme			
02	Poly Clinic			
03	Status of a PHM office			
04	Status of a PHI office			
05	Disease surveillance			
06	Status of a MOH office			
07	School Health Programme			
08	Progress review meeting			
09	Health education session			
09	Health education programme			
10	A health promotion project			
11	Food sanitation programme			
12	A special health programme			
13	Inter-sectoral coordination for health development			

Table 2

Name of Critical Review			
Date			
Participation	Participated in developing & presentation of the review	yes	no
	Participated actively in the discussion	yes	no
Signature of Trainer			
Name of Trainer			

ANNEX X - TRAINING PORTFOLIO

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO, SRI LANKA

TRAINING PORTFOLIO

MASTER OF SCIENCE (MSc)
IN
COMMUNITY DENTISTRY

2017

BOARD OF STUDY IN
COMMUNITY MEDICINE

Content page

Personal Details

Family name ……

Fore names ……

Address ……

Contact land/mobile number ……

Sex Male/Female

Date of birth ……./……/…….

Date of graduation ……./……/…….

University graduated from ……

Pre-Registration Appointments ……
(Grade/Specialty/Hospital) ……
……

Pre-Registration Appointments ……...
(Grade/Specialty/Hospital): ……..
……..

Date of passing selection examination: ……./……/…….
Date of joining the course: ……./……/…….

PORTFOLIO
Introduction

The trainee should maintain a Portfolio to document and reflect on his/her training experience and identify and correct any weaknesses in the competencies expected of him, and also to recognize and analyze any significant clinical and field events experienced, so that appropriate changes in management could be adopted in order to reduce the risks arising from such situations in the future.

The Portfolio should be maintained from the time of entry to the training course. **It has to be maintained to record different activities listed below in each component during Field Training in Clinical & Practical Skills**. The Supervisors/trainers are expected to review the candidate's progress at regular intervals. It is the responsibility of the trainee to obtain the signature of the trainer.

The final Portfolio should contain the following documents:

1. Certification of procedural skills – ANNEX X
2. Reflective writing on three selected procedural skills – ANNEX 3.Evidence on continuing professional development (CPD)

CPD Activities - should contain a collection of papers and other forms of evidence to demonstrate that learning has taken place in terms of the learning outcomes of the community based clinical and practical training. It should be a collection of trainee's work that exhibits his / her efforts, progress and achievements in this module. The trainees are free to include any material which demonstrates the achievement of learning goals in the portfolio.

Submission

The trainees will have to submit the learning portfolio in order to be eligible to sit for the final examination.

The completed Portfolio (bound together with Log Bok) should be submitted to the PGIM within two weeks following completion of Field Training in Clinical & Practical Skills.

Mentorship

Each trainee will be allocated a mentor to provide guidance to complete the portfolio.

Components under reflective writing

There shall be three components under this. The trainee should ensure that all activities in components included are complete and accurate. The portfolio should be with the trainee at all times during the relevant training activities and should be made available to the trainer or a member appointed by the BOS for inspection.

COMPONENTS

Component 1

Development of clinical and practical competencies which are pertinent to field oral health service delivery

There are 6 items of procedures that need hands on training to confirm that the trainee possesses the required skills. Demonstration of selected procedures shall take place at a different location than the location in which hands on training shall take place. The procedures and the location of observing and practicing the procedures are listed in the table below:

Table 1 - The procedures and location

Procedure		Location*	
		Demonstration	**Practice**
01	Screening for oral cancer and oral potentially malignant disorder	Oral cancer unit, NCCP	Oral cancer unit, NCCP
02	Application of fluoride gels	IOH Maharagama DI Colombo	IOH Maharagama DI Colombo
03	Application of fluoride varnishes	IOH Maharagama DI Colombo	IOH Maharagama DI Colombo
04	Application of fissure sealants	IOH Maharagama DI Colombo	IOH Maharagama DI Colombo
05	Screening pregnant mothers for oral disease	IOH Maharagama	IOH Maharagama
06	Dietary counseling for high risk groups	IOH Maharagama DI Colombo	IOH Maharagama DI Colombo

*Location: may be changed subject to availability of facilities and trainers, with prior notification

The procedures listed above should be observed twice, when demonstrated by a competent trainer, after which the trainee has to perform (P) the procedure correctly adhering to standard techniques, twice under supervision of the trainer. Finally the trainee should obtain the signature from the trainer to certify satisfactory completion (Table 2). Throughout the procedure the trainer and trainee should engage in a discussion related to the following:

a. The trainee reflects on what he/she did well during the procedure
b. The trainer contributes to the discussion by adding what he/she did well
c. The trainee reflects on what he/she should have done well
d. The trainer contributes to the discussion by guiding the trainee on areas to be improved
e. Both the trainer and the trainee discuss the ways and means of improving the skill

Table 2 – Certification of procedures

Procedure		Observation		Performance	
		Occasion 1	**Occasion 2**	**Occasion 1**	**Occasion 2**
01	Screening for oral cancer and oral potentially malignant disorder				
02	Application of fluoride gels				
03	Application of fluoride varnishes				
04	Application of fissure sealants				
05	Screening pregnant mothers for oral disease				

Component 2

Prepare a report for three of the procedures carried out above

The trainee is expected to prepare a report (number of words 200) for any three (3) procedures: mentioned in Table 1.

The report should discuss trainee's personal strengths and weaknesses, strengths and weaknesses highlighted by the trainer, and a how further learning is planned to improve the weaknesses. These selected entries for reflective writing should be structured according to the four stages described in Kolb's (1984) reflective cycle as follows:

1. Stage 1: Concrete Experience - doing and having the experience
2. Stage 2: Reflective Observation – reviewing and reflecting on the experience. A description of what happened and what your feelings were at the time.
3. Stage 3 : Abstract Conceptualization - concluding and learning from the experience
4. Stage 4: Active Experimentation – plan/practice the concepts developed in stage 3, so that when the concrete experience (Stage 1) occurs again, you take an action different to what you did when you experienced the concrete action (Stage1) in the previous occasion.

Reference:

Kolb, D. A. (1984). *Experiential Learning: Experience as a Source of Learning and Development.* Englewood Cliffs, NJ: Prentice-Hall.

Component 3

Any other material which demonstrate trainee's achievement of learning goals

The portfolio may contain any other material which demonstrates trainee's achievement of learning goals. Some examples are provided below**:**

1. Two case histories and management plans from each clinical discipline that the trainee has discussed with the trainer during their hospital training and field training.
2. Reports on presentations you have made at journal clubs, lectures etc. and feedback received from peers or supervisors on such presentations.
3. Printouts of the MS Power Point presentations
4. Certificates in participating in CPD Sessions
5. Certificate of attendance in other clinical and professional meetings such as workshop and academic sessions.

==========

Submission

The completed Log Book and Training Portfolio should be bound together and named as "**Log Book and Portfolio"** and submitted to the PGIM two months before the MSc Examination. Acceptance of the Log by the Board of Study (BoS) is a prerequisite to be eligible to sit for the MSc Examination.

The **Log Book and Portfolio** shall be assessed by an examiner appointed by the BoS to certify completion and acceptance.

If not accepted the recommended corrections and improvements to be made and resubmitted two (2) weeks before commencement of the MSc Examination to be eligible to sit the examination.

If the resubmission too is not accepted should complete and sit for the next available examination following year.

Date submitted to the PGIM: /……../……..

Date submitted to the BoS: /……../……..

Date accepted by the BoS: /……../……..