



# MASTERS OF PUBLIC HEALTH

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## COURSE DOCUMENT

Lenovo

*Educating committed, socially aware, culturally competent and ethical public health researchers, practitioners, and policy makers to meet society's needs to manage public health problems locally, nationally and globally.*

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Table 1: Program Details

<b>COURSE TITLE</b>	MPH
<b>SPECIALITY</b>	General Public Health, Maternal, Newborn & Child Health(MNCH),Hospital Administration(MHA),Public Health Nutrition(PHN))
<b>COURSE DURATION</b>	02 years (including course work duration and research dissertation) ,Maximum 4 years (including course work duration) with approval of Director Research/Registrar/Controller of Examinations)
<b>TYPE OF STUDY</b>	Full time
<b>STUDY SYSTEM</b>	Semesters system (Minimum of 16 weeks of teaching semester excluding examinations) <ul style="list-style-type: none"> <li>➤ 3Regular semesters for coursework (1st 3 semesters))</li> <li>➤ 01 semester for research work (4th semester)</li> </ul>
<b>TOTAL CREDIT HOURS</b>	60 (Credit Hours of Course Work + MPH dissertation which must be evaluated by two external reviewers and one internal reviewer.
<b>DISTRIBUTION OF COURSES AND CREDIT HOURS</b>	<ul style="list-style-type: none"> <li>• 1<sup>st</sup> semester (18 Credit hours) <ul style="list-style-type: none"> <li>➤ 6 Compulsory courses (03 Credit hours each)</li> </ul> </li> <li>• 2<sup>nd</sup> semester (18 Credit hours) <ul style="list-style-type: none"> <li>➤ 6 Compulsory courses (03 Credit hours each)</li> </ul> </li> <li>• 3<sup>rd</sup> semester (18 Credit hours) <ul style="list-style-type: none"> <li>➤ 6 Compulsory courses (03 Credit hours each)</li> </ul> </li> <li>• 4<sup>th</sup>Semesters (06 credits) <ul style="list-style-type: none"> <li>➤ Research, Dissertation</li> </ul> </li> </ul>
<b>COURSE LOAD PER SEMESTER</b>	18 Credit Hours per 1st,2nd and 3rd semester,6 Credit hours in 4th semester
<b>TEACHING INSTITUTION</b>	Institute of Public Health & Social Sciences(IPH&SS)
<b>DEGREE AWARDDING INSTITUTION</b>	Khyber Medical University Peshawar
<b>ELIGIBILITY CRITERIA</b>	Sixteen years (16 years) of education in the following fields:- MBBS,MD,BDS, or equivalent qualification (Recognized by PM&DC), BS Nursing (04 years) or BSc Post RN (Recognized by PNC), BS (Prosthetic and Orthotic Sciences), BS Paramedics, BS Vision Sciences, BS Human Nutrition, BSc Physiotherapy (04 years), Doctor of Physical Therapy (DPT), Pharmacy (Pharm-B, Pharm-D) (Recognized by Pharmacy Council), DVM, Masters in Psychology, Statistics and Social Sciences.

### **1.Program Overview:**

Masters of Public Health is a TWO years degree programme taught in English, spread over Four Semesters and having 60 credit hours, with the objective of producing highly qualified public health specialist able to provide preventive and promotive health services to the community with effective communication and research skills. The Programme is registered with Pakistan Medical & Dental Council (PM&DC) and Higher Education Commission of Pakistan. On campus full time classes are held at the Institute of Public Health and Social Sciences, Khyber Medical University (Phase 5 , Hayatabad Peshawar). 1st ,2nd and 3rd Semesters offer 6 modules each, culminating in a total of 18 credit hours per each semester. 4th semester offers MPH Thesis of six credit hours culminating in a total of 6 credit hours. One credit hour is defined as one hour of contact teaching in a class room setting in a week for 16 weeks in a semester. A three credit hour course translates to three hours of teaching in a class room setting per week in a semester.

### **2.Mission:**

To produce highly qualified public health specialist able to provide preventive and promotive health services to the community with effective communication and research skills.

### **3.Outcomes:**

MPH graduate will be able to:

1. Identify and analyze the public health problems.
2. Develop strategies to deal with public health problems.
3. Conduct, analyze and interpret the research findings.
4. Communicate effectively with all the stakeholders.
5. Do advocacy with the policy makers.
6. Educate general population to increase awareness of public health problems.

### **4.Objectives:**

1. Equip the students with the knowledge and skills to identify, critically analyze and to deal with the public health problems.
2. Prepare the students to bring knowledge into practice.
3. Develop the communication skills of the students for effective communication with all stake holders.
4. Develop theoretical knowledge and practical skills in the field of research

## 5. Program structure

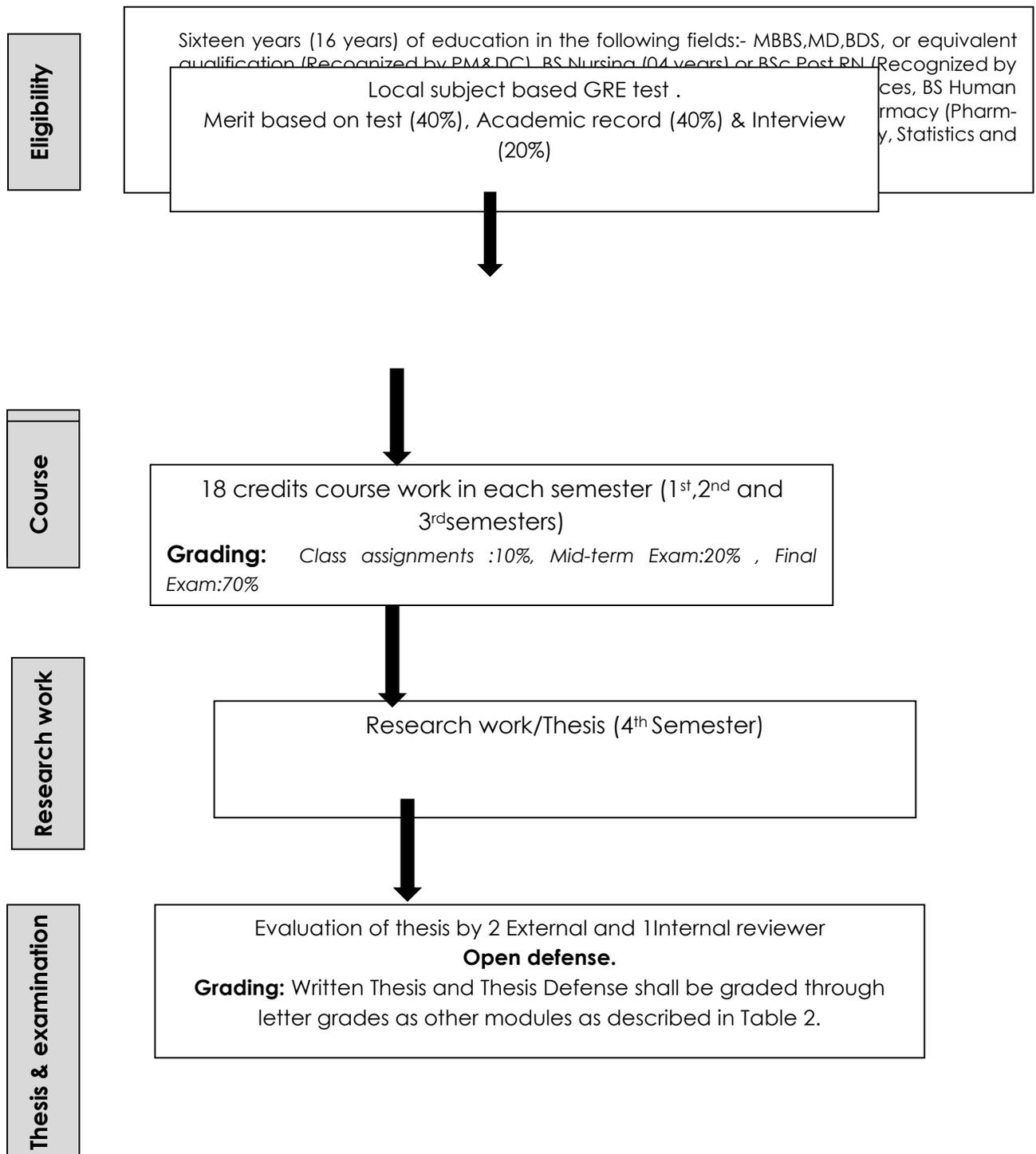
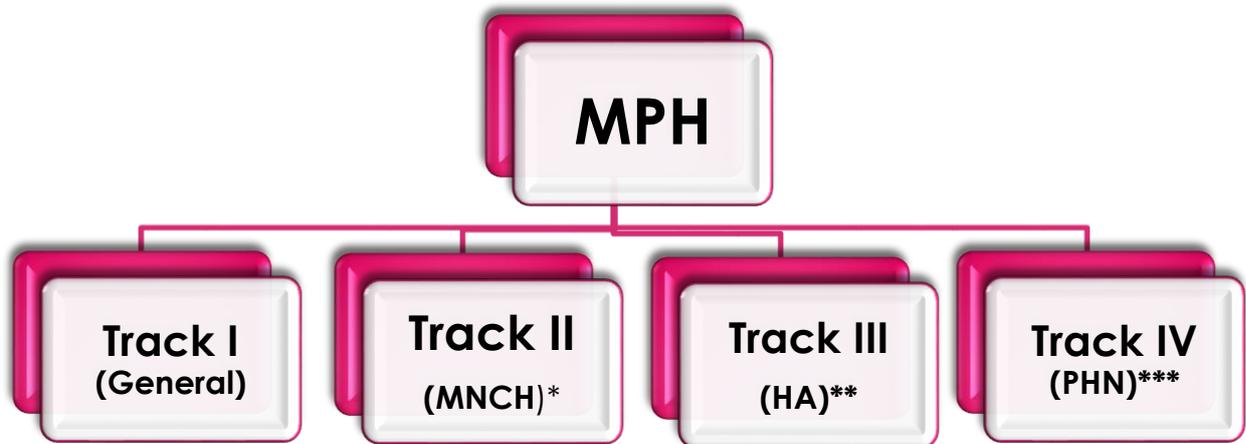


Figure 1. Tracks offered in MPH Program.



\* Maternal ,Newborn and Child Health(MNCH)

\*\*Hospital Administration(HA)

\*\*\*Public Health Nutrition(PHN)

## 6.ADMISSION:

The University abides by its strict merit based criteria with absolute transparency to select its student for the MPH Program.

### 6.1Student Selection Criteria

This is an equal opportunity program and there is no discrimination based on gender, religion or ethnicity. However, females and minority groups are encouraged to join this program. As per KMU policy

### 6.2Evaluation of Applicants

Applicants will be evaluated in four stages:

**Stage I:** Applications are reviewed and short listed based upon the eligibility criteria

**Stage II:** All short listed applicants are required to write the KMU MPH Admission Test.

**Stage III:** Includes interviews with the senior faculty members of the program. The purpose of the interview is to assess a variety of attributes, including integrity, motivation for the interest in the program, maturity, social and cultural awareness, knowledge of public health issues in developing nations and evidence of initiative and commitment to the profession.

**Stage IV:** Final selection is made by the institutes admission committee.

## **7.Registration**

Students will be registered with Khyber Medical University, Peshawar within a week after the admission.

## **8.Attendance:**

The policy for minimum attendance (>75 %) in a course is mandatory to complete the requirements of a course. The instructor shall report a student's absences and the student shall be placed on attendance probation by his/her dean/HOD and it will be notified by the department. A student shall be dropped from the University for violating the terms of such probation.

## **9.Cancellation of enrollment:**

If a student fails to attend any lecture during the first four weeks after the commencement of the semester as per announced schedule, his/her admission shall stand cancelled automatically without any notification.

## **10.Examination and Methods of Assessment:**

Students are evaluated during each course on the basis of:

1.Continuous assessment which includes short quizzes, tests, class and home assignments, class participation, interactive discussions, practical exercises and / or group work depending on the course outline. These assessments will be weighted towards 10% of the total grade for the course.

2.The mid-term exam will be graded for 20% of the total grade for the course. The mid-term results will be announced within a week and the students will get an opportunity to know their progress in the course. If students are weak in the subject, they may discuss with the course instructor and seek additional help from faculty for the course.

3.For the Final Examination the course coordinator will prepare two question papers in the University approved format and submit these to the Director of the Institute in a sealed envelope. The Director will forward these papers to the University Examination Section. By random selection the Final exam question paper will be issued by the University Exam Section. The final exam will be weighted towards 70% of the total grade for the course.

4.The weightage for both internal assessment, mid-term final exam will be as follows:

Final Examination: 70%

Midterm Examination: 20%

Internal Assessment: 10%

5.If a student fails the mid-term exam, the student needs to discuss his/her standing in the course with the course coordinator. The course coordinator will advise the student on coping strategies to improve the grade in the final exam.

6.If a student fails in the final exam, and the overall grade is a D, the student needs to repeat the course.

### Grading

a. Grading of students will be through letter grades as defined in Table 1. Grades will be assigned by the course coordinator. The course coordinator will sign and submit the grades to the program Coordinator who will forward the same to the Director of the Public Health Institute. The Director will then forward them to the Controller of Examination at the University. The numerical scoring in the continuous assessment, mid-term exam and final exam will be converted to a letter grade and grade points as follows: Any addition and deletions as per Semester rules are subject to rectifications

**Table 2: Grade Points**

Numerical Score (in percent)	Letter Grade	Grade Points
$\geq 85$	A	4.0
79- 84	B+	
70 - 78	B	3.0
60 – 69	C	2.0
50 – 59	D	1.0
$< 50$	F	0.0
	I	Incomplete
	W	Withdrawn

b. Students receiving an F grade in any course will have to repeat the course whenever it is offered again. A student obtaining a D grade in the course may also repeat that course, if necessary to improve his/her cumulative grade point average (CGPA). In case of repeated courses, all grades earned by the student will appear in the Transcript/Detailed Mark Certificate (DMC); however, only the latest grade will be counted for calculating the CGPA. If a large number of students fail a course, that course may be offered again during the Summer Semester.

c. Grade I (Incomplete) should be awarded to a student only if he/she has missed the Final Examination, Project Report Submission, Thesis Defense, etc., due to genuine reason, but has completed all the other work of the course successfully. The award of grade I should not cover a student's lethargic attitude, willful absence, or bad performance in class.

Grade I should be converted to an appropriate letter grade by the end of the next semester, otherwise it would stay permanent and the student will have to repeat the course. The course instructor concerned should specify the conditions for conversion of grade, in the Grade Conversion Form (FORM-GCF) to be supplied by the Controller of Exams at the University, and explain the same to the student while assigning grade I.

d. The Grade Point Average (GPA) for a semester will be calculated as:

Quality Points of each course = Grade Points of grade awarded x Course credit hours

GPA = Sum of Quality points of all courses / Total credit hours

An example of the GPA calculation for a generic semester in the MPH program is given in Table 2.

**Table 2: Example of GPA calculation for a semester**

Course Code	Credit Hours	Numerical Score	Letter Grade	Grade Points	Quality Points
A	B	C	D	E	A x E
MPH 410	3	87	A	4.0	12
MPH 421	3	76	B	3.0	9
MPH 430	3	70	C	2.0	6
MPH 440	3	84	B	3.0	9
<b>Total</b>	<b>12</b>				<b>36</b>
<b>GPA = 36 / 12 = 3.0</b>					

e. The Cumulative Grade Point Average (CGPA) will be calculated over all courses taken to date in a similar manner. In case a course is repeated, all grades will be reported on the transcript; however, only the latest grade will be used to calculate the GPA.

f. The written thesis and the thesis defense will be graded as other modules.

g. Student are expected to maintain a CGPA of 2.5 during the course of study.

h. A student who obtains a GPA of less than 2.5 for two consecutive semesters will be issued a warning letter from the Director.

i. A student who has more than one F grade from the first semester still outstanding at the end of the third semester will not be registered for the fourth semester until he/she clears these courses.

### **11.Thesis defense:**

The thesis defense committee comprises of the following members:

I.1 Internal reviewer.

II.1 External reviewer.

Thesis is reviewed using the Thesis evaluation form provided by the Examination section.

Students are required to present a 20 minutes presentation on their thesis

During this time questions are by the audience. This part of the exam is open to public(students/faculty).

Following this the student is examined in private by the examiners.

The written thesis and the thesis defense are graded as other modules.

## SECTION 2

### SEMESTER WISE DISTRIBUTION OF COURSES

12.Program Curriculum:

### 12.1 Program Duration, Credit Hours and Medium of Instruction

In a given year the program will commence from February and it may include a short Summer Semester (end of July to beginning of September) for make-up credits specially designed and scheduled by the course coordinator. The medium of instruction for all courses in the MPH program is English. The conduct of courses rests upon the imagination and individuality of the course teacher. However, the general methods of teaching are employed that include lectures, group discussions, seminars, demonstrations, short visits, etc.

The 1st,2nd and 3rd semesters offers 06 modules, culminating in a total of 18 credit hours per semester. While the 4th semester offers MPH Thesis of six credit hours culminating in a total of 6 credit hours. One credit hour is defined as one hour of contact teaching in a class room setting in a week for 16 weeks in a semester. A three credit hour course translates to three hours of teaching in a class room setting per week in a semester. The duration of one semester will include a total of 18 weeks that will be arranged as follows:

Week 1 – Week 8: Teaching and training

Week 9: Mid-term Exam

Week 10 – Week17: Teaching and Training

Week 18: Final Exam

### 12.2 Semester Wise Distribution of Courses

The distribution of the courses in the four semesters is given in the following tables.

#### Semester 1

#### Year 1

SEMESTER 1			
S NO	Codes	Modules	Credit Hours
1	MPH 617	Basic concepts in Public Health	02+01
2	MPH 612	Basic Biostatistics	02+01
3	MPH 611	Basic Epidemiology	02+01
4	MPH615	Communication and Computer skills	01+02
5	MPH 614	Health Promotion, Advocacy and Social Mobilization	02+01
6	MPH 618	Environmental and Occupational Health	02+01
<b>Total</b>			<b>18</b>

## Semester 2

<b>SEMESTER 2</b>			
<b>S NO</b>	<b>Codes</b>	<b>Modules</b>	<b>Credit Hours</b>
1	MPH 622	Applied Epidemiology & Biostatistics	02+01
2	MPH 613	Epidemiology of Communicable and Non Communicable Diseases	02+01
3	MPH 624	Applied Nutrition	02+01
4	MPH 621	Health Management & Policy	02+01
5	MPH 626	Health Systems	02+01
6	MPH 627	Health Professions Education & Professionalism	02+01
<b>Total</b>			<b>18</b>

## Semester 3

## Year 2

<b>SEMESTER 3</b>			
<b>S NO</b>	<b>Codes</b>	<b>Modules</b>	<b>Credit Hours</b>
1	MPH 711	Project Management	02+01
2	MPH 712	Hospital Management	02+01
3	MPH 713	Primary Health Care	02+01
4	MPH 714	Reproductive Health	02+01
5	MPH 715	Research Methods	02+01
6	MPH 716	Technical Writing	02+01
<b>Total</b>			<b>18</b>

## Semester 4

<b>S NO</b>	<b>Codes</b>	<b>Modules</b>	<b>Credit Hours</b>
1	MPH 601	Thesis	06

### Number of Credits per Semester

Semester I	18
Semester II	18
Semester III	18
Semester IV	06
<b>Total credits for the MPH Program</b>	<b>60</b>

### 12.3 MPH COURSES FOR SEMESTER I

#### 12.3.1 MPH 617: Basics Concepts in Public Health

Course Title: Basics Concepts in Public Health

Course Code: MPH 617

Course Credits: 3

#### Objectives of the course:

- Examine public health through its historical context and use this information in the evaluation of current public health issues.
- Analyze a public health problem and evaluate interventions and policy alternatives.
- Public health professionals' education and preparedness is the main concern of this course, for this will improve the health of the populations.

#### Course Contents:

The following areas will be covered during the course:

1. Definition of public health in a historical perspective
2. Recent developments in public health and future directions of public health
3. Problem-solving methodology applied to public health
4. Developing a conceptual framework for understanding the key determinants
5. Identifying and developing strategies (policies and interventions)
6. Setting priorities and recommending intervention or policies
7. Implementing interventions or policies and evaluation plan
8. Developing a communication strategy
9. Research in public health and importance of evidence-based decision making

10. Overview of public health programs in Pakistan.

**Recommended Readings:**

1. Basch PF. Textbook of international health, 2<sup>nd</sup> edition New York, NY: Oxford University Press.
2. Brownson RC, Baker BA, Leet TL, Gillespie KN. Evidence-based public health. New York, NY: Oxford University Press; 2003.
3. Detels R, McEwen J, Beaglehole R, Tanaka H, (eds.). Oxford textbook of public health: the practice of public health, 4<sup>th</sup> edition Oxford: Oxford University Press; 2002.
4. Malin N, Wilmot S, Manthorpe J. Key concepts and debates in health and social policy. Philadelphia, PA: Open University Press; 2002.
5. Porter D. Health, civilization and the state, 1<sup>st</sup> edition New York, NY: Chapman and Hall Routledge; 1999.

**Grading:** Class assignments 10%

Mid-term Exam 20% (MCQs & SEQs)

Final Exam 70% (MCQs & SEQs)

**12.3.2 MPH 612: Basic Biostatistics**

Course Title: Basic Biostatistics

Course Code: MPH612

Course Credits: 3

**Objective of the Course:**

Fundamental concepts and methods of biostatistics as applied predominantly to public health problems. Emphasis on interpretation and concepts rather than calculations. Topics include descriptive statistics; vital statistics; sampling; estimation and significance testing; sample size and power; correlation and regression; spatial and temporal trends; small area analysis; statistical issues in policy development. Examples of statistical methods will be drawn from public health practice. Use of computer statistical packages will be introduced.

**Course Contents:**

Definition, population and samples, data analysis and presentation, elementary statistical methods, tabulation, chart and diagram preparations, measures of central tendency and dispersion, sampling techniques and sample size estimation, probability and proportions, correlation and its applications; linear regression and multiple regression. Clinical trials and intervention studies. Measures for developing health statistical indicators: morbidity and mortality statistics. Use of latest statistical computer software for data analysis.

### Recommended Reading/Text

1. Daniel WW. Biostatistics: A Foundation for Analysis in the Health Sciences. Sixth edition, 1995, John Wiley & Sons. Inc. New York.
2. Larson R and Farber B. Elementary Statistics: Picturing the World. 1999, Prentice Hall Publications. USA.
3. Gonick L and Woolcott S. The Cartoon Guide Statistics. 1993. Harper Collins Publishers Inc., 10 East 53<sup>rd</sup> Street, New York, NY 10022.
4. Oliver, M. and Combard MS. Biostatistics for Health Professions. 1998, Prentice Hall Publications, New Jersey.
5. Scott S. Statistics for Health Professionals. 1990, WB Saunders and Company, USA.
6. Statistical Software: SPSS; EPIINFO; STATA; SAS

**Readings:** Assigned with each class.

### Grading:

Class assignments	25%
Mid-term Exam	25%
Final Exam	50%

### 12.3.3 MPH 611: Basic Epidemiology

Course Title: Basic Epidemiology

Course Code: MPH 501

Course Credits: 3

### Objective of the Course:

Epidemiological principles and methods needed to understand population-based statement of illness and health. Descriptive epidemiology, analytic epidemiology and epidemiological inference. Classification, morbidity and mortality rates, sampling, screening, epidemiological models, field trials, controlled epidemiological surveys, sources of bias and causal models.

### Recommended Reading /Text

1. Gordis, L. Epidemiology. Pennsylvania: W.B. Saunders Company. 1996, or the latest edition.
2. Rothman KJ. Modern Epidemiology. Boston: Little, Brown and Company, 1986.
3. Kelsey JL, Thompson WD, Evans AS. Methods in Observational Epidemiology. New York: Oxford University Press, 1986.
4. Kleinbaum DG, Kupper LL, Morgenstern H. Epidemiologic Research: Principles and Quantitative Methods. Belmont, CA: Lifetime Learning Publications, 1982.

5. Lilienfeld DE, Stolley PD. Foundations of Epidemiology (3<sup>rd</sup> edition). New York: Oxford, 1994.

6. WHO. "Epidemiological approach to public health", 1994, WHO: Geneva.

7. Vaughan J, Morow R, "Manual of Epidemiologist for District Health Management", 1998. Geneva: WHO.

**Readings:** Assigned with each class.

**Grading:**

Class assignments            25%

Mid-term Exam                25%

Final Exam                     50%

**12.3.4 MPH 615:Communication and Computer skills**

Course Title: Communication and Computer skills

Course Code: MPH 615

Course Credits: 3

**Objectives of the course:**

The overall goal of the course is to improve the capacity of the students in term of developing excellent communication skills. It will help the students in developing better written and verbal communication skills. As public health practitioner, most of the time is spend practicing communication skills, either writing reports, preparing power point presentation for meetings/seminars/workshops using both verbal and written communication. The course will enable students to understand the basic concepts of communications and to develop skills, how to effectively communicate. It will also help in developing skills of written communication whether formal or informal and effectively communicating with government or international organizations. It will also enable students to apply different advocacy tools while working on public health issues with community or other stake holders.

**Course Contents:**

**Principles of Communication**

1. Communication process
2. Communication flow & its types
3. Communication in a modern organization
4. 7 Cs of effective communication
5. Barriers to communication

**Press Release**

1. History & Evolution of press release
2. Why we need press release/importance
3. guidelines of press release

## How to write letters

1. Formal & Informal letter writing
2. Tips on CV

## Meeting

1. Working paper/agenda setting
2. proceedings of the meeting
3. vetting of the minutes

## Power Point presentation

1. Preparation of oral presentation-Structuring the presentation
2. giving the presentation
3. question answer

## Health Messages

1. Different channels of communications & choosing the appropriate channel
2. guidelines for preparing health messages
3. elements & development of health messages

## Advocacy

1. Definition & purpose of advocacy
2. Forms of advocacy
3. Advocacy planning cycle

## Recommended Readings:

1. [www.mmdnewswire.com](http://www.mmdnewswire.com)
2. <http://www.wagingpeace.org/menu/about/medicenter/>
3. [http://en.wikipedia.org/w/index.php?title=Press\\_release&oldid=453682050](http://en.wikipedia.org/w/index.php?title=Press_release&oldid=453682050)
4. <http://www.Publicityinsider.com>
5. Communication Skill Guide by University of Adelaide, Australia, <https://www.adelaide.edu.au/professions/current-students/downloads-forms/archive/Communications-Skills-Guide.pdf>
6. Advanced Skills for Communication in English: Book I, [https://www.researchgate.net/publication/301351158\\_Advanced\\_Skills\\_for\\_Communication\\_in\\_English\\_Book\\_I](https://www.researchgate.net/publication/301351158_Advanced_Skills_for_Communication_in_English_Book_I)
7. Advances in Public communication campaigns. In E Scharrer (Ed), The International Encyclopedia of media studies:Vol.5:media effects/media psychology (pp.526-551). London, UK: Wiley Blackwell
8. How to improve scientific writing in Public Health by WHO, PAHO/WHO Methodologies for Information Sharing and Knowledge Management in Health, [www.paho.org](http://www.paho.org)

## Grading:

Class assignments	10%
Mid-term Exam	20% (MCQs & SEQs)
Final Exam	70% (MCQs & SEQs)

### **12.3.5 MPH 614: Health Promotion, Advocacy and Social Mobilization**

Course Title : Health Promotion, Advocacy and Social Mobilization

Course Code : MPH 614

Course Credits : 03

#### **Objectives:**

An innovative, multilevel, service-oriented health course designed to educate, motivate, and empower Public Health graduates to become advocates for their own health, the health of their peers, and the health of their community.

The general learning objective of this course is to introduce the significance of Health education & Promotion as a subject in MPH program through enhancing the knowledge of students regarding planning, implementation and evaluation of methods and policies that enable people to increase control over their health and its determinants and there by improve their health.

This module intends to enable students to:

1. Assess individual and community needs.
2. Plan, Develop, Coordinate, Implement & Evaluate health education programs.
3. Develop social marketing and mass media campaigns.
4. Mobilize communities for action & be able to handle controversial health issues.
5. Advocate & encourage healthy behavior & conduct research.

#### **Course Contents:**

1) Common medical problems in adolescents and young adults; 2) School health policies affecting health; 3) Principles of preventive medicine, health promotion and social marketing; 4) Personal development; and 5) evidence-based school prevention programs. This course is ideal for students interested in pursuing careers in medicine, public health, dentistry, nursing, law, anthropology, or social work.

#### **Recommended Reading/ Text**

1. Elder JP. Behavior change and public health in the developing world. Thousand Oaks, CA: SAGA; 2001
2. Valente TW. Evaluating health promotion programs New York, NY: Oxford University Press; 2002.
3. Brace G. Simons – Morton, Walter H. Greene, Neeill H. Gottlieb. "Introduction to health education and health promotion", Waveland Press, INC; Prospect Height. Illinois.
4. Naidoo, J. Wills, j. "Health Promotion", 1994 London: Baillere/Tindall Publications.
5. Young, B. and Durston, S. "Primary Health Education", 1987, England: Longman education text.
6. Spyros D. (eds) "Ethics in Health Education", 1990, England: John Wiley  
Hawes H. "Health promotion in our schools", 1997, UNICEF/Child to child trust.

**Readings:** Assigned with each class.

**Grading:**

Assignments	10%
Mid-term Exam	20%
Final Exam	70%

**12.3.6 MPH 618: Environmental & Occupational Health**

Course Title: Environmental & Occupational Health

Course Code: MPH 618

Course Credits: 3

**Objectives of the course:**

The overall goal of the course is to improve the capacity of students in terms of their knowledge, skills & attitude of occupational health and environmental hazards. Identify & suggest remedial measures of indigenous occupational and environmental health hazards. To provide skills i.e. identify and diagnose the disease and then refer to specialist. Describe the core issues in Environmental Health. Define the major sources and types of environmental agents. Identify the carriers or vectors that promote the transfer of these agents from the environment to the human. Describe the existing situations and remedies in developing countries. Identify and define the steps in the risk-assessment and risk-management processes. Describe the sources, pathways of exposure and methods of control of the principal physical, chemical, biologic and psychosocial hazards that impact human health in ambient, indoor and occupational environments. Define and describe essential concepts, principles, methods and terms in occupational health. Apply certain techniques in the resolution of selected occupational health issues and Describe basic methods of quantitative and qualitative analysis being used by health managers in occupational health.

**Course Contents:**

**General :**

1. Introduction to Environmental Health Issues
2. Environmental Health Issues of Pakistan
3. Human Impacts on Environment
4. Environmental Impacts on Human Health
5. Sanitation Status and Options in Pakistan

**Water Pollution:**

1. Surface and Groundwater Resources of Pakistan

2. Drinking Water Supply Sources
3. Drinking Water Quality Situation in Pakistan
4. Pesticides and Fertilizers
5. Arsenic, Fluoride and Nitrate contamination in Drinking Waters
6. Water Born Diseases in Pakistan

#### **Air Pollution**

1. Air Pollution Sources
2. Air Quality Monitoring Network in Pakistan
3. Present Status of Air Pollution in Pakistan
4. Health Effects of Air Pollution
5. Air Pollution Control Devices
6. Legal Regulations

#### **Noise Pollution:**

1. Sources of Noise Pollution
2. Effect of Noise Pollution on Health and Behavior
3. Noise Mitigation
4. Legal Requirements

#### **Solid and Hazardous Waste Management:**

1. Solid Waste Sources and Quantitative Estimates
2. Methods of Disposal
3. Waste Handling and Transport
4. Waste Management Concepts
5. Technologies
6. Hazardous Waste Generation
7. Hazardous Waste Management
8. Hazardous Waste Storage
9. Common Hazardous Waste incineration Facilities

## **Environmental Impact Assessment (EIA)**

1. Objectives of EIA
2. Types of EIA
3. Basic EIA Principals
4. Types of Environmental Impacts
5. Risk Assessment
6. Environmental Management Plan
7. Stakeholders Roles and Responsibilities

## **Climate Change and Its Effect on Health:**

1. Pakistan's Vulnerability to Climate Change
2. Effect on Floods and Droughts
3. Human Health

## **Environment Policy and Law:**

1. Air Quality and Noise
2. Waste Management
3. Water Supply and Management
4. Forestry
5. Poverty and Environment
6. Health and Environment
7. Natural Disaster Management
8. Legislation and Regulatory Framework

## **Occupational Health**

1. Workplace and Health
2. Scope of Occupational Health and Safety
3. Occupational Health Issues in Low-income Countries
4. Industrial Hygiene
5. Anticipation

6. Recognition
7. Evaluation
8. Control
9. Clinical Occupational and Environmental Medicine
10. Legal and Regulatory Issues

**Recommended Readings:**

1. Lippmann M, Cohen BS, Schlesinger RB. Environmental health science, 2nd ed. New York, NY: Oxford University Press; 2003.
2. Moeller WD. Environmental health, 2nd ed. Cambridge, MA: Harvard University Press; 1997.
3. Moore GS. Living with the earth: concepts in environmental health science, 2nd ed. Boca Raton, FL: Lewis Publishers; 2002.
4. Nadakavukaren A. Man and environment: a health perspective, 3rd ed. Prospect Heights, IL: Waveland Press; 1990.
5. Sellers CC. Hazards of the job: from industrial disease to environmental health science. Chapel Hill: University of North Carolina Press; 1997.
6. Steiner GA, Miner JR, Gray ER. Management policy and strategy. New York, NY: Macmillan Education Ltd; 1986.
7. Vesilind PA, Peirce JJ. Environmental pollution and control, 4th ed. Boston, MA: Butterworths Publishers; 1983.
8. Yassi A, Kjellström T, de Kok T, Guidotti T. Basic environmental health. New York, NY: Oxford University Press; 2001.
9. Jeyaratnam J, Koh D (eds.). Textbook of occupational medicine practice. Singapore: World Scientific Publishing Co; 1996.
10. Sellers CC. Hazards of the job: from industrial disease to environmental health science. Chapel Hill: University of North Carolina Press; 1997.
11. Reich MR, Okubo T (eds.). Protecting workers' health in the third world: national and international strategies. New York, NY: Auburn House.
12. Merchant JA, Boehlecke BA, Taylor G, Pickett-Harner M (eds.). Occupational respiratory diseases. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, National Institute for Occupational Safety and Health, DHHS (NIOSH); 1986. Publication No. 86-102.

**Grading:**

Class assignments	10%
Mid-term Exam	20%
Final Exam	70%

**12.4 MPH COURSES FOR SEMESTER II****12.4.1 MPH 622: Applied Epidemiology & Biostatistics**

Course Title: Applied Epidemiology & Biostatistics

Course Code: MPH 622

Course Credits: 3

**Objectives of the course:**

Introduce the students to the principles and methods of epidemiologic investigation of infectious and noninfectious diseases. Illustrates how methods of studies of the distribution and dynamic behavior of infectious and chronic diseases in a population can contribute to an understanding of etiologic factors, modes of transmission, and pathogenesis. Presents different types of study design, including randomized trials, case-control and cohort studies, and risk estimation and causal inferences. Demonstrates the interface between epidemiology and the development of policy.

**Course Contents:**

This course will cover the methods used in the conduct of epidemiological research. Topics include: case control studies, cohort studies, clinical trials, cross-section studies, exposure measurement, subject selection, validity, reliability, samples size and power, effect modification, confounding, bias, chance, risk assessment, frequency matching, matching, meta-analysis. Analysis of data sets will be given as well.

**Recommended Reading/ Text**

1. Brownson RC, Petitti DB. Applied Epidemiology. Theory to practice. Oxford University Press; London, 1998.
2. Mandell G, Douglass RG, Bennett JE. Principles and Practice of Infectious Diseases, 3<sup>rd</sup> ed., Churchill Livingstone, New York, 1990.
3. Brownson RC, Baker EA, Leet TL, Gillespie KN. Evidence based public health. Oxford University Press. London. 2002.
4. Giesecke J. Modern Infectious Disease Epidemiology. Edward Arnold; London, 1994.
5. Kelsey JL, Thompson WL, Evans AS. Methods in Observational Epidemiology. Oxford University Press; New York, 1986.

**Readings:** Assigned with each class.

**Grading:**

Class assignments	10%
Mid-term Exam	20
Final Exam	70%

**12.4.2 MPH 613: Epidemiology of Communicable & Non-Communicable Diseases**

Course Title: Epidemiology of Communicable & Non-Communicable Diseases

Course Code: MPH 613-Second Semester

Course Credits: 03

**Objectives of the course:**

This course will help the students to understand the basic concepts in epidemiology of communicable and non-communicable diseases. Improved and updated knowledge regarding the dynamics of transmission and control measures of common communicable diseases. Understand the role of vectors in disease transmission. The importance of immunization in disease prevention and to choose effective public health approaches in controlling and reducing the burden of disease in general population. Understand the steps and rationale of disease outbreak investigation and public health approaches in disaster and emergency situations. To impart the importance of increasing mortality from non communicable disease in the local context facing the double burden of disease and its preventive and controlling strategies through modifiable risk factor. Bioterrorism risk management. The impact of climate changes on health due to degradation of environment.

**Course Contents:**

**Introduction: Basic concepts of Health & Disease, Prevention**

1. Health, diseases & wellness, definition & its components-dimensions, determinants of health.
2. Models/theories of disease causation, natural history of disease. Levels of prevention & screening

**Epidemiology of Communicable diseases**

1. Prevention & control of communicable diseases, epidemiological classification of communicable diseases.
2. Dynamics of disease transmission

**Public Health Approaches to Infectious diseases**

1. Public Health Definition, Public health approaches to Infectious diseases

2. International Health Regulations (IHR)

#### **Vector borne diseases (Malaria)**

1. Introduction to VBDs, Integrated management of VBDs
2. Malaria Introduction ,Strategies for prevention & control of malaria
3. Malaria control programs
4. Malaria in Pakistan

#### **Airborne diseases (T.B)**

1. Airborne transmission
2. Epidemiology of TB
3. TB control strategies and TB control in Pakistan

#### **Sexually transmitted diseases (HIV/AIDS, Hepatitis C& D)**

1. Sexually transmitted diseases
2. epidemiology of HIV/AIDS
3. strategies for the prevention & control of HIV/AIDS, HIV/AIDS in Pakistan

#### **Food& water borne diseases (Hepatitis A& E)**

1. Food borne & waterborne diseases
2. Viral hepatitis, prevention & control of viral hepatitis
3. Hepatitis in Pakistan

#### **Contact diseases (Ebola Hemorrhagic fever & scabies)**

1. Key facts
2. Transmission, prevention & control

#### **Childhood Diseases & Expanded Program of Immunization in Pakistan**

1. Major causes of children mortality
2. Child health in Pakistan, Interventions that work
3. Child health & SDGs
4. Immunization in Pakistan

#### **CDs in Emergencies: Disease Early Warning System & Outbreak investigation**

1. Fundamental principles of communicable diseases control in emergency situations-Rapid assessment
2. Prevention, surveillance
3. outbreak control and management
4. Working of DEWS, Outbreak investigation

#### **Epidemiology of Non-communicable diseases**

1. Epidemiology of NCDs
2. modifiable & non modifiable risk factors
3. Prevention & control strategies

## **Non-communicable diseases of Public health importance (CVDs, cancers, diabetes mellitus, COPD)**

1. Introduction, burden, risk factors
2. Prevention & response for control

## **Non-communicable diseases and injuries in Pakistan: Policy & Strategic priorities**

1. NCDs burden in Pakistan, risk factors & prevention in Pakistan
2. National Action Plan for prevention & control of NCDs in Pakistan

## **Risk factors for Non-communicable diseases**

1. Physical inactivity, causes and health risks of obesity
2. strategies for prevention of Obesity, Tobacco use

## **Road Traffic Accidents & Safety**

1. Causes for road traffic accidents
2. Mortality & prevention strategies

## **Mental Health**

1. Factors underlying mental ill health, types, burden
2. Strategies for control and prevention of mental disorders

## **NCDs and global (environmental) change**

1. Effect of climate change on CVDs, respiratory diseases, general health, mental health, cancer & injuries.
2. Strategies to address impact of climate change.

## **Bio risk measures, food value chain, pesticides, Bio terrorism, drug resistance**

1. Bio Risk Measure
2. Food Value Chain-Sustainable food value chain
3. Pesticides
4. Bio Terrorism
5. Anti Microbial Resistance

## **Recommended Readings:**

1. <http://www.pitt.edu/~super4/lecture/lec20021/013.htm>
2. <https://cursos.campusvirtualsp.org/mod/tab/view.php?id=23157>
3. WHO Recommended Strategies for the Prevention and Control of Communicable Diseases 2001.13
4. Principles of epidemiology in Public health practice, CDC self study course
5. [CDC Self-Study Course SS1978Lesson 1](#)
6. <http://www.who.int/ihr/finalversion9Nov07.pdf>
7. <http://www.open.edu/openlearn/science-maths-technology/science/public-health-approaches-infectious-disease/content-section-0?active-tab=description-tab>
8. Malaria: Fact sheet N°94. WHO, 2013. <http://www.who.int/mediacentre/factsheets/fs094/en/index.html>.
9. World Malaria Report, 2014. WHO Global Malaria Program. WHO, 2014.
10. Malaria, WHO. <http://www.who.int/topics/malaria/en/>

11. <https://www.youtube.com/watch?v=HL26nz31hEQ> (Video Link)
12. <https://www.youtube.com/watch?v=gwYlyjwYluc&feature=youtu.be> (Video Link)
13. Malaria Control Program. Directorate of Malaria Control, Pakistan.
14. <http://www.dmc.gov.pk/index>
15. <http://www.emro.who.int/pak/programmes/roll-back-malaria.html>
16. <http://www.ntp.gov.pk/>
17. GLOBAL TUBERCULOSIS REPORT 2013
18. Tuberculosis control in Pakistan: reviewing a decade of success and challenges *P. Metzger,1 N.A. Baloch,2 G.N. Kazi1 and K.M. Bile1*EMHJ • Vol. 16 Supplement • 2010, Eastern Mediterranean Health Journal
19. HIV/AIDS. Fact sheet. WHO, 2017. <http://www.who.int/mediacentre/factsheets/fs360/en/index.html>
20. National AIDS Control Program – Ministry of Inter-provincial co-ordination, Govt. of Pakistan. : <http://www.nacp.gov.pk/introduction/>
21. GLOBAL HEALTH SECTOR STRATEGY ON VIRAL HEPATITIS 2016–2021
22. TOWARDS ENDING VIRAL HEPATITIS by WHO, June 2016
23. <http://www.who.int/mediacentre/factsheets/fs103/en/>
24. <https://www.cdc.gov/parasites/scabies/>
25. Expanded Program of Immunization, Pakistan. WHO, :<http://www.emro.who.int/pa>
26. Expanded Program of Immunization. : <http://www.epi.gov.pk/>
27. Public health guide for emergencies- The Johns Hopkins and the International Federation of Red Cross and Red Crescent Societies Communicable disease control in emergencies a field manual by WHO
28. <http://www.who.int/mediacentre/factsheets/fs355/en/> Maher et al. Globalization and Health 2012, 8:14
29. <http://www.globalizationandhealth.com/content/8/1/14>
30. <http://www.who.int/mediacentre/factsheets/fs312/en/>
31. <http://www.who.int/mediacentre/factsheets/fs297/en/>
32. <http://www.who.int/mediacentre/factsheets/fs315/en/>
33. <http://www.who.int/mediacentre/factsheets/fs317/en/>
34. NCDs POLICY BRIEF - Pakistan February 2011
35. The World Bank, South Asia Human Development, Health, Nutrition, and Population Non-communicable diseases and injuries in Pakistan: strategic priorities, *Lancet* 2013; 381: 2281–90 Published Online May 17, 2013 [http://dx.doi.org/10.1016/S0140-6736\(13\)60646](http://dx.doi.org/10.1016/S0140-6736(13)60646)
36. <http://www.who.int/mediacentre/factsheets/fs311/en/>
37. <http://www.who.int/mediacentre/factsheets/fs385/en/>
38. [http://apps.who.int/iris/bitstream/10665/178577/1/WHO\\_NMH\\_PND\\_15.5\\_eng.pdf?ua=1&ua=1](http://apps.who.int/iris/bitstream/10665/178577/1/WHO_NMH_PND_15.5_eng.pdf?ua=1&ua=1)
39. Strategies for Prevention of Road Traffic Injuries (RTIs) in Pakistan: Situational Analysis, Adeel Ahmed Khan and Zafar Fatmi, Journal of the College of Physicians and Surgeons Pakistan 2014, Vol. 24 (5): 356-36
40. Mental Health. WHO., [http://www.who.int/topics/mental\\_health/en](http://www.who.int/topics/mental_health/en)
41. [http://knowledgex.camh.net/amhspecialists/screening\\_assessment/screening/treating\\_cd\\_intro/pages/treating\\_cd\\_mhproblems.aspx](http://knowledgex.camh.net/amhspecialists/screening_assessment/screening/treating_cd_intro/pages/treating_cd_mhproblems.aspx)

42. Annu. Rev. Public. Health. 2011.32:133-47. [www.annualreviews.org](http://www.annualreviews.org) Bio risk management : Lab bio security guidelines by WHO: [http://www.who.int/csr/resources/publications/biosafety/WHO\\_CDS\\_EPR\\_2006\\_6.pdf](http://www.who.int/csr/resources/publications/biosafety/WHO_CDS_EPR_2006_6.pdf)
43. <http://www.who.int/csr/delibepidemics/biochemguide/en/>
44. <http://www.fao.org/sustainable-food-value-chains/what-is-it/en/>
45. Guidelines on the management of public health pesticides: [http://www.fao.org/tempref/AG/Reserved/btor/agp/agpp\\_BTOCM.pdf](http://www.fao.org/tempref/AG/Reserved/btor/agp/agpp_BTOCM.pdf)
46. Antimicrobial resistance Fact sheet by WHO 15 Feb 2018: <http://www.who.int/en/news-room/fact-sheets/detail/antimicrobial-resistance>
47. Guideline on Use of medically important antimicrobials in food producing animals by WHO
48. <http://apps.who.int/iris/bitstream/handle/10665/258970/9789241550130-eng.pdf?sequence=1>

**Grading:**

Class assignments	10%
Mid-term Exam	20%
Final Exam	70%

**12.4.3 MPH 624: Applied nutrition**

Course Title: Applied nutrition

Course Code

Credit Hours:03

**OBJECTIVES:**

1. To comprehend fundamental concepts in the public health nutrition.
2. To understand the role of nutrition in the aetiology of health problems of widespread importance in global and Pakistan context.
3. To apply scientific principles and concepts to deal with the nutrition related problems in community and emergency situations.
4. To analyze, interpret and evaluate policies and programs related to Public health Nutrition.
5. Utilize the research data for developing strategies for prevention and management of nutritional disorders

**CONTENT:**

1.Introduction to Basic concepts of Nutrition:

- Food Groups
- Nutrients (Classification, biochemical structure, functions, daily requirements, deficiency & excess disorders)
- Balanced Diet

2. Life cycle nutrition:

- Infant & young child
- Adolescent Nutrition
- Pregnancy & lactation
- Old age

3. Influences on nutrition:

- Factors affecting dietary habits
- Cultural & religious sensitivities
- Nutrition promotion

4. Prevention of Food Hazards

- Epidemiology
- Classification
- Prevention (food safety & hygiene)
- Drug resistance organisms

5. Nutrition in emergency situations:

- Introduction
- Phases of an emergency response
- Basic principles of nutrition supply in emergency situations
- Planning a ration
- Nutrition surveillance
- Post emergency rehabilitation

6. Double burden of malnutrition:

- Types (Under nutrition & over nutrition)
- Prevention & control strategies

7. Micronutrient malnutrition:

- Vitamin A, Iron and Iodine deficiencies
- Prevention strategies

8. Nutritional Assessment & Surveillance:

- Methods of Nutritional assessment
- Screening
- Types of Nutritional Surveillance Systems
- Nutritional Surveillance Indicators
- Nutritional Surveillance cycle

9. Food Security situation in Pakistan

- Food & Nutrition security & Insecurity: Basic concepts
- Nutrition policies & Programs in Pakistan

**Recommended Reading:**

1. Essentials of Human Nutrition, Second Edition. Jim Mann, A. Stewart Truswell, Editors  
Oxford University Press; 2002.

2. Nutrition and Health in Developing Countries. Second Edition. Editors Richard D. Semba, Martin W. Bloem. 2008 Humana Press, USA.

3. An Introduction to Nutrition (v. 1.0).

Available Online : <http://2012books.lardbucket.org/>

**Additional Reading:**

1. Principles of Human Nutrition: Lecture Material – Jhon Hopkin University (Online).

2. Encyclopedia of Human Nutrition (Second Edition)

*Editor-in-Chief:*

*Benjamin*

*Caballero*

ISBN:

978-0-12-226694-2

Editors: Lindsay Allen and Andrew Prentice

3. Human Nutrition – Britannica Online Encyclopedia. Available at: [www.britannica.com](http://www.britannica.com)

4. Cambridge Journal Online – Public Health Nutrition. Cambridge University Press

**Grading:**

Class assignments      10%

Mid-term Exam          20%

Final Exam                70%

**12.4.4 MPH 621: Health Policy & Management**

Course Title: Health Policy & Management

Course Code: MPH 621

Course Credits: 3

**Objectives of the course:**

Health planning is major task of public health professional working in the government and the private sector in position of program and project manager, at district and below. Public health professionals

are required to have sound knowledge and skill to plan, implement and monitor the program at the prescribed levels.

At the end of the course, the student should be able to;

1. List the sequential steps of the micro planning cycle.
2. Explain the difference and relationship between different types of planning.
3. Apply certain tools and technique for district health and project planning.
4. Develop a district health plan/ program implementation plan with an adequate budget.
5. Conduct a stakeholder analysis in the process of policy development.
6. Understand the implementation modalities of macro level and micro level policy decisions at micro level (translation of policies into action)
7. Describe the policy procedure that exist in Pakistan and in other countries and critique their strengths and weaknesses.

### **Recommended Reading/ Text**

1. Green A. An introduction to health planning in developing countries, 2<sup>nd</sup> ed. Oxford: Oxford University Press; 1999.
2. Kielmann AA, Siddiqi S, Mwadime RK. District health planning manual: toolkit for district health managers. Islamabad, Pakistan: Multi –donor support unit, Ministry of health; 2002.
3. Kielmann AA, Janovaky K, Annett H. Assessing district health needs, services and systems: protocols for rapid data collection and analysis. London, UK: Macmillan Education Ltd and AMREE; 1995
4. Newell K. The way ahead for district health systems. World Health Forum. 1989; 10:80-7.

**Readings:** Assigned with each class.

### **Grading:**

Class assignments :10%

Mid-term Exam:29%

Final Exam:70%

### **12.4.5 MPH 626: Health System**

Course Title: Health System

Course Code: MPH 626

Course Credits: 3

### **Objectives of the course:**

1. Understand the various concepts of Health Systems
2. Understand and enlist all essential components of the Health Systems Model
3. Understand and practice the steps of Health Systems Analysis
4. Identify indicators for each component of Health Systems Model
5. Develop a tool for Health Systems Analysis
6. Conduct Health Systems Analysis in the field
7. Analyze and interpret the findings from data collected through the Health Systems Analysis Tool

**Course Contents:**

The following areas will be covered during the course:

1. Definitions of health input, output and outcomes
2. Health System: Conceptual Frameworks
3. Health System: Terms and Concepts
4. Systems Approach
5. Micro Health System: Kielmann Model
6. Health Indicators and their use
7. Situation Analysis Approach
8. Instrument for Health Systems Analysis
9. Macro Health System: WHO model
10. Health Management Information System
11. Field Visits for data collection(applied system analysis)
12. Health system functions
13. Health system outcomes
14. Primary Health Care
15. Linking the Micro and Macro Health models

**Recommended Readings:**

1. Berman BA, Bossert TJ. A decade of health sector reform in developing countries: what have we learned? Boston, MA: Data for Decision Making Project, International Health Systems Group, Harvard; 2000. Available from: URL: <http://www.hsph.harvard.edu/ihs/publications/pdf/closeout.pdf>
2. Kemm J, Parry J, Palmer S (eds.). Health impact assessment: concepts, theory, techniques and applications. Oxford: Oxford University Press; 2004.
3. Kielmann AA, Siddiqi S, Mwadime RK. District health planning manual: toolkit for district health managers. Islamabad, Pakistan: Multi-donor Support Unit, Ministry of Health; 2002.
4. Kielmann, AA, Janovsky K, Annett H. Assessing district health needs, services and systems: protocols for rapid data collection and analysis. London, UK: MacMillan Education Ltd and AMREF, 1995.
5. Siddiqi S, Haq IU, Ghaffar A, Akhtar T, Mahaini R. Pakistan's maternal and child health policy: analysis, lessons and the way forward. Health Policy 2004;69:117-30.
6. Siddiqi S, Kielmann AA, Khan MS, Ali N, Ghaffar A, Sheikh U, et. al. The effectiveness of patient referral in Pakistan. Health Policy Plan. 2001;16: 193-198.

<b>Grading:</b> Class assignments	10%
Mid-term Exam	20%
Final Exam	70%

#### **12.4.6 MPH 627: Health Professions Education & Professionalism**

Course Title: Health Professions Education & Professionalism

Course Code: MPH **627**

Course Credits: 3

##### **Objectives of the course:**

By the end of CHPE course, the target audience should be able to achieve the following learning outcomes:

1. Demonstrate trends, issues and challenges in Health Professions Education at the global, national and local levels.
2. Demonstrate the significance and role of Health Professions Education in improving the quality of education.
3. Recognize the modern role of a medical teacher beyond the boundaries of mere information provider.
4. Develop skills as efficient and effective medical teachers.
5. Demonstrate basic communication skills pertinent to their roles as medical teacher.
6. Perform alignment of curriculum development with teaching, learning and assessment.
7. Identify his/her own professional development needs to professionalize his/her practice as an educator and lifelong learner.

##### **Course Contents:**

1. Overview of health professions education
2. Learning theories
3. Adult learning principles
4. Learning domains
5. Learning objectives/outcomes
6. Table of specification
7. Teaching in large group format
8. Teaching in small groups
9. Problem based learning
10. Case based learning
11. Task based learning
12. Team based learning
13. Types of curriculum
14. Curriculum planning and development
15. SPICES model

16. Curriculum integration
17. Study guides
18. Professionalism
19. Values based medicine
20. Medical Ethics
21. Principles of assessment
22. Types of assessment
23. Assessment blueprint
24. Miller's pyramid
25. Construction of MCQs,/EMQs
26. Short answer/essay questions/Modified essay questions
27. Construction of OSCEs/OSPES
28. Workplace based assessments
29. Effective feedback

**Recommended Readings:**

1. Practical guide for medical teachers
2. ABC of teaching and learning

**Grading:**

Class assignments	10%
Mid-term Exam	20%
Final Exam	70%

**12.5 MPH COURSES FOR SEMESTER III: *TRACK 1 MPH General***

**12.5.1 MPH 711: Project Management**

Course Title: Project Management

Course Code: MPH 711

Course Credits: 3

**Objectives of the Course:**

To raise awareness on the value of project management & broaden project management skills in project managers and development organizations & to enable project team members understand project management concepts and enable them to participate more effectively.

**Course Contents:**

Introduction to Project Management, Definition of Project and Project Management, The Four Project Management Constraints, The Development Project Environment. Project Management Challenges, The Project Management Cycle, The Six Project Management Phases. The Project Management Cycle, The Project Management Processes, The Enabling Project Management Processes, The Facilitating Project Management Processes, The Role of the Project Manager ,The Responsibilities of the Project

Manager, Managerial Skills for Project Managers, Interpersonal Skills for Project Managers, Influence and Power of the Project Manager, The Project Management Structures, The Programmatic Focus Structure, The Matrix Structure, The Project Based Structure

**Recommended Reading:**

1. A Guide to the Project Management Body of Knowledge: PMBOK Guide
2. Step by Step Office Project 2007
3. Directing Successful Projects with PRINCE2 Manual

Readings: Assigned with each class.

**Grading:**

Class assignments	10%
Mid-term Exam	20%
Final Exam	70%

**12.5.2 MPH 712: Hospital Management**

Course Title: Hospital Management

Course Code: MPH 712

Course Credits: 3

**Objectives of the Course:**

The goal of the course is to enhance the students' knowledge regarding management and other issues faced by hospital managers and to develop their skills to address the managerial and administrative issues of Public and Private sector hospitals at all levels.

**Course Contents:**

Components of a hospital and role of hospital in Preventive care activities, Health care delivery system of Pakistan and comparison of different levels of system in terms of service delivery, vision, mission and values of a hospital and developing statements for all the three domains, hospital administration with different roles and functions of hospital managers, hospital inventory-different types of inventory and minimal data included in inventory, organization of Nursing services, nursing care plans and nursing educational programs, minimum standards for hospital pharmacy, organizational structure of pharmacy department along with pharmacy and therapeutic committee, hospital's A&ED its design in detail along with essential components and remarks, standard concepts of A&ED, manpower requirement of A&ED, quality indicators of A&ED and standard protocols of a hospital's A&ED, key accounting principles and concepts of hospital financial management, modes of payments of hospitals

and health care financing in Pakistan, health human resource management, human resource development, and human resource forecasting and job analysis, hospital waste and its management, classification of health care waste (HCW), Waste management process and methods of HCW treatment, clinical governance and audit, importance and characteristics of clinical audit and also differentiation between audit and research.

### **Recommended Reading/ Text**

#### **Essential books (text books)**

1. Management of Health care Organizations: An Introduction
2. Principles of Hospital Administration and Management
3. Health Care Operations Management

#### **Recommended books**

1. Essential Techniques for healthcare Managers
2. Fundamentals of Human Resources in Healthcare
3. Healthcare Strategic Planning

#### **International Reports, Studies and Websites, etc.**

1. World Health Organization. The hospital in rural and urban districts: report of a WHO study group on the functions of hospitals at the first referral level. World Health Organization Tech Rep Ser. 1992; 819:1-74.
2. Blanchet KD, Switlik MM. The handbook of hospital admitting management. USA: Aspen Publications; 1985.
3. Barnum H, Kutzin J. Public hospitals in developing countries: resource use, cost, financing. Baltimore, MD: Johns Hopkins University Press; 1993.
4. Hospital Pharmacy Management-World Health Organization. Available at [apps.who.int/medicinedocs/documents/s19622en/s19622en.pdf](https://apps.who.int/medicinedocs/documents/s19622en/s19622en.pdf)
5. Introduction to medical equipment inventory management- WHO Medical device technical series. Available at [www.who.int/medicinedocs/documents/s21565en/s21565en.pdf](http://www.who.int/medicinedocs/documents/s21565en/s21565en.pdf)
6. *Needs assessment for medical devices*. Geneva, World Health Organization, 2011.  
[www.hqip.org.ukk](http://www.hqip.org.ukk)

<b>Grading:</b>	Class assignments	10%
	Mid-term Exam	20%
	Final Exam	70%

### **12.5.3 MPH 713: Primary Health Care**

Course Title: Primary Health Care

Course Code: MPH713

Course Credits: 3

### **Objectives of the Course:**

Summarize the key factors that informed the development of the Primary Health Care Approach, Explain the key principles of comprehensive primary health care (CPHC), Critically analyse the main differences between a selective and a comprehensive approach to primary health care, Describe the main features of the district health system, Discuss critically the importance of intersectoral action and community involvement in health development, Identify the key measures of success of PHC, and the barriers to implementation of CPHC on an international level

### **Course Contents:**

Primary health care terminology and links to population health, health promotion and the determinants of health. Phases of team development, nature of teams, process of change, managing team meetings, consensus building, understanding the roles of different providers on the PHC team. Identifying new sources of community support and resources, referral practices, nature and levels of partnerships, exploring new partners and strategies for initiating them, critical factors for a successful partnership and assessing partnership effectiveness. Program planning: key steps, determining program activities, and creating a program profile, a program planning model and an action plan and Evaluation: key steps, key types and creating a basic evaluation framework.

### **Recommended Reading/ Text**

1. Chanawongse K. Understanding primary health care management: from theory to practical reality. Bangkok: Buraphasilp Press; 1990.
2. McMahon R, Barton E, Ross F. On being in charge: a guide to management in primary health care, 2nd ed. Geneva: World Health Organization; 1992.
3. Creese A, Parker D (eds). Cost analysis in primary health care: a training manual for programme managers. Geneva: World Health Organization in collaboration with the United Nations Children's Fund and the Aga Khan Foundation; 1994.

### **Grading:**

Class assignments	10%
Mid-term Exam	20%
Final Exam	70%

### **12.5.4 MPH 714: Reproductive Health**

Course Title: Reproductive Health

Course Code: MPH 714

Course Credits: 3

**Objectives of the course:** To introduce to the students importance issues of reproductive health and community obstetrics; its various stages and their management.

### Course Contents

Historical development and reasons for maternal and child health services, nutrition and malnutrition, measurement of health, health services for mothers, health services for children. Female morbidity and mortality indicators and their evaluation. Organization of reproductive health service in Pakistan, their priorities, coverage and utilization rates; challenges faced and agenda for reforms in the future.

### Recommended Reading/ Text

1. Afsar HA, Younus M, Gul A. outcome of patient referral made by the lady health workers in Karachi, Pakistan. J. Pak. Med Ass 2005 : 55; 20-11
2. Douthwaite M, Ward P. Increasing contraceptive use in rural Pakistan: an evaluation of the lady health workers program. Health Policy Plan:2005;20;117-23
3. Jokhio AH, Winter HR, Cheng KK. An intervention involving traditional birth attendants and perinatal and maternal mortality in Pakistan. New England Journal of Medicine 2005: 352; 2091-9.
4. Sultan M, Cleveland JG, Ali MM. Assessment of a new approach to family planning services in rural Pakistan. American Journal of Public Health 2002: 92; 1168-72.
5. Uvall MJ, Sochael S, Gonsalves A. Behind the mud walls: the role and practice of lady health visitors in Pakistan. Health care for women international 2002;23; 432-41
6. Weisman c, Grason H, Strobina D. Quality management in public and community health: examples from women's health. Quality management in health care 2001 :10; 54-64

<b>Grading:</b>	Class assignments	10%
	Mid-term Exam	20%
	Final Exam	70%

### 12.5.5 MPH 715: Research Methods

Course Title: Research Methods

Course Code: MPH 715

Credit Hours: 3

#### Objectives:

1. To develop a sound understanding of basic concepts in Health research and ethics.
2. To describe the steps in development of health research proposal.
3. To develop a research proposal and conduct research following standard guidelines

4. A critical understanding of the main principles of bioethics and how these principles should be applied in research, particularly in conduct of human subject research.
5. To enable students to apply principles and concepts of Health research to identify public health problems and suggest solutions for them.

#### **COURSE CONTENT:**

1. Introduction to Health Research & Ethics:
  - Research (Definition. Objectives, types)
  - Health Research
  - Research Ethics
2. Research Process:
  - Steps in Research proposal Development
  - Problem Analysis:
    - Identifying and prioritizing problems for research:
    - Identification of research topic
    - Criteria for prioritizing problems for research
    - Scales for rating research topics
    - Steps in problem analysis
    - Factor diagram
    - Formulation of problem statement (include Background of problem, extent of problem, contributing factors , Justification & application of study)
3. Formulation of Research Question, Hypothesis & Objectives:
  - Definition and characteristics of Research Question, Hypothesis & objectives
4. Literature Review:
  - Importance of literature review during the preparation of a research protocol
  - Resources for literature review
  - Internet searching for literature
5. Introduction to health systems research methodology:
  - Steps in HSR methodology
  - Variables (Definition, types, use in research)
6. Research Designs:
  - Types of studies use in research
  - Qualitative & Quantitative research studies
  - Advantages & limitations
7. Sampling:
  - Sampling Methods
  - Sampling biases
  - Sample size calculation
8. Data collection tools & techniques:
  - Data-collection techniques & tools
  - Uses and limitations of different techniques
  - Bias in data collection and ways of preventing bias
9. Data Collection & Analysis:
  - Plan for data collection & processing

- Statistical methods used in data analysis

10. Research and Ethics:

- Major ethical issues involved in the implementation of research
- How to deal with ethical issues?

**SUGGESTED READINGS**

1. Designing and Conducting Health systems research projects. Corllen M. Varkeuisser, Indra Pathmanathan, Ann Brownlee.
2. Health Research Methodology. A Guide For Training In Research Methods. Second Edition

**PERIODICALS, WEBSITES, ETC:**

1. Lectures uploaded on website: [www.iph.kmu.edu.pk](http://www.iph.kmu.edu.pk)
2. International Journal of Health Research. Website: <http://www.ijhr.org/>
3. Pakistan Journal of Health Research.  
Website; <http://www.linkedin.com/groups/Pakistan-Journal-Health-Research-4731182>

<b>Grading:</b>	Class assignments	10%
	Mid-term Exam	20%
	Final Exam	70%

**12.5.6 MPH 716: Technical Writing**

Course Title: Technical Writing

Course Code: MPH 716

Course Credits: 3

**Objectives of the course:**

The Importance of effective communication has emerged as science and art in this modern era. The objective of the course is to provide students with a basic understanding of communication skills (both verbal & written) and various dimensions of Technical Report writing. how to develop a survey, including where to look for standardize measures, principles of items writing, revising poorly structured official correspondences, being also familiar with the many different options available for survey administration (phone, mail, interview, computerized, online)

**Course contents**

1. Principles of Communication Types and pros and cons of different types of communication. The types, flow and process of communication. Merits and demerits of interviews, telephone, mail, computer direct interviews, email survey, web- based survey).

2. Questionnaire design (types of questions, ordering of questions and responses, writing response categories, question layout, transitional statement). Tips on website layout.
3. What questions to ask? Developing a construct table in advocacy.
4. Drafting different types of official letters
5. Different varieties of reports generated in an organization
6. The importance of press releases
7. How to make a powerful power point presentations and organizations of formal meetings along with agenda settings

### **Recommended Reading/ Text**

Floyd J, Fowler, Jr. "Improving survey questions", design and evaluation; applied social research methods series vol.38.Saga Publication; London, New Dehli; 1995.

- Basic Communication by Hudson,
- <http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1585&context=theses>
- Class material at the time of sessions

### **Grading:**

Class assignments :10%

Mid-term Exam : 20%

Final Exam : 70%

## **12.6 MPH Courses for Track II MPH (MATERNAL,NEWBORN & CHILD HEALTH)**

### **12.6.1 Introduction:**

The Maternal ,Neonatal and Child Health track of MPH at the Institute of Public Health and Social Sciences, Khyber Medical University focuses on current health problems and diseases affecting both women and children worldwide with special emphasize on developing countries including Pakistan. The impact of various common health problems at different stages of the life cycle and their functional outcomes in terms of morbidity, mortality, psychological well-being, reproduction and growth will be highlighted. Students will become acquainted with the epidemiology of women and childhood diseases. Programs and resources available to combat health and nutritional problems will be evaluated. The role of different international organizations will be discussed in the context of socioeconomic development and current political/economic policies and realities.

### **12.6.2 Objectives:**

Upon completion of the course of the Master in Maternal and Child Health, individuals will gain a broad understanding of the field that focuses on the health and welfare of women and children. Competencies addressed include the following:

1. An understanding of the biological, social, and behavioral basis for a MCH program; knowledge of the historical development of the field of MCH;
2. An understanding of the normal patterns of human growth and development;
3. Understand major health issues of women and child health following life course approach.
4. Identify the determinants and impact of the major health problems that are present during pregnancy, infancy, childhood and adolescence.
5. Understand and interrelate Maternal and Child Health.
6. Acquire knowledge and skills to assess the health care needs of women and children.
7. Develop professional and academic skills in research and management.
8. An understanding of the design, implementation, and evaluation of MCH policies and programs with an ability to identify essential gaps in existing programs serving mothers and children.
9. Apply research methods to analyze maternal and child health problems and identify solutions to them.
10. Develop knowledge and skills for effective management and prevention of these problems at community level.

### 12.6.3 Semester Wise Distribution of Courses MPH (Maternal, Neonatal and Child Health)

#### Semester 1

SEMESTER 1			
S NO	Codes	Modules	Credit Hours
1	MPH 617	Basic concepts in Public Health	02+01
2	MPH 612	Basic Biostatistics	02+01
3	MPH 611	Basic Epidemiology	02+01
4	MPH615	Communication and Computer skills	01+02
5	MPH 614	Health Promotion, Advocacy and Social Mobilization	02+01
6	MPH 618	Environmental and Occupational Health	02+01
<b>Total</b>			<b>18</b>

#### Semester 2

SEMESTER 2
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S NO	Codes	Modules	Credit Hours
1	MPH 622	Applied Epidemiology & Biostatistics	02+01
2	MPH 613	Epidemiology of Communicable and Non Communicable Diseases	02+01
3	MPH 624	Applied Nutrition	02+01
4	MPH 621	Health Management & Policy	02+01
5	MPH 626	Health Systems	02+01
6	MPH 627	Health Professions Education & Professionalism	02+01
<b>Total</b>			<b>18</b>

### Semester 3

### Year 2

SEMESTER 3			
S NO	Codes	Modules	Credit Hours
1	MPH 711	Project Management	02+01
2	MNCH 524	Public Health Approaches To Women And Child Nutrition	02+01
3	MNCH 523	Child Health: Issues, Programs and Policies	02+01
4	MPH 714	Reproductive Health	02+01
5	MPH 715	Research Methods	02+01
6	MPH 716	Technical Writing	02+01
<b>Total</b>			<b>18</b>

### Semester 4

S NO	Codes	Modules	Credit Hours
1	MPH 799	Thesis(In MNCH specific subject)	06

Total Credit Requirements: 60

MPH Modules : 45

MNCH Core modules: 09

Thesis(MNCH specific research):06

#### **12.6.4 MNCH CORE MODULES:**

MPH(MNCH) course is distributed over four semesters. In first two semesters the MNCH subjects are common to that of MPH (General). While the MNCH core subjects will be taught in third semester.02 modules out of 6 shall be changed in the 3rd semester for MPH(MNCH)

MNCH core modules are as follows:

1. Reproductive health
2. Children's Health: Issues, Programs and Policies
3. Public Health Approaches to Maternal and Child Nutrition

#### **12.6.5MNCH 523: Child Health: Issues, Programs and Policies**

Course Code: MNCH 523

Course Credits: 3

##### **Introduction:**

To focus on current health problems and diseases affecting children worldwide with special emphasize on, in developing countries including Pakistan. The impact of various common health problems and their functional outcomes in terms of morbidity, mortality, psychological well-being, will be highlighted. Students will become acquainted with the epidemiology of common childhood diseases. Programs and resources available to combat child health issues will be analyzed. IMNCI (Integrated management of Childhood Illness)

##### **Objectives :**

- i. Describe major health problems that affect children health.
- ii. Identify health problems of children in different stages of life (neonatal period, infancy, childhood and adolescence).
- iii. Identify the major determinants and impact of these major health problems on the health of children.
- iv. Identify appropriate strategies, in light of the social, cultural, economic determinants of child health.

v. Acquire knowledge and skills to assess the health care needs of children.

vi. Correlate the health problems of children with their determinants.

vii. Analyze and evaluate policies & programs targeted toward improving the women and child health.

Course Content:

1.Introduction to Child Health

2.Normal Child

3.Survival of preterm Infants

4.Improving Neonatal Health

5.Child Health: Issues and intervention

6.Improving Adolescent Health

7.Prevention of maternal to child HIV transmission

8.Child Abuse

9.Determinants of child health

10.MDGs and child's Health in Pakistan

11.Epidemiology of pediatric diseases

12.EPI

13.IMCI

14.Child growth Monitoring

15.School Health services

16.Children and youth with special needs

**Grading:**

- Class Assignment 10%
- Midterm 20%
- Final term 70%

## **12.6.6MNCH 524: Public Health Approaches To Women And Child Nutrition**

Course Code: MNCH 524

Course Credits: 3

### **Objectives:**

At the end of the course students will be able to:

1. Understand the basics of maternal and child nutrition.
2. Interrelate maternal and child health and nutrition.
3. Describe maternal and child nutrition related health issues following life course approach.
4. Analyze and co-relate major nutrition related maternal and child health issues and their determinants.
5. Develop skills for effective management and prevention of these problems at community level.

Course Content:

Child Nutrition:

1. Basic concepts in nutrition
2. Nutrition through life cycle (Infants, preschool, school children, adolescent, pregnancy & Lactation)
3. Why to breast feed a child?
4. Maternal HIV/AIDs and Breast Feeding
5. Malnutrition in children- Over nutrition and under nutrition
6. Nutrition Assessment
7. CBMAM
8. Maternal & Child Nutrition status in Pakistan –NNS 2010-11
9. Maternal & Child Nutrition in Pakistan- Policies & Programs
10. Nutrition in emergency situation
11. Nutrition & Health Promotion

## Grading:

Class Assignments 10%

Midterm 20%

Final term 70%

## SUGGESTED READINGS:

1. Maternal and Child Health. Jhon Ehiri. Available as; [Jhon\_Ehiri]\_Maternal\_and\_Child\_Health\_Global\_Ch(BookFi.org)
2. Paediatrics and Child Health. 2nd Edition. Mary Rudolf, Malcolm I. Levene. Available as; [Mary\_Rudolf,\_Malcolm\_I.\_Levene]\_Paediatrics\_and\_C(BookFi.org).
3. Reproductive Health in Developing Countries: Expanding Dimensions, Building Solutions. Amy O. Tsui, Judith N. Wasserheit, John G. Haaga, Editors. NATIONAL ACADEMY PRESS, Washington, D.C.1997
4. Text Book of Paediatrics. Pakistan Paediatric Association.
5. Nutrition through the life cycle. By Judith E. Brown, Janet S. Isaacs. Available as: [Brown\_J.,et\_al]\_Nutrition\_through\_the\_life\_cycle(BookFi.org).
6. Leatherhead Food International. Nutrition Through The Life Cycle. Edited By Prakash Shetty. Available as: [P.\_Shetty]\_Nutrition\_through\_the\_life\_cycle(BookFi.org).
7. Nutrition and Health in Developing Countries, 2nd Edition (Nutrition and Health). Richard D. Semba. (Book Fi.Org).
8. Essentials of Human Nutrition, Second Edition. Jim Mann A., Stewart Truswell, Editors. OXFORD UNIVERSITY PRESS

### ➤ Helpful Websites:

1. Maternal and Child Health Journal. Springer.com Available at: <http://www.springer.com/public+health/journal/10995>
2. Child Health/BMJ. Available at: <http://www.bmj.com/specialties/child-health>
3. Child Health/WHO. Available at: [www.who.int/topics/child\\_health/en/index.html](http://www.who.int/topics/child_health/en/index.html)
4. Maternal, Newborn, Child and Adolescent Health/WHO. Available at; [www.who.int/topics/maternal\\_child\\_adolescent/topics /en/index/html](http://www.who.int/topics/maternal_child_adolescent/topics/en/index/html)
5. UNICEF. Website: [www.unicef.org](http://www.unicef.org)
6. United Nation Fund For Population (UNFP). Website; [www.unfp.org](http://www.unfp.org)
7. United Nation Population Development (UNDP).
8. Website; [www.undp.org](http://www.undp.org).
9. [www.health.gov.pk](http://www.health.gov.pk).
10. Cambridge journals Online- Public Health Nutrition
11. World Food Program (WFP)[www.wfp.org](http://www.wfp.org)
12. [www.cdc.gov](http://www.cdc.gov)
13. [www.who.int/topics/nutrition /en/](http://www.who.int/topics/nutrition/en/)

## 12.7 MPH Courses For Track III MPH (Hospital Administration)

### 12.7.1 Introduction:

In view of acute scarcity of trained professional managers and administrators to manage medical and health services efficiently and effectively, it was imperative to create a pool of trained manpower that will enable the Province and the Country to meet the challenges of providing quality healthcare to the people of Pakistan at cost affordable to the people and the country.

The Master in Hospital Administration program is designed to train individuals to become responsible, productive and professional hospital managers and leaders.

### 12.7.2 Objectives:

Upon completion of the course of Master in Hospital administration program, individual will gain a very good understanding of how a hospital works and how to manage it more effectively providing quality care to the patients attending the hospital.

1. This course will enable participants to gain an in-depth knowledge of how the Healthcare System is organized in Pakistan along with a more detailed understanding of Hospitals.
2. Provide theoretical base of Management of health organizations.
3. Personnel already working in Hospitals will develop better understanding of the hospital administration.
4. This program will also improve their career prospects.
5. Participants exposed for the first time to the subject will acquire a sound basic knowledge of how Hospitals work.
6. Develop professional and academic skills in research and management.
7. Apply research methods to analyze the available data of the hospital to identify problems and possible solutions based on scientific evidence.
8. Develop knowledge and skills to effectively manage the affairs of a hospital.
9. To produce professionals with conceptual and technical skills in institutional management.

### 12.7.3. Semester wise Distribution of Modules

Semester wise distribution of modules for the 1st and 2nd semester of MPH General and MPH(HA) is the same. Whereas 02 modules out of 6 are different in the 3rd semester for MPH(HA)

SEMESTER 1			
S NO	Codes	Modules	Credit Hours
1	MPH 617	Basic concepts in Public Health	02+01
2	MPH 612	Basic Biostatistics	02+01
3	MPH 611	Basic Epidemiology	02+01
4	MPH615	Communication and Computer skills	01+02

5	MPH 614	Health Promotion, Advocacy and Social Mobilization	02+01
6	MPH 618	Environmental and Occupational Health	02+01
<b>Total</b>			<b>18</b>

<b>SEMESTER 2</b>			
<b>S NO</b>	<b>Codes</b>	<b>Modules</b>	<b>Credit Hours</b>
1	MPH 622	Applied Epidemiology & Biostatistics	02+01
2	MPH 613	Epidemiology of Communicable and Non Communicable Diseases	02+01
3	MPH 624	Applied Nutrition	02+01
4	MPH 621	Health Management & Policy	02+01
5	MPH 626	Health Systems	02+01
6	MPH 627	Health Professions Education & Professionalism	02+01
<b>Total</b>			<b>18</b>

SEMESTER 3			
S NO	Codes	Modules	Credit Hours
1	MHA 717	Organizational Behavior	02+01
2	MPH 715	Research Methods	02+01
3	MHA 718	Health Care Financial Management & Managerial Accounting	02+01
4	MPH 716	Technical Writing	02+01
5	MPH 712	Hospital Management	02+01
6	MPH 711	Project Management	02+01
<b>Total</b>			<b>18</b>

SEMESTER 4			
S NO	Codes	Modules	Credit Hours
1	MPH799	Thesis(Hospital Administration specific module)	06

Total Credit Requirements: 60

MPH modules: 48

Hospital Administration Core modules= 06

Thesis(Hospital Administration specific research)=06

**MPH Hospital Administration CORE MODULES:**

MPH(HA) course is distributed over four semesters. In first two semesters the Hospital Administration subjects are common to that of MPH. While the Hospital Administration core subjects will be taught in third semester.02 modules out of 6 shall be changed in the 3rd semester for MPH(HA)

Hospital Administration core modules are as follows

- 1.Organizational Behavior
- 2.Health Care Financial Management & Managerial Accounting

**6.7.4 MHA 717: Organizational Behavior**

Course Title: Organizational Behavior

Course Code: MHA 713

Course Credits: 3

**Objectives of the Course:**

This course will emphasize on understanding and demonstrating how to manage people as an integral part of a high-performing organization. The course begins by focusing on how health care administrators can “make a difference” when leading people. Within that framework, we emphasize the significant roles of organizational culture, influence and power, conflict management, and motivation in managing people. Last, we examine how to implement change.

**Course Contents:**

What Is Organizational Behavior?

1. Diversity in Organizations
2. Attitudes and Job Satisfaction
3. Emotions and Moods
4. Personality and Values
5. Perception and Individual Decision Making
6. Motivation Concepts
7. Motivation: From Concepts to Applications
8. Foundations of Group Behavior
9. Understanding Work Teams
10. Communication
11. Leadership
12. Power and Politics
13. Conflict and Negotiation
14. Foundations of Organization Structure
15. Recommended Reading/ Text
16. Organizational Behavior 15th By Stephen P. Robbins

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	10%
	Mid-term Exam	20%
	Final Exam	70%

**6.7.5 MHA 718: Health Care Financial Management & Managerial Accounting**

Course Title: Health Care Financial Management & Managerial Accounting

Course Code: MPH 78

Course Credits: 3

**Objectives of the course:**

This course focuses on learning and applying key financial and managerial accounting tools and concepts to healthcare problems. It provides a broad introduction to key concepts, issues, tools, and vocabulary useful both for policymakers and administrators.

### **Course Contents**

Topics include: healthcare financial statements, recording transactions, financial statement analysis, full costing, differential costing, budgeting, and responsibility accounting. The course uses a number of cases and focuses upon both analytics and communication skills.

## **12.8 MPH Courses for Track IV MPH (PUBLIC HEALTH NUTRITION)**

### **12.8.1 Introduction:**

The primary goal of starting Public Health Nutrition Program at Institute of Public Health and Social Sciences KMU is to produce a critical mass of highly skilled Public Health Nutrition professionals from a diverse background to overcome the scarcity of skilled human resource in this field. These Public Health Nutrition professionals will be involved in nutritional assessment at individual and population level; development, implementation and evaluation of cost effective nutrition intervention strategies; developing nutrition-related public health policies; and monitoring and evaluation of individuals, communities and populations. Our unique infrastructure at IPHSS combines Public Health, Maternal & Child health, Family medicine, Biostatistics and Epidemiology and Public Health Nutrition under one roof provide students the opportunity to engage with experienced researchers & faculty across different discipline of public health. The ultimate goal is to improve nutritional status and health of the people and contribute towards economic development of Pakistan.

### **12.8.2 Objectives:**

At the end of the program the student should be able to:

1. Understand the factors that determine nutritional needs throughout the life-cycle,
2. Understand the role of nutrition in the etiology of health problems of widespread importance in developed and developing countries,
3. Critically appraise food and nutrition policies and direct and indirect interventions implemented to address public nutrition problems in developed and developing countries,
4. Understand the role of cultural, social and psychological factors in shaping the eating habits of an individual and the influences which may contribute to changing eating patterns,
5. Have increased knowledge of the methods used for acquiring and interpreting nutritional, biological and epidemiological information,

6. Have improved ability to analyze, synthesize and summarize information critically,
7. Have improved ability to recognize the moral, ethical and social implications of scientific investigations and human intervention in the food chain
8. Have improved written and oral communication skills and information retrieval skills

### 12.8.3. Semester wise Distribution of Modules

Semester wise distribution of modules for the 1st and 2nd semester of MPH General and MPH(PHN) is the same. Whereas 03 modules out of 6 are different in the 3rd semester for MPH(PHN).

<b>SEMESTER 1</b>			
<b>S NO</b>	<b>Codes</b>	<b>Modules</b>	<b>Credit Hours</b>
1	MPH 617	Basic concepts in Public Health	02+01
2	MPH 612	Basic Biostatistics	02+01
3	MPH 611	Basic Epidemiology	02+01
4	MPH615	Communication and Computer skills	01+02
5	MPH 614	Health Promotion, Advocacy and Social Mobilization	02+01
6	MPH 618	Environmental and Occupational Health	02+01
<b>Total</b>			<b>18</b>

<b>SEMESTER 2</b>			
<b>S NO</b>	<b>Codes</b>	<b>Modules</b>	<b>Credit Hours</b>
1	MPH 622	Applied Epidemiology & Biostatistics	02+01
2	MPH 613	Epidemiology of Communicable and Non Communicable Diseases	02+01
3	MPH 624	Applied Nutrition	02+01
4	MPH 621	Health Management & Policy	02+01
5	MPH 626	Health Systems	02+01
6	MPH 627	Health Professions Education & Professionalism	02+01
<b>Total</b>			<b>18</b>

SEMESTER 3			
S NO	Codes	Modules	Credit Hours
1	MPH 711	Project Management	02+01
2	MPH 715	Research Methods	02+01
3	MPH 716	Technical Writing	02+01
4	PHN	Nutrition Epidemiology	02+01
5	712PHN 713	Public Health Approaches to Maternal, Child and Adolescent Nutrition	02+01
6	PHN 714	Nutrition Issues Interventions & Program: Local & global perspective	02+01
<b>Total</b>			<b>18</b>

SEMESTER 4			
S NO	Codes	Modules	Credit Hours
1	MPH 799	Thesis	06

Total Credit Requirements: 60

MPH Modules : 45

Hospital Administration Track: 09

Thesis(Public Health Nutrition specific research ):06

#### **MPH (Public Health Nutrition) CORE MODULES:**

MPH(Public Health Nutrition) course is distributed over four semesters. In first two semesters the Public Health Nutrition subjects are common to that of MPH. While the Public Health Nutrition core subjects are taught in third semester.03 modules out of 6 are different in the 3rd semester for MPH(PHN)

Hospital Administration core modules are as follows

1. Nutrition Epidemiology
2. Public Health Approaches to Maternal, Child and Adolescent Nutrition

### 3. Nutrition Issues, Interventions & Program: Local & global perspective

#### **12.8.4 PHN 712: Nutrition Epidemiology**

This course introduces students to dietary intake and nutritional assessment at individual, groups and population level. The students will learn about both qualitative and quantitative nutritional assessment methods, their advantages and disadvantages and how to perform these practically. The course will also address methodological aspects involved in the design, conduct, analysis and interpretation of nutritional epidemiological research

#### **Course objectives**

1. To gain a basic understanding of different nutritional assessment methods and their rationale, advantages, disadvantages and limitations.
2. To learn and apply nutritional assessment methods using dietary, biochemical and anthropometric approaches at individual and population level.
3. To obtain hands-on experience and basic training in common anthropometric methods.
4. Explain the basic design considerations for nutritional epidemiological research
5. To critique the dietary assessment, study design and data analysis of published nutritional epidemiological studies.
6. To discuss how findings from nutritional epidemiology can be translated into recommendations for chronic disease prevention and be communicated to the public.

#### **Course contents**

Introduction to nutrition care, Key Nutritional Assessment Methods and their rationale, uses, advantages and disadvantages, including Anthropometry, biochemical and clinical examination; Qualitative and quantitative approaches to measure dietary intake; validation, interpretation and critical appraisal of such methods. The importance of nutrition in the prevention of morbidity and mortality from chronic disease. Local and international trends and patterns in diet, body size, and physical activity. The course will also address methodological aspects involved in the design, conduct, analysis and interpretation of nutritional epidemiological research. The problem of measurement error in nutrition-related exposures and approaches of how to deal with this (validity, reproducibility, de-attenuation, calibration).

#### **Further reading (Books)**

1. Principles of Nutritional Assessment, 2nd Edition. RS Gibson. Oxford University Press: New York, 2005
2. Nutritional assessment, Lee, R.D and Neiman D.C (2010), McGraw Hill

#### **Journals**

1. American Journal of Clinical Nutrition
2. Nutrients

### **12.8.5 PHN 713: Public Health Approaches to Maternal, Child and Adolescent Nutrition**

This 3 credit hours course provide students with comprehensive understanding of nutritional requirements during pregnancy, lactation, infancy, childhood and adolescence. This course will integrate public health practice and policy recommendations with evidence-based clinical practice guidelines to provide a comprehensive view of maternal and infant nutrition issues from a public health perspective .

#### **Course objectives**

By the end of this course, the students will be able to

1. Identify nutritional issues of women of reproductive age (WRA) that can impact pregnancy and birth outcomes.
2. Describe changes in nutritional demand during pregnancy.
3. Discuss benefits and limitations of breast feeding & bottle feeding practices.
4. Describe types and time frame of introducing infants to solid foods.
5. Identify and critique national and international nutrition guidelines for mother, infant, children and adolescents.
6. Develop and promote public health messages about nutritional issues targeting mothers, infants and adolescents.

#### **Course contents:**

The course contents for this subject include; physiologic and metabolic adaptations during pregnancy and lactation, maternal nutrition during pregnancy and lactation composition of human milk and formula, feeding practices of infants and toddlers, and the nutrient requirements of infants, children, and adolescents.

#### **Further readings (Books)**

Nutrition Through the Lifecycle, 5<sup>th</sup> edition. Cengage Learning, 2014. ISBN-10: 1-133-60049-2

#### **Journals**

1. Maternal and child nutrition
2. International Journal of Child Health and Nutrition

### **12.8.6 PHN 714: Nutrition Issues, Interventions & Program: Local & global perspective**

While good nutrition is key for promoting one's health throughout the life, it is not always enough to target the individuals. Most of the time, we need to adopt top-down approach that means devising policies and programs to encourage, promote and adopt healthy eating behavior on population level. Only then, we will be able to reduce nutrition related disparities and promote good nutrition for everyone. It is therefore necessary to pay more attention to nutrition in context of public health. This module introduces the students to the nature and scope of major nutritional issues across the globe with a special emphasis on developing countries and Pakistan.

#### **Course objectives**

Students completing this course will be able to

1. Know and understand most common nutritional issues of developing countries.
2. Get an understanding of principal environmental, cultural, socioeconomic, and political factors related to the distribution and severity of local and global nutritional problems.
3. To gain an understanding of the chief public-health approaches for prevention, surveillance, and relief of the nutritional problems.
4. The stand of nutrition in international policy and the right based approach to water and food
5. Nutrition policies and programs at national and international level

### **Course contents**

Overview of the nutrition situation in Pakistan as well globally both in developed and developing countries. in relation to other critical issues for our common future, including: Poverty, demographic changes, water, sanitation and other environmental issues, the UN Sustainable development goals and food as a Human Right. Food production and nutrition in low-resource settings. Overview of crop and livestock systems, household fuel, food production, post-harvest technology, marketing and participatory rural appraisal. Food security and gender issues in food production.

### **Journals, periodicals and web sources**

1. International Journal of Epidemiology
2. American Journal of Clinical Nutrition
3. British Journal of Nutrition
4. Public Health Nutrition

## **4.4 MPH Course for Semester IV**

### **MPH 799: Thesis**

Course title: Thesis

Course Number: MPH 799

Course credit: 6

### **Objectives of the Course:**

The Master's Thesis represents the culminating experience required for the degree program and may take the form of a research thesis, an evaluation study, or an intervention study. Each student is required to formally present the research experience and research findings in a viva voce or thesis defense.

As a requirement of the program all students are required to develop a research protocol, collect and analyze data and write a thesis. This provides the students an opportunity to gain first-hand experience of conducting a complete research study. Thesis committees supervise the students' research projects. Each thesis committee comprises a thesis supervisor and at least one other faculty member from within

the program or within the University. In order to conduct their MPH thesis research, students are encouraged to seek funds by applying to national and international funding agencies.

MPH scholars enrolled in the various tracks i.e, MNCH,HA and PHN will conduct research in their specific areas of specialization.

**Grading:** Thesis(written and defense) is graded as other modules following the standardized grade points as shown in Table 1.

