



## ***CURRICULUM FOR***

# MASTERS IN PUBLIC HEALTH (MPH) PROGRAMME

KHYBERMEDICALUNIVERSITY  
PESHAWAR

Block VI, PDA building, Phase V, Hayatabad, Peshawar

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## INTRODUCTION

Khyber Medical University (KMU), Peshawar is the first Public Sector Medical University in North West Frontier Province, established through an Act of law on 13<sup>th</sup> Jan, 2007 with jurisdiction on the entire province including Federally Administered Tribal Areas, on all institutions of health sciences, including Medical and Dental colleges recognized by PMDC. The University is:

- Committed to developing future leaders in medical sciences.
- Committed to promoting and maintaining faculty of the highest quality to conduct research and become passionate teachers and mentors.
- Committed to provide a common forum for faculty, health educators, community partners, and students to come together to share and develop ideas that will improve the health of and quality of life of individuals & populations

### 1.1 KMU Mission Statement

Service to humanity with a commitment for excellence in medical education and research, providing students with state of the art knowledge, skills and attitude to deliver the highest standards of health care to the people.

### 1.2 Goal of KMU

- **Create** state of the art learning opportunities for faculty and students.
- **Promote** an environment of academic freedom.
- **Develop** valid assessment techniques for evaluation of knowledge, skill and attitude.
- **Provide** a supportive environment to promote lifelong learning to all health care providers for enhancing their knowledge, technical capabilities and professional conduct.
- **Establish** collaborations and partnerships within the KMU constituent / affiliated colleges and other educational and health care institutes.
- **Advocate** for good public health policy, evidence based clinical practice and efficient health care delivery systems.

### 1.3 Institutional Objectives

1. **D**evelop a multi-dimensional Comprehensive Health Care Approach encompassing all the four elements of health i.e. prevention, promotion, curative intervention & rehabilitation.

2. **I**nclude a Health Care Team approach at all levels of health care delivery for a comprehensive health care delivery system.
3. **S**et up the Semester System of Education.
4. **C**reate the Health Education Continuum (UGME, PGME, CME, CPD, & CED) with opportunities & commitment for life long learning.
5. **I**ncorporate Behavioral Sciences and Humanities in the Medical Education Curriculum.
6. **P**romote and enhance the level of Education in Basic Medical Sciences, Nursing and Allied Health Sciences, And Public Health.
7. **L**earning innovations defined by a dynamic, relevant, comprehensive, evidence and outcome based curricula that accommodate healthy extra curricular, literary and cultural activities.
8. **I**mplement an objective and Continuous System of Evaluation.
9. **N**urture evidence based medical practice through Innovation, Scholarship, Partnership, Collaborations and Biomedical Research.
10. **E**stablish the concepts of Academic Audit, Research Audit & Clinical Audit.

## **Introduction to the KMU - MPH Program**

### **2.1 Goal of the MPH program**

A Master in Public Health degree is designed to prepare students to address the broad mission of public health, defined as “ enhancing health in human populations through organized community effort “, utilizing education, research, and community service. Why do we need MPH qualified personnel?

- The Ministry of Health (Federal) has identified the need for 4000 Public Health Science, qualified personnel in Pakistan.
- The current number of MPH qualified persons is about 200 (GTZ consultant, HSA, Islamabad).

Current Status of Public Health in KHYBER PAKHTUNKHWA:

**Access:** Doctors, health specialists; health managers do not have access to recognized/accredited programs of public health science.

**Quality:** Public Health education programs lack good quality to meet the needs and demands of the Health Sector in KHYBER PAKHTUNKHWA.

**Relevance:** The teaching, training and research in Public Health are not relevant to the needs of the Province and the Country.

The KMU MPH program endeavors to fulfill the needs and demands of the province and the country in educating and training the Public Health human resource.

## **2.2 Objective of the MPH program**

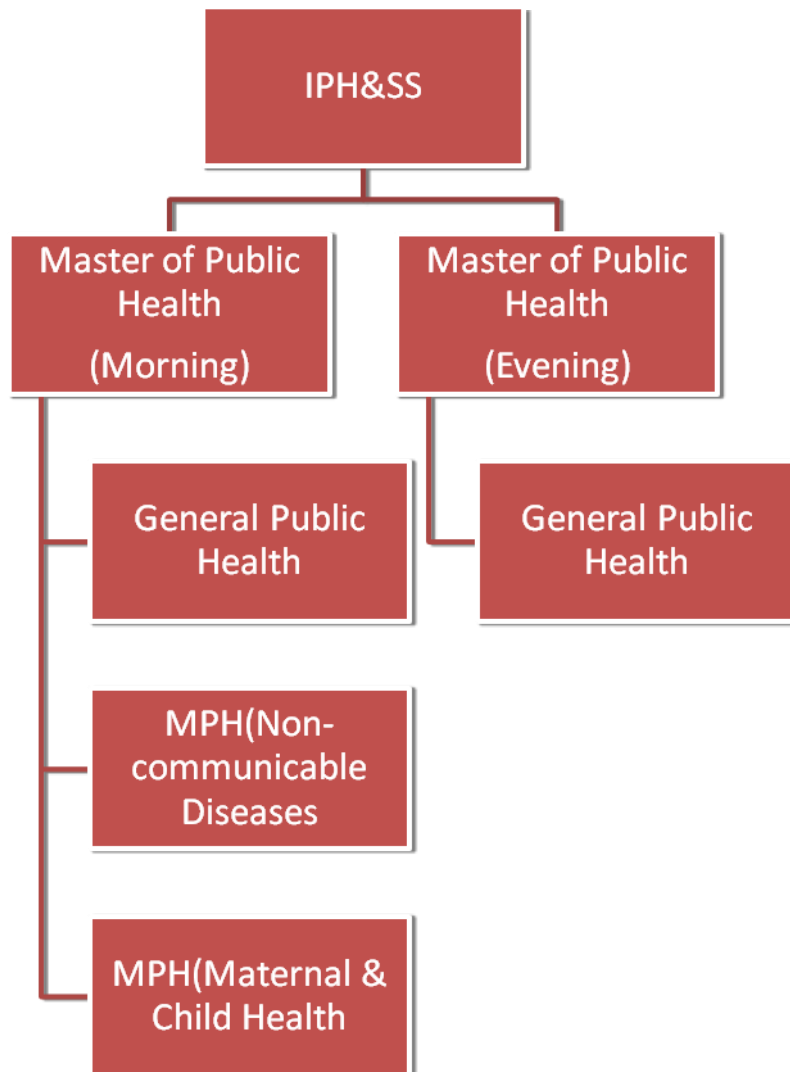
The Public Health Education and Training, needs to be based on the population/community need of KHYBER PAKHTUNKHWA. Establishment of the Institute of Public Health in KHYBER PAKHTUNKHWA by KMU will enable the fulfillment of the public health needs of the Province. The University will ensure competency based approaches to curriculum design for Public Health Education. The evaluation and assessment of the MPH program with outcome and impact data will ensure relevance to the current and future emerging challenges in the field of public health.

The KMU-MPH program has the following objectives:

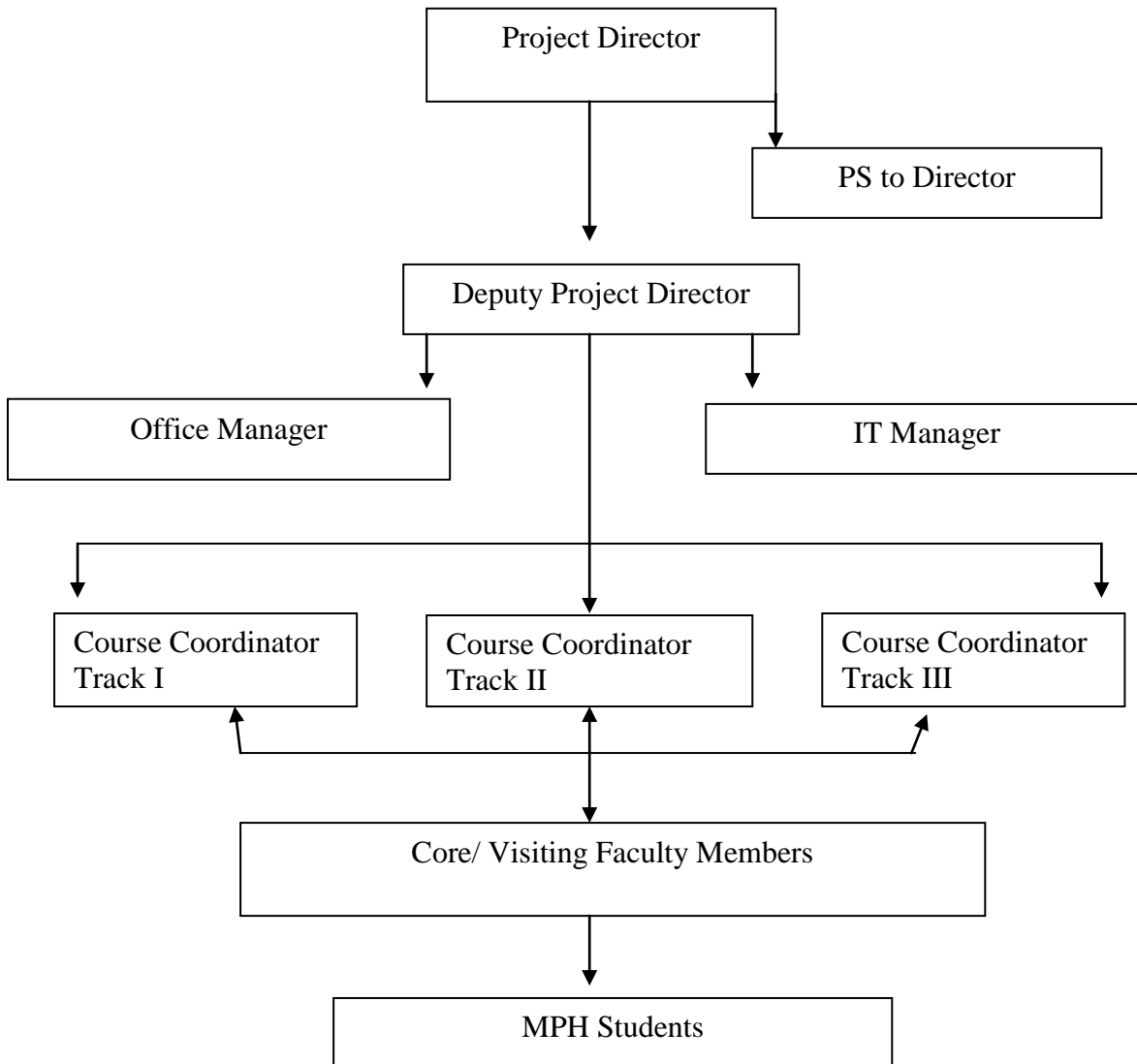
- To develop a Public Health human resource who understand the basic principles of public health, epidemiology, biostatistics, healthcare management, and public health policy;
- To develop persons who can critically identify public health problems and use their theoretical knowledge and skill developed through the program to characterize them at the population level;
- To develop professionals who will be able to design and conduct epidemiological studies, manage and analyze public health data, and use the results to design interventions and control strategies as part of public health policy;
- To produce professionals with conceptual and technical skills in institutional management;
- To provide professionals with tools to function at all levels of the health and social sectors: local (public/private), provincial, federal; and in all settings: academic/research institutes, advocacy groups, and service organizations like hospitals, family health clinics and/or primary health care centers.
- The program endeavors to produce a valuable human resource – Public Health Specialists for the North West Frontier Province and the country.

**MPH Program Organization and Structure**

The MPH Program has a two-year curriculum requiring 60 credit hours. A total of 24 credits are accumulated in eight core required courses, representing the fundamental domains of public health: biostatistics, epidemiology, environmental health sciences, health policy and administration, and social and behavioral sciences. Students receive six credits for two courses in the concentration area (General Public Health; Hospital Management & Health Care Services; and Family Health) of their choice, six credits for two elective courses, and six credits through a public health field practicum, usually encompassing at least one semester of the MPH program that will culminate in six credit hours of thesis work. Previous experience or education pertaining to public health may increase the student's flexibility in course selection.

**THE KMU PUBLIC HEALTH PROGRAM STRUCTURE**

**KMU INSTITUTE OF PUBLIC HEALTH  
ORGANOGRAM**



### **3.1 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 instructor. The medium of instruction for all courses in the MPH program will be English. The conduct of courses rests upon the imagination and individuality of the course teacher. However, the general methods of teaching may be employed that include lectures, group discussions, seminars, demonstrations, short visits, etc.

The 1st semester will offer 8 modules, culminating in a total of 20 credit hours while the 2nd & 3rd semester will offer 7 modules each, culminating in a total of 17 credit hours each and the 4th semester will offer 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

### 3.2 Semester Wise Distribution of Courses

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

#### Semester 1

#### Year 1

S NO	Code	Course	Cr. Hrs
1	MPH 501	Epidemiology – Introduction to theory and practice	03
2	MPH 502	Statistical Methods in Public Health	03
3	MPH 503	Communicable & Non Communicable Disease Control	03
4	MPH 506	Technical Report Writing & Basic Communication Skills	03
5	MPH 505	Computer Applications in Public Health	03
6	MPH 504	Health Education & Promotion	03
7	MPH 508	Field Visits	01
8	MPH 507	Graduate Seminar	01
<b>Total</b>			<b>20</b>

#### Semester 2

S NO	Code	Course	CrHrs
1	MPH 510	Epidemiology – Application to theory and practice	03
2	MPH 512	Nutrition	03
3	MPH 509	Public Health Management & Policy	03
4	MPH 513	Health Economics	03
5	MPH 511	Occupational Health & Environmental Hazards	03
6	MPH 508	Field Visits	01
7	MPH 507	Graduate Seminar	01
<b>Total</b>			<b>17</b>

#### Semester 3

#### Year 2

S NO	Code	Course	Cr Hrs
1	MPH 515	Hospital Management	03
2	MPH 517	Community Interventions in Reproductive Health	03
3	MPH 516	Primary Health Care	03
4	MPH 518	Research & Ethics	03
5	MPH 514	Project Management	03
6	MPH 508	Field Visits	01
7	MPH 507	Graduate Seminar	01
<b>Total</b>			<b>17</b>

#### Semester 4

S NO	Code	Course	CrHrs
1	MPH 540	MPH Thesis	06



### Adjusted Courses

S NO	Code	Course	CrHrs
1	MPH 412	Infectious Disease Epidemiology	03
2	MPH 413	Mental Health	03
3	MPH 505	Health Management Information System(HMIS)	03
4	MPH 415	Survey Design and Data Collection	03
5	MPH 506	Health Management & Accounting	03
6	MPH 437	Disaster Management	03
7	MPH 460	Introduction to Behavioral Health	03
8	MPH 508	Community Pediatrics	03
9	MPH 483	Best Practice Models in Family Health	03
10	MPH 436	Health Policies	03
11	MPH 438	Models of Health Care System	03
12	MPH 481	Community Intervention, Program Development & Evaluation	03
13	MPH 600	Practicum	03

### MPH COURSES FOR SEMESTER I

#### MPH 501: Epidemiology – Introduction to theory and practice

Course Title: Epidemiology – Introduction to theory and practice

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.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

## **MPH 502: Statistical Methods in Public Health**

Course Title: Statistical Methods in Public Health

Course Code: MPH 502

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 Woollcott S. The Cartoon Guide Statistics. 1993. Harper Collins Publishers Inc., 10 East 53<sup>rd</sup> Street, New York, NY10022.
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.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

### **MPH 503: Communicable & Non-communicable Disease Control**

Course Title: Communicable & Non-communicable Disease Control

Course Code: MPH 503

Course Credits: 3

#### **Objective of the Course:**

To understand key concepts of communicable and chronic non-communicable disease epidemiology with reference to developing countries and Pakistan and the role of health care provider in the prevention and control of communicable and chronic non-communicable disease. Skills to describe the interaction between the infectious agents and host factors (resistance and susceptibility) that contribute to the transmission of these diseases and the role of host factors in conferring both resistance and susceptibility to these diseases

#### **Course Contents:**

Introduction of CDC, Tuberculosis, Control of Infection, Screening of Disease, Malaria, Dengue fever, Road Traffic Accidents & Safety, Skin Infection, Bird flu, Hospital acquired infection, Disease outbreak investigation, Mental health, Stroke, Diabetes- A Major Public Health Problem, Hepatitis- C, Obesity, Rabies.

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

1. Preventive & Social Medicine by K. Park
2. Community Medicine in Public Health by Ilyas Shah Ansari
3. Communicable and Non-Communicable Disease Basics: A Primer by Madeline M. Hurster
4. An Introduction to Community Health By James F. McKenzie, Robert R. Pinger, Jerome E Kotecki

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

### **MPH 504: Health Education & Promotion**

Course Title: Health Education & Promotion

Course Code: MPH 504

Course Credits: 3

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

An innovative, multilevel, service-oriented health course designed to educate, motivate, and empower high school, undergraduate, and graduate students to become advocates for their own health, the health of their peers, and the health of their community. Each educational cohort will have different expectations that are clearly delineated and will function as experiential experts on their own life cycle stage, each offering the other the substantial

benefit accrued through this experience. This course is designed to allow motivated students to interrelate in a dynamic, interactive course that transcends the typical content oriented approach to health education, focusing on acquiring the knowledge and skills necessary to become health advocacy leaders in their respective communities. Effective health advocacy requires an understanding of:

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.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

### **MPH 505: Computer Application in Public Health**

Course Title: Computer Application in Public Health

Course Code: MPH 505

Course Credits: 3

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

This course is designed to introduce students to the use of computers for development of statistical investigation and provide familiarity with different types of statistical applications and software. Topics include an overview of the SAS, and SPSS software packages and EPI INFO. The main focus of this course is to develop skills in data entry, import and export, data manipulation and management, presenting descriptive statistical results and basic data analysis. Familiarity with basic statistics is not required but is useful.

**Recommended Reading /Text**

1. Stata Corporation. Stata release 8: user's guide. College Station, Texas: Stata press; 2003.
2. Other manual for statistical software
3. Help options in the software programs

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

**MPH 506: Technical Report Writing & Basic Communication Skills**

Course Title: Technical Report Writing & Basic Communication

Course Code: MPH 506

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:** Assignments (25%)

Mid term Exam (25%)

Final Term Paper (50%)

**MPH 507: Graduate Seminar (will be conducted in 2<sup>nd</sup> & 3<sup>rd</sup> semester as well)**

Course Title: Graduate Seminar

Course Code: MPH 507

Course Credits: 3 (one each in 03 Semester)

**Objectives of the course:**

Students and faculty have the opportunity to meet on a weekly basis to discuss papers in the literature. Each week a graduate student in a formal presentation reviews a paper in detail. Discussion of the strengths and weaknesses of the work gives insight into the complexities of investigations in the Public Health arena. The Graduate Seminar will be part of Semester I, II and III of the MPH program, however, Semester IV students may be exempted from attending.

**Note:** Student attendance in the Graduate Seminar is important and 75% attendance will be considered acceptable to pass this course and be eligible to sit in the Semesters' Final Exam.

**Grading:** Class presentations on prescribed format.

**MPH 508: Field Visits**

Course Title: **Field Visits**

Course Code: MPH 508

Course Credits: 3 (one each in 03 Semester)

**Objectives of the course:**

IPH&SS recognizes the great need for consistent coaching and visitation for students on the field. The students will be able to appreciate the need for developing effective partnerships between community-based organizations, health services and nongovernment organizations. This will include visit to different health sector organizations both public and private, international/national non-governmental organizations

**Note:** Student attendance in the Field Visit is important and 75% attendance will be considered acceptable to pass this course and be eligible to sit in the Semesters' Final Exam.

**Grading:** On attendance and submission of field visit report.

**MPH COURSES FOR SEMESTER II****MPH 509: Public Health Management & Policy**

Course Title: Health Planning and Policy Development

Course Code: MPH 432

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;

- List the sequential steps of the micro planning cycle.
- Explain the difference and relationship between different types of planning.
- Apply certain tools and technique for district health and project planning.
- Develop a district health plan/ program implementation plan with an adequate budget.
- Conduct a stakeholder analysis in the process of policy development.
- Understand the implementation modalities of macro level and micro level policy decisions at micro level (translation of policies into action)
- 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.

<b>Grading:</b>	Class assignments	25%		
	Mid-term Exam	25%	Final Exam	50%

### **MPH 510: Epidemiology – Application of theory, Methods and Practice**

Course Title: Epidemiology – Application of theory, Methods and Practice

Course Code: MPH 510

Course Credits: 3

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

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.

#### **Course Contents:**

Introduces 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.

#### **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.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%



## **MPH 511: Occupational Health & Environmental Hazards**

Course Title: Occupational Health & Environmental Hazards

Course Code: MPH 511

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.

### **Course Contents:**

History & Introduction to occupational health, Occupational Hazards, Work Organization & Stress., Occupational Back Pain , Investigating the Workplace  
Occupational Lung Diseases, Industrial Noise Pollution, Occupational Cancers, Occupational Infections, Introduction to Environmental Health, Climate Change & Health, Environmental Health in emergencies & disasters, Healthy settings, Indoor air pollution, Public Health & Environment, Outdoor air pollution

### **Recommended Reading/ Text**

- i. Protecting Workers' Health Series No. 3 by Stavroula Leka BA MSc PhD
- ii. Fundamental principles of occupational health and safety. Second edition
- iii. ABC of Occupational and Environmental Medicine

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

## **MPH 512: Nutrition**

Course Title: Nutrition

Course Code: MPH 512

Course Credits: 3

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

The purpose of this course is to examine epidemiologic methodology in the relation to nutrition measure and to provide an overview of the current state of knowledge regarding diet as an etiologic factor in disease. The course will include a guest faculty from the department of nutrition to review methods for assessing dietary intake including the advantages and limitation of different diet assessment techniques and the levels and sources of measurement error in nutritional assessment. The course designed to provide an overview of nutritional epidemiology content and concept and enable investigators outside of nutrition to develop an understanding of nutrition/ dietary measurements and analysis, incorporate appropriate nutritional measure in their studies and better communicate and collaborate with nutritional researchers.

Topics include;

- Nutrition / disease relationship through the application of epidemiologic methods.
- Measure of exposure and outcome in nutritional epidemiology
- Dietary intake and biomarkers
- Diet/ nutrition and disease prevention
- Specific studies of diet, nutrition and disease.

### Recommended Reading/Text

1. Eleanor Noss Whitney and Sharon RadyRolfes. Understanding Nutrition. 9<sup>th</sup> edition. 2002. Wadsworth Group, California, USA.
2. Maurice E Shills and Vernon R Young. Modern Nutrition in health and disease. 7<sup>th</sup> Edition, 1988. Philadelphia, USA.
3. Sareen S. Gropper, Jack L. Smith and James L. Groff. Advanced Nutrition and Human Metabolism. April 2004.
4. Charles W. Van Way. Nutrition Secrets. 1999, Hanley and Belfus, Inc. Philadelphia, USA.
5. Mitchell R and Anderson D. Nutrition in health and disease. 16<sup>th</sup> edition. Oxford textbooks, USA.
6. Michael J, Gibney, Barrie M, Margetts, John M, Kearney, Lenore Arab. “Public health nutrition”, NS: Black Well Publishing, 2004.

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

### MPH 513: Health Economics

Course Title: Health Economics

Course Code: MPH 513

Course Credits: 3

### Objectives of the course:

Topics include budgeting, cost-benefit ratios, cost-effectiveness, cost-utility analysis, and healthcare outcomes. Quality of life and other measures of effectiveness will also be addressed. Emphasis on case studies, course project, and evaluation of publications. Some decision analysis and policy implications will also be included.

### Recommended Reading/ Text

1. WHO, “Macroeconomic environment and health”, 1993 Switzerland:WHO
2. McKinlay, J B. ed. “Issues in the political economy of health care”, 1994, Tavistock: London
3. HNP/World Bank, “Measuring country performance on health” , 1999, Washington: World Bank
4. Zaidi, S A. “The political economy of health care in Pakistan”, 1988, Lahore; Vanguard
5. World Bank, “Strengthening the effectiveness of Aid” 1995, Washington: World Bank.

6. Fazli Hakim Khattak. "Health economics and planning in Pakistan", ad- Rays Publisher, Blue Area, Islamabad; 1996.

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

**MPH COURSES FOR SEMESTER III  
TRACK REQUIRED COURSES  
*Track I - GENERAL PUBLIC HEALTH***

**MPH 514: Project Management**

Course Title: Project Management

Course Code: MPH 514

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/ Text**

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.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

## **MPH 515: Hospital Management**

Course Title: Hospital Management

Course Code: MPH 515

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:**

Health Care in Pakistan—A Profile and the Future, Planning a Modern Hospital, Hospital Organization Structure, Financial Management for Hospitals, Human, Resource Management in Hospitals, Hospital Materials Management, Hospital Stores Organization and Pharmacy, Selective Systems of Materials Management in a Hospital—Case Illustration, Effective Drug Management, Customer Experience Management, Medical Records, Operations Research in Hospitals, Hospital Waste Management, Patient Relations in Hospitals, Medical Audit and its Administration, Hospitals Certification

### **Recommended Reading/ Text**

- i. Managing a Modern Hospital, A. V. Srinivasan
- ii. Principles of hospital administration, John R. McGibony. Second edition
- i. Hospitals: Planning, Design, and Management, G. D. Kunders, S.Gopinath, Asoka Katakam

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

## **MPH 516: Primary Health Care**

Course Title: Primary Health Care

Course Code: MPH 516

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.

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

**MPH 517: Community Interventions in Reproductive Health**

Course Title: Community Interventions in Reproductive Health

Course Code: MPH 517

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. Joki 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. Upvall 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

### **MPH 518: Research & Ethics**

Course Title: Research & Ethics

Course Code: MPH 518

Course Credits: 3

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

- To improve the quality of research by improving skills in behavioral change, communications and strengthening of character of the participants by introducing them to the basic concepts of research & ethics in clinical practice.
- To understand the ethics of care and virtue and the standard of care in developing countries.
- They will be confronted with ethical dilemmas faced by physicians as well as researchers and will be expected to give their opinion on various aspects of ethical issues and made to recommend solutions.
- They shall be introduced to the subjects of conflict of interest and relationship with pharmaceutical industry as well as other grant giving agencies.
- At the end of the course the participants should be able to organize and facilitate Ethics Review Committees in their place of work and should be able to critically analyze research projects submitted to them from all aspects of ethical framework.

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

## **Track II – Introduction to KMU-MPH (NCD) Program**

### **Introduction**

Non-communicable diseases (NCDs) or chronic diseases are diseases of long duration and slow progression.

Until the second part of the 19th century, the main causes of mortality in the world have been communicable diseases.

Industrialization has resulted in availability of antibiotics, vaccines, and good life conditions (such as housing, water supply, nutrition). Because of that, death from communicable diseases has decreased and the non-communicable diseases have become one of the major dangers to human health in the 21st century. The shift in population levels of weight towards obesity is one health challenge that has arisen in the past decades.

NCDs are leading causes of death both developing and developed countries; only in Africa do communicable diseases cause more death than non-communicable diseases. Trends suggest that the main risk factors for NCDs are on the rise, especially in developing countries. Many developing countries are on the stage of epidemiologic and behavioral transition in which they face a growing burden of non-communicable disease along with ongoing under nutrition and communicable diseases.

Therefore, NCDs are imposing a growing burden upon low-and middle-income countries, which are still struggling with infectious diseases - so called double burden of disease.

The ageing of populations is an underlying determinant of NCD epidemics. In addition, global nutrition transition in combination with tobacco use and little physical activity leads to widespread distribution of non-communicable disease.

### **Learning Objectives of MPH (NCD) Program**

On completion of this program students should be able to;

1. Define the scope of non-communicable diseases epidemiology and appreciate the changing importance of non-communicable diseases as a major public health burden in different parts of the world.
2. Explain the rationale for a life-course approach to the etiology of non communicable diseases
3. Explain how functional genetic variant associations with common chronic diseases can provide robust estimates of the effects of environmental exposures on these diseases.
4. Explain the concept of screening for disease control and how it can be used as a tool in public health
5. Describe the role of infectious agents in the etiology of non communicable diseases.
6. Apply the theoretical knowledge gained through the course to developing NCD prevention and control strategies.
7. Analyze the burden of NCD globally and at a national level in terms of the magnitude of the problem (economic burden, social burden and future impact).
8. Assess the social, political, environmental, cultural and economic factors contributing to the burden of NCDs in low and middle-income countries

## **MPH (NCD) Program Organization and Structure**

### **Program Duration**

The duration of MPH (NCD) Program will be of two years. Every year the program will be offered in the month of February.

Each semester will be of 18 weeks duration 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

### **Credit Hours**

The MPH (NCD) Program has 60 credit hours. A total of 54 credit hours are accumulated in three semesters and the fourth (final) encompassing six credit hours of thesis. Each module in 1-3 semesters will be of three (03) credit hours each culminating in a total of 18 credit hours. The fourth (final) semester encompassing thesis work will be of six (06) 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.

### **Medium of Instruction**

The medium of instruction for all courses in the MPH program will be English.

### **Instructional Strategies**

The instructional strategies will include lectures, group discussions, tutorials, seminars, problem based learning, self study, field work etc.



### Semester Wise Distribution of Courses

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

#### Year 1

##### Semester 1

S No	Code	Course	CrHrs
1	MPH 501	Epidemiology – Introduction to theory and practice	03
2	MPH 502	Statistical Methods in Public Health	03
3	MPH 503	Communicable Disease Control	03
4	MPH 506	Technical Report Writing & Basic Communication Skills	03
5	MPH 505	Computer Applications in Public Health	03
6	MPH 504	Health Education and Promotion	03
7	MPH 508	Field visit	01
8	MPH 507	Graduate Seminar	01
<b>Total</b>			<b>20</b>

#### Year 1

##### Semester 2

S No	Code	Course	CrHrs
1	MPH 510	Epidemiology – Application of theory & practice	03
2	MPH 512	Nutrition	03
3	MPH 509	Public Health Management and Policy	03
4	MPH 511	Occupational Health & Environmental Hazards	03
5	MPH 513	Health Economics	03
6	MPH 508	Field visit	01
7	MPH 507	Graduate Seminar	01
<b>Total</b>			<b>17</b>

#### Year 2

##### Semester 3

S No	Code	Course	CrHrs
1	NCD 531	<b>Epidemiology of NCDs</b>	03
2	NCD 532	<b>Economics of NCDs</b>	03
3	NCD 534	<b>Key NCDs</b>	03
4	MPH 518	Research & Ethics	03
5	MPH 514	Project Management	03
6	MPH 508	Field visit	01
7	MPH 507	Graduate Seminar	01
<b>Total</b>			<b>17</b>

#### Year 2

##### Semester 4

S No	Code	Course	CrHrs
1	MPH 540	MPH Thesis	06
<b>Total</b>			<b>06</b>
<b>Total</b>			<b>60</b>

## **NCD 531: Epidemiology of NCDs; AIM**

1. To provide an overview of the importance of and trends in non-communicable diseases globally, including low and middle income countries.
2. To generate an appreciation of the drivers of the burden of non-communicable diseases.
3. To identify methodological and conceptual issues in identifying causes of non-communicable diseases and evaluating preventive strategies.

## **OBJECTIVES**

By the end of this module, students will have an appreciation of the growing global importance of non-communicable diseases across low middle and high income countries, the major determinants of non-communicable diseases and the key challenges faced by epidemiology and public health in studying and controlling these conditions.

## **CONCEPTUAL OUTLINE**

This module will focus on major non-communicable diseases. It will draw on key illustrative examples from all major regions of the world, from a range of fields including molecular and genetic epidemiology, reproductive, cardiovascular and cancer epidemiology, and demography. The module will include the following issues:

1. An overview of the emergence of the field of non-communicable disease epidemiology, and a critical evaluation of the definition of this heterogeneous field including the reality that many diseases in this category involve infectious agents as in their aetiology.
2. The contemporary burden of non-communicable diseases in different regions of the world and key drivers of trends including urbanization and other aspects of societal change.
3. Challenges to the study of non-communicable diseases including the limits of observational evidence, construction of conceptual frameworks in life-course epidemiology and the potential contribution of genetic associations to understanding environmental aetiologies.
4. Challenges in the control of non-communicable diseases in different parts of the world

## **Contents:**

At the end of the module the student will be able to:

- Define epidemiology and grasp its uses.
- Define health and disease.
- Be able to use the indicators for measuring health and disease.
- Know the different types of epidemiological studies.
- Grasp the concept of causation in epidemiology.
- Identify the methods and guidelines for field investigations.

- Know the communicable diseases general aspects.
- Define surveillance, the effective system, its elements and limitations.
- Specify the objectives of surveillance.
- Identify diseases to be included in surveillance system.
- Define data to be collected in the system.
- Select the surveillance method to be used for different situations.
- Specify data collection procedures.
- Collect, compile and tabulate data.
- Analyze the data.
- Investigate causation.
- Take action.
- Prepare and present reports.
- Outbreak investigation, control and reporting.
- Non-communicable diseases general epidemiology, particular health problems (cardiovascular disease, coronary heart disease, hypertension, stroke, rheumatic heart disease, cancer, diabetes, obesity, blindness, accidents and injuries).

### **NCD 532: Economics of NCDs**

#### **By the end of the module, the student should be able to:**

1. Analyze the burden of NCD globally and at a national level in terms of the economic burden of the problem
2. Understand fundamental concepts and principles of economics relevant to non communicable diseases
3. Be familiar with different methods of financing for non communicable diseases control
4. Recognize major global, regional, national and local stakeholders in NCD management and prevention
5. Appraise global strategies addressing NCD
6. Revise and examine processes towards establishment of a National NCD Prevention and Control Program as part of an existing national response in a given country

#### **Contents**

1. Health, Health Care and the Economy
2. The MicroeconomicsofHealth and Health Care
3. Equity, Efficiency and Need in term of NCDS
4. Principles of Economic Appraisal
5. Defining and Measuring Costs

6. Economic Evaluation in non communicable diseases
7. The Demand for Medical Care for control of non communicable diseases: Conceptual Framework
8. Government Provision of Health Insurance in terms of non communicable diseases control
9. Universal Insurance Issues and International Comparisons of Health Care Systems

### **NCD 534: Key NCDs**

#### **Overall aims of course**

The course will explore the evidence and the frameworks used to address the burden of non-communicable diseases through action on the conventional risk factors (lifestyle factors such as tobacco use, unhealthy diet, physical inactivity, and high blood pressure etc) but also more 'upstream factors' and the social determinants of health (e.g. urbanization, income, education, trade, health transitions).

This course aims also at providing participants with an in-depth theoretical and practical insight into how national NCD programmes can be developed, integrated and maintained in a local, national and global perspective

#### **Intended learning outcomes of course (ILOs)**

##### **a. Knowledge and understanding**

1. Understand the nature and impact of non communicable diseases globally, and in local environments
2. Understand different health system structures, and approaches such as primary health care, and family medicine.

##### **b. Intellectual skills**

1. analyze the social, economic, behavioral and political determinants of non-communicable diseases;
2. support and manage multi-disciplinary health and social teams to deliver effective care
3. Recognize major global, regional, national and local stakeholders in NCD management and prevention

##### **c. Professional and Practical Skills**

1. Appraise global strategies addressing NCD
2. Propose and evaluate concepts of NCD surveillance, evaluation and monitoring of NCD programs
3. Through practical experience, contrast and evaluate the structure, aims and importance of NGOs, government agencies, intergovernmental bodies and the private sector

**d. General and transferable skills**

1. Be able to effectively and confidently apply the theoretical knowledge gained through the course to developing NCD prevention and control strategies
2. Revise and examine processes towards establishment of a National NCD Prevention and Control Program as part of an existing national response in a given country

**Contents:**

<b>Topic</b>	<b>No. of Hours</b>	<b>Lecture</b>	<b>Tutorial/Practical</b>
<b>Introduction of NCDs</b>	<b>3 hrs</b>	<b>1</b>	
<b>Cardiovascular diseases (hypertension, coronary artery disease, stroke)</b>	<b>6 hrs</b>	<b>2</b>	
<b>Asthma</b>	<b>3 hrs</b>	<b>1</b>	
<b>Mental disorders</b>	<b>3 hrs</b>	<b>1</b>	
<b>Malnutrition(Obesity, under nutrition)</b>	<b>6 hrs</b>	<b>2</b>	
<b>Diabetes</b>	<b>3 hrs</b>	<b>1</b>	
<b>Bone diseases (osteoporosis,osteoarthritis)</b>	<b>3 hrs</b>	<b>1</b>	
<b>Muscle and joint diseases(fibromyalgia, gout and rheumatoid arthritis)</b>	<b>1hr 30 min</b>	<b>1</b>	
<b>hypo/hyper thyroidism</b>	<b>3 hrs</b>	<b>1</b>	
<b>Eye diseases (blindness, cataract)</b>	<b>3 hrs</b>	<b>1</b>	
<b>Crohns disease, Irritable bowel syndrome</b>	<b>3hrs</b>	<b>1</b>	
<b>Injuries, Road Traffic accidents, industrial and occupational accidents, home accidents</b>	<b>3 hrs</b>	<b>1</b>	
<b>Allergies</b>	<b>3hrs</b>	<b>1</b>	
<b>Renal disorders (nephritis, nephritic syndrome)</b>	<b>3hrs</b>	<b>1</b>	

**Teaching and Learning Methods:**

- a. lectures
- b. Group work
- c. Assignments and self directed learning

**Student Assessment Methods**

- a. **brain storming questions** ..... to access ...students baseline knowledge and their interest and engagement in the subject
- b. **assignment**.....to access.... Students knowledge and competency
- c. **Midterm**.....to access ....students knowledge and competency
- d. **final term**.....to access ....students command on subject

### **Track III – Introduction to MPH in MATERNAL & CHILD HEALTH**

#### **Introduction:**

The Maternal and Child Health program at the Institute of Public Health and Social Sciences, Khyber Medical University is a Master of Public Health (MPH) program focuses on current health problems and diseases affecting both women and children worldwide with special emphasize on in 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.

#### **Mission Statement:**

The Master of Maternal and Child Health program is designed to train individuals to become responsible and productive public health professionals with an emphasis on MCH populations.

#### **Objectives:**

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

1. Identify the causes and effects of the major health problems that are present during pregnancy, infancy, childhood and adolescence.
2. Acquire knowledge and skills to assess the health care needs of women and children.
3. Conduct research related to the health and well-being of women, children.
4. Analyze, plan, design and evaluate programs targeted toward improving the women and child health.

**Total Credit Requirements: 60**

**Public Health Track = 48**

**Maternal & Child Health Track = 12**

#### **Semester Wise Distribution of Courses**

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

**FIRST YEAR****Year 1****Semester 1**

S No	Codes	Course	CrHrs
1	MPH 501	Epidemiology – Introduction to theory and practice	03
2	MPH 502	Statistical Methods in Public Health	03
3	MPH 503	Communicable Disease Control	03
4	MPH 506	Technical Report Writing & Basic Communication Skills	03
5	MPH 505	Computer Applications in Public Health	03
6	MPH 504	Health Education and Promotion	03
7	MPH 508	Field visit	01
8	MPH 507	Graduate Seminar	01
<b>Total</b>			<b>20</b>

**Year 1****Semester 2**

S No	Code	Course	CrHrs
1	MPH 510	Epidemiology – Application of theory & practice	03
2	MPH 512	Nutrition	03
3	MPH 509	Public Health Management and Policy	03
4	MPH 511	Occupational Health & Environmental Hazards	03
5	MPH 513	Health Economics	03
6	MPH 507	Graduate Seminar	01
<b>Total</b>			<b>16</b>

**SECOND YEAR****SEMESTER III****MCH CORE SUBJECTS**

S No	Code	Course	CrHrs
1	MPH 414	Health System Research	3
2	MPH 507	Project Management	3
3	<b>MCH 536</b>	<b>Children's Health: Issues, Programs and Policies</b>	3
4	<b>MCH 535</b>	<b>Women, Gender and Health</b>	3
5	<b>MCH 537</b>	<b>Public Health Approaches to Maternal and Child Nutrition</b>	3
6	MPH 501	Graduate Seminar	1
<b>Total</b>			<b>16</b>

**Semester IV: Practicum and Thesis**

<b>Courses</b>	<b>Credits</b>
Clinical Rotation	2
MPH Thesis	6
Total	8

**Number of Credits Per Semester**

Semester I	20
Semester II	16
Semester III	16
Semester IV	8
<b>Total credits for the MPH Program</b>	<b>60</b>

**MCH CORE SUBJECTS:**

MCH course is distributed over four semesters. In first two semesters the MCH subjects are common to that of MPH. While the MCH core subjects will be taught in third semester. These are as follow;

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

**MCH 535: Women, Gender And Health**

**Course Code:** MCH535

**Course Credits:** 3

**Objectives of the course:**

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

1. Comprehend the physiological components of reproductive system
2. Identify major determinants of the women health
3. Analyze major health issues of the women and maternal health.
4. Develop skills for effective management and prevention of these problems



**Course Content:**

1. Introduction to Maternal and Child Health
2. Reproductive system: Embryology and Genetics
3. Women's Health: A life cycle
4. Social and cultural factors affecting women health
5. MDGs and Women Health
6. Maternal Mortality
7. Maternal Morbidity
8. Sexually transmitted Infections
9. HIV/AIDS in women
10. Genital Tract malignancies
11. Unsafe abortion
12. Family planning
13. Violence against women
14. MCH Delivery System
15. Maternal Health in Pakistan
16. MCH in emergency situations
17. Role of international organizations in maternal and child health
18. Role of men in women's health

**Assessment Methods:**Examination (75%):

Mid term (25%) (MCQs, SAQs)

Final term (50%) (MCQs, SAQs)

Assignment (20%)Class Activity (5%)**MCH 536: Children's Health: Issues, Programs and Policies**

**Course Code:** MCH536

**Course Credits:** 3

**Objectives of the course:**

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

1. To understand and interrelate Maternal and Child Health.
2. Identify and distinguish health problems of children in neonatal period, infancy, childhood and adolescence.
3. Develop skills to assess growth and development of children.
4. Analyze major health issues and their determinants of the childhealth.
5. Develop skills for effective management and prevention of these problems at community level.

**Course Content:**

1. Introduction to Child Health
2. Survival of preterm Infants
3. Improving Neonatal Health
4. Infants Health: Issues and solutions
5. Children Health (1 – 5 yrs)
6. Improving Adolescent Health
7. Prevention of maternal to child HIV transmission
8. Child growth and development
9. Social and cultural factors affecting child health
10. Children and youth with special needs
11. Child Abuse
12. MDGs and child's Health
13. Child Health in Pakistan
14. Health care delivery system for children
15. Epidemiology of pediatric diseases
16. School Health services

**Assessment Methods:**Examination (75%):

Mid term (25%) (MCQs, SAQs)

Final term (50%) (MCQs, SAQs)

Assignment (20%)Class Activity (5%)**MCH537: Public Health Approaches To Women And Child Nutrition**

**Course Code:** MCH537

**Course Credits:** 3

**Objectives of the course:**

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

6. To understand the basics of maternal and child nutrition.
7. Understand and interrelate maternal and child health and nutrition.
8. Analyze major nutrition health issues and their determinants.
9. Develop skills for effective management and prevention of these problems at community level.

**Course Content:****Child Nutrition:**

1. Lactation Management: (Anatomy & Physiology of a Female Breast)
2. Promotion of Breast Feeding
3. Appropriate Alternatives to Breast feeding
4. Maternal HIV/AIDs and Breast Feeding
5. Weaning
6. Growth Monitoring
7. Adolescent Nutrition Problems
8. Malnutrition in children- Over nutrition and under nutrition

**Women's health and Nutrition:**

1. Women nutrition through life cycle
2. Maternal Anemia its functional outcome
3. Diabetes Mellitus during Pregnancy
4. Nutrition Education

**Assessment Methods:**Examination (75%):

Mid term (25%) (MCQs, SAQs)

Final term (50%) (MCQs, SAQs)

Assignment (20%)Class Activity (5%)

## MPH ELECTIVE COURSES

S No	Code	Course	Cr Hrs
1	MPH 522	Mental Health	3
2	MPH 521	Survey Design and Data Collection	3
3	MPH 527	Health Policies	3
4	MPH 520	Disaster Management	3
5	MPH 528	Models of Healthcare Systems	3
6	MPH 526	Best Practice Models in Family Health	3
7	MPH 519	Health Management Information System	3
8	MPH 523	Introduction to Behavioral Health	3
9	MPH 524	Health Management and Accounting	3
10	MPH 525	Community Paediatrics	3
11	MPH 529	Community Intervention, Programme Development and Evaluation	3

### MPH 522: Mental Health

Course Title: Mental Health

Course Code: MPH 522

Course Credits: 3

#### Objectives of the course:

This course provides an overview of various topics in the area of psychiatry and psychiatric epidemiology. These include history of psychiatry relevant to psychiatric epidemiology, methodological issues critical to research in this area, the social, ethical, and legal context of research in this area, including epidemiology of various psychiatric disorders. It is offered every other year (in even years) in the fall semester.

#### Recommended Reading/ Text

1. Shorter Oxford Textbook of Psychiatry. 5<sup>th</sup> Edition. Oxford University Press.
2. Yates J, James D, Aston I. Pre-existing mental health problems in medical students: a retrospective survey. *Med. Teach.* 2008 May; 30(3):319-21
3. Vanheusden K, van der Ende J, Mulder CL, van Lenthe FJ, Verhulst FC, Mackenbach JP. The use of mental health services among young adults with emotional and behavioral problems: equal use for equal needs? *Soc. Psychiatry PsychiatrEpidemiol.* 2008 May 29.
4. Kavan MG, Malin PJ, Wilson DR. The role of academic psychiatry faculty in the treatment and subsequent evaluation and promotion of medical students: an ethical conundrum. *Acad. Psychiatry.* 2008 Jan-Feb; 32(1): 3-7.

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%

## **MPH 521: Survey Design and Data Collection**

Course Title: Survey Design and Data Collection

Course Code: MPH 521

Course Credits: 3

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

The objective of the course is to provide students with a basic understanding of how to develop a survey, including where to look for standardize measures, principles of items writing, revising poorly written questions, being familiar with the many different options available for survey administration (phone, mail, interview, computerized, online)

### **Course contents**

8. Types and pros and cons of different surveys/ interviewing methods (semi- structured interviews, telephone, mail, computer direct interviews, email survey, web- based survey).
9. Questionnaire design (types of questions, ordering of questions and responses, writing response categories, question layout, transitional statement). Tips on website layout.
10. What questions to ask? Sources of standardized question, developing a construct table.
11. Writing the question and knowing a good one from a bad one.
12. Questionnaire development (applied).

### **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.

**Grading:**       Assignments (25%)  
                           Mid term Exam (25%)  
                           Final Term Paper (50%)

## **MPH 527: Health Policies**

Course Title: Health Policies

Course Code: MPH 527

Course Credits: 3

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

To introduce to the students the subject of health policy; its determinants, processes and challenges, specifically in the context of Pakistan.

**Course Content:**

The health policy processes, what constitutes a policy, health policy studies, approaches, design and techniques. Health policies of UK, USA and other countries. Key issues: poverty, equity, development aid, privatization, public private partnerships, etc. planning and policy for pharmaceuticals, regulation of drugs and formulary; public and private sector hospitals and institution based private practice. Health policy of Pakistan and its determinant; key features, weaknesses and challenges; role of donor agencies in policy making, environmental and legal issues effecting policy formation for preventive and curative health programs.

**Recommended Reading/ Text**

1. Abel smith B. An introduction to health policy, planning and financing. London: Longman Group Ltd; 1994
2. Danis M, Clancy C, Churchill LR. Ethical dimensions of health policy. New York, NY: OxfordUniversity Press; 2002
3. Harding A, PrekerAS. Private participation in health services. WashingtonDC: The World Bank; 2003
4. Lashari T. Pakistan's national health policy: quest for a vision. Islamabad, Pakistan: Health Policy Unit, The network for consumer protection; September 2004
5. Ministry of Health, Government of Pakistan. National Health Policy: the way forward – agenda for health sector reform. Islamabad, Pakistan: December 2001.
6. Nishtar S. The gateway paper: health system in Pakistan –a way forward. Islamabad, Pakistan: Pakistan's Health Policy forum and heartfile; 2006
7. Lin V, Gibson B. Evidence – based health policy: problems and possibilities. Melbourne, Australia: OxfordUniversity Press; 2003.
8. Walt G. Health Policy: an introduction to Process and power. London: zed Books; 1994.

**MPH 520: Disaster Management**

Course Title: Disaster Management

Course Code: MPH 520

Course Credits: 3

**Objectives of the Course:**

Disaster management due to nature, war on terror. The purpose of this course is to make participants aware of the special needs of children and families in disaster situations and understand public health approaches to address these needs. The learning objectives for this course are:

- 1) Identify the most important problems and priorities for the most vulnerable in disaster situations,
- 2) Identify the organizations most frequently involved in providing assistance in disaster situations and define their roles and strengths,
- 3) Describe the reasons why children are among the most vulnerable in disaster events,

- 4) Conduct emergency nutritional assessments of children,
- 5) Develop health profiles on displaced people and plan interventions based on results,
- 6) Define common psychosocial issues of affected people and the means to address them,
- 7) List basic points of international law including the Geneva Convention that relate to all persons involved in disaster situations,
- 8) List important security issues,
- 9) Appreciate ethical issues involved in disaster situations and employ skills of cross cultural communication,
- 10) Recognize and respond to special issues for children involved in biological and chemical terrorist attacks

## **ELECTIVE COURSES**

### **MPH 528: Models of Health Care System**

Course Title: Models of Health Care System

Course Code: MPH 528

Course Credits: 3

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

Introduction to systems, systems thinking; comparative health system; UK, USA, China, and Cuba; the role of the state, and the crisis of capitalist order and its implications, the transnational pharmaceutical industry, political economy of western medicine in the less developed nations.

#### **Course Contents:**

Models of determinants of health status; country performance and trends across time and space. Code of ethics in health services, ethical issues regarding staff, patients, community marketing, social responsibilities. The second part of this course covers an analysis of contemporary organization and management theory with regard to its environmental characteristics the organization and management of health care institution in Pakistan; the primary secondary and tertiary levels; the federal level, provincial level district level, government, non government, international health sector, delegation, responsibilities, job description, challenges and drawbacks – collaborations efficiency, gender imbalances, ethic and cultural sensitivities, role of donors issues and forces shaping its future.

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

1. WHO, "Macroeconomic environment and health", 1993, Switzerland: WHO
2. McKinlay JB. (ed) "issues in the political economy of health care" 1994, Tavistock : London.
3. HNP/World Bank, "Measuring country performance on health" 1999, Washington: World Bank
4. Darr k. "ethics in health services management" 3<sup>rd</sup> ed. 1997, Maryland; health Professions press.

### **MPH 526: Best Practice Models in Family Health**

Course Title: Best Practice Models I Family Health

Course Code: MPH 526

Course Credits: 3

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

To train participants with the knowledge and skills to be engaged as Public Health

Practitioners specialized in Family Health. The course will focus on all aspects of Family Health including the preventive, promotive, curative and rehabilitative services for human health.

#### **Course Contents:**

Diagnosis and management of chronic and infectious diseases; identifying genetic disorders; principles of practice management; communicating and counseling effectively and efficiently with patients, families, health care team and colleagues; principles and practice of preventive and promotive health strategies; essential knowledge and skills to be a family health doctor.

### **MPH 519: Health management information system**

Course Title: Health management information system

Course Code: MPH 519

Course Credits: 3

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

The aim of the course is not complex. The course aims to provide you with an understanding of Health Management Information System; it also aims to provide you with solutions to health challenges in the communities.

#### **Course Contents:**

To achieve the aims set out; the course has a set of objectives. Each unit has specific objectives which are included at the beginning of the unit. You should read these objectives before you study the unit. You may wish to refer to them during your study to check on your progress. You should always look at the unit objectives after completion of each unit. By doing so, you would have followed the instructions in the unit.

Below are the comprehensive objectives of the course as a whole. By meeting these objectives, you should have achieved the aims of the course as a whole. In addition to the



aims above, this course sets to achieve some objectives. Thus, after going through the course, you should be able to:

1. Describe the Expanded definitions of the Concepts and Terminologies of Health Management Information System.
2. Undertake Health Data Management to provide great health information capable of guiding the planners and stakeholders in health care delivery system.
3. Understand the foundational basis for the National Health Management Information System Policy and
4. Describe Project cycle, Monitoring tools and Evaluation of health projects and programmes

### **MPH 523: Introduction to Behavioral Health**

Course Title: Introduction to Behavioral Health

Course Code: MPH 523

Course Credits: 3

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

The Need for Geriatric Mental health Care, What is Different About Geriatric behavioral Health?, Why Long-term Care?, What is Long-term Care?, behavioral Health Services in the Long-term Care Setting, The Impact of Aging on behavioral Health, The Aging Body, The Aging Brain, Cerebrovascular Integrity, Personality, Family Dynamics, Social Dynamics, The Impact of Medical Illness on behavioral Health, Nutritional Deficits, Pain, Medications, Substance Abuse, Sexual Problems, Sleep, Delirium,

#### **Course Contents:**

General overview of mental health problems (signs and symptoms, nature and causes) and how they affect people , Types of mental illness i.e. depression, bipolar, psychosis, The importance of social inclusion, Practical steps to improve your own mental health, What help is available in your community Outcomes, Understanding of mental health and the stigma that surrounds it, Confidence to deal with clients or colleagues who may be experiencing mental health problems, Increase in participants' awareness of their own attitudes to mental health and illness.

**MPH 524: Health management & Accounting**

Course Title: Health management & Accounting

Course Code: MPH 524

Course Credits: 3

**Objectives of the course:**

This module will inculcate business management skills covering marketing, accounting, research, understanding global business environment, financial policy and analyzing the impacts and changes in healthcare and medical technologies and innovations.

In the micro analysis, managers need to understand the operational strategies in managing the sources and assets of the business. From this point, MBA Healthcare Management will focus on the aspects of human resource management, financial management, management and cost accounting of healthcare in particular and hospital management in general.

**Course Contents:**

Healthcare Technology Management & Innovation, Healthcare Management & Cost Accounting, Healthcare Strategic Financial Management, Health care Services Marketing, Health Economics & Financing, Strategic Healthcare Management & Planning, Organisational Healthcare Human Resource Management, Action Research in Health Organisation, Healthcare Business Supply Chain, Health Informatics, Healthcare Creativity & Innovation.

**MPH 525: Community Pediatrics**

Course Title: Community Pediatrics

Course Code: MPH 525

Course Credits: 3

**Objectives of the course:**

To promote child advocacy by enhancing resident educational and experiential opportunities, To increase community partnerships to enhance resident knowledge and skills to practice community pediatrics, To promote and support evidence-based community practices to improve child health, To achieve institutional change that incorporates and sustains Community Pediatrics.

**Course Contents:**

Epidemiology for Child Health, Evidence-based Child Health, Molecular and Genetic Basis of Paediatrics, Specialist Paediatrics I (Acute), The Healthy Child Programme 0-18 years, Teaching & Learning in Medical Education, Child development and disability: inclusive approaches in global contexts (CIHDG010 shared with MSc Global Health and Development), Immunisation and communicable diseases, Specialist Paediatrics II (Chronic), Safeguarding and Children in Society, Leadership and Professional Development, Nutrition, growth and physical activity Investigations and Management in Paediatric Gastroenterology ,Principles and Practice in Paediatric Gastroenterology

**MPH 529: Community Intervention, Program Development & Evaluation**

Course Title: Community Intervention, Program Development & Evaluation

Course Code: MPH 529

Course Credits: 3

**Objectives of the course:**

Discuss the impact of the aging process on behavioral health. Apply knowledge of family dynamics with the aging parent to the psychological treatment of family members. Assess the impact of medical illness on the behavioral health of the elderly client (e.g., nutritional deficits, pain, use of medications, sleep disturbance).

Screen the elderly client for dementia and recognize the different stages of the illness. List treatment options for depression and anxiety in the elderly and utilize effective therapeutic techniques.

**Course Contents:**

The Need for Geriatric Mental health Care, What is Different About Geriatric Mental Health?, Why Long-term Care?, What is Long-term Care?, Mental Health Services in the Long-term Care Setting, The Impact of Aging on Mental Health, The Aging Body, The Aging Brain, Cerebrovascular Integrity , Personality, Family Dynamics, Social Dynamics, The Impact of Medical Illness on Mental Health, Nutritional Deficits, Pain, Medications, Substance Abuse, Sexual Problems, Sleep, Delirium, The Impact of Memory and Cognitive Decline

Age Associated Memory Impairment

Mild Cognitive Impairment

Dementia

Types of Dementia

Reversible Dementias

Subcortical Dementias  
Depression & Anxiety Disorders

Extent of the Problem  
Anxiety Disorders in Old Age  
Loss and Grief  
Suicide  
Barriers to Diagnosis  
Barriers to Treatment

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

**MPH 540: Thesis**  
Course title: Thesis  
Course Number: MPH 540  
Course credit: 6

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

The Masters 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.

**Grading:** Written Thesis and Thesis Defense (Pass/Fail)

#### **Academic Quality**

- A course file will be maintained in the Institute for each course. Before the beginning of the classes, each teacher will submit a course plan, including topics to be taught each week, the number of assignments and quizzes, and the distribution of marks. Complete record of the course will be maintained and submitted by the teacher on monthly basis, including attendance, topics covered, home assignments graded, etc.

The course director will review course files periodically to ensure that course plans have been followed faithfully.

- The Board of Studies of the department will meet in the first week of every semester to review the examination papers of the Final Exam and student performance for the *previous semester*. The Board will also approve the course plans of the new semester.
- Since the semester system requires close and continuous interaction between student and teacher, class strength should not exceed 30 students. In case of higher enrolment, students will be divided into sections and all necessary extra facilities will be provided.
- A student must have attended at least 75% of the classes held in a course in order to be allowed to sit in the Final Examination.
- Each course will be assigned a Teaching Assistant (TA) for grading assignments and quizzes, taking tutorial classes for weak students, and in general, helping the teacher in conducting the course. The TA should be a Lecturer or Assistant Professor of the University. Teaching Assistants may also attend their relevant course lectures to keep abreast with the subject.

### **Examination and Methods of Assessment**

The 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 25% of the total grade for the course.
2. The mid-term exam will be graded for 25% 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 teaching assistants for the course.
3. For the Final Examination the class teacher will prepare two question papers in the University approved format and submit these to the Course Director of the Institute in a sealed envelope. The Course 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 50% of the total grade for the course.
4. The format of paper for both the mid-term and final exam will include:
  - Paper A : MCQs : 150
  - Paper B : Short Questions : 10
  - Best Answer: 1
5. If a student fails the mid-term exam, the student needs to discuss his/her standing in the course with the course instructor. The course instructor 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. However, the student may discuss with the course instructor who

may give an incomplete grade for the course and may instruct the student to do some additional assignments to improve and gain a passing grade.

### Grading

a. Grading of students will be through letter grades as defined in Table 1. Grades will be assigned by the course instructor. The course instructor will sign and submit the grades to the course 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:

**Table 1: Grade Points**

<b>Numerical Score (in percent)</b>	<b>Letter Grade</b>	<b>Grade Points</b>
<b>&gt;= 85</b>	<b>A</b>	<b>4.0</b>
<b>79 - 84</b>	<b>B+</b>	<b>3.0</b>
<b>70 - 78</b>	<b>B</b>	<b>2.0</b>
<b>60 - 69</b>	<b>C</b>	<b>2.0</b>
<b>&lt; 60</b>	<b>F</b>	<b>0.0</b>
	<b>I</b>	<b>Incomplete</b>
	<b>W</b>	<b>Withdrawn</b>

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**

<b>Course Code</b>	<b>Credit Hours</b>	<b>Numerical Score</b>	<b>Letter Grade</b>	<b>Grade Points</b>	<b>Quality Points</b>
<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>A x E</b>
MPH 501	3	87	A	4.0	<b>12</b>
MPH 502	3	76	B	3.0	<b>9</b>
MPH 503	3	70	C	2.0	<b>6</b>
MPH 504	3	84	B	3.0	<b>9</b>
<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 practicum report, the written thesis and the thesis defense will be graded as pass or fail. The pass or fail grade will not be counted towards the calculation of the GPA or the CGPA.

g. Students at the Masters level 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.

## **Admission Criteria and Procedures**

### **Introduction:**

The University abides by its strict merit based criteria with absolute transparency to select its student for the MPH Program. Every year, the number of Pakistani and foreign students is fixed by the Graduate & Research Management Council of the University.

### **Admission**

- **Student Selection Criteria**
- **Application Requirements**
- **Evaluation of Applications**
- **Admission Test**
- **Short Listing and Interviews**
- **Application Timeline**
- **Tuition and Other Charges**



## Student 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.

- Entry into the masters program will require:
- Sixteen years (16 years) of education in the following fields:
- MBBS, MD, BDS or equivalent qualification( Recognized by PMDC ), B.Sc Nursing ( Recognized by PNC ), B.Sc Paramedics, B.Sc Vision Sciences, B.Sc Human Nutrition, B.Sc Physiotherapy, Pharmacy (Pharm-B, Pharm-D)
- Masters degree in Sciences, Social Sciences recognized by PMDC.
- Applicant's background should reflect significant interest in Public Health e.g. research projects, publications, symposia and workshops attended;
- The program favors individuals with appropriate academic credentials. Applicant must demonstrate evidence of scholarly ability and personal maturity;
- Basic computer literacy is expected.

## Application Requirements

The ***Application Form*** must be completed and submitted, along with the following supporting documents:

### Scholastic Achievements:

A complete set of official transcripts of academic record in college, graduate school, and/or professional schools, with certification of degrees conferred, courses taken and grades received.

### Statement of Objectives:

A statement of objectives, summarizing past education, training and experience, as well as interests and future aims is required. A curriculum vitae and list of publications, if any, should be included.

### Evaluation of Applicants

Applicants will be evaluated in four stages:

**Stage I:** Applications are reviewed and short listed.

**Stage II:** Short listed candidates need to pass the KMU-MPH Program Admission test.

**Stage III:** Includes interviews with the senior faculty members of the program.

**Stage IV:** Final selection will be made by our admission committee after approval from KMU Graduate & Research Management Council (GRMC).

## **Admission Procedure**

All short listed applicants are required to write the KMU MPH Admission Test. The Admission Test consists of three components: English, Logical Reasoning and Simple Mathematics. The mathematics component is designed to assess basic knowledge of the subject, including critical reasoning, deduction and problem solving ability. The English language component evaluates English competency and reading comprehension. The logical reasoning component is aimed to assess the logical thinking ability of the candidates.

**The University has not authorized any publication or preparatory classes for the Admission Test.**

### **Short-listing and Interviews**

Applicants will be short listed on the basis of the Admission Test. 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.

Interviews will be conducted at Khyber Medical University, Peshawar.

### **Application Timeline**

**Entry Test:** Sunday, August 31, 2008

#### **Interviews:**

- At KMU: Monday, September 1 thru Friday, September 5, 2008
- Result announcement: Wednesday, September 10, 2008
- Orientation of program at KMU: Wednesday, September 17, 2008
- Commencement of Master's program: Monday, September 22, 2008

### **Tuition and Other Charges**

Educational expenses for selected candidates, including tuition fee, course material, computer lab fee, and examination fee, will be Rs. 50,000 per semester for four semesters.

### **Application Procedure**

Application must be made on the prescribed original application form available in the prospectus of the university. The application form is provided as part of the student prospectus. The prospectus may be obtained after payment in the following ways:

1. Direct from the KMU Registrar's office.
2. By sending a written request addressed to the Registrar, KhyberMedicalUniversity, Block IV PDA Building, Phase V Hayatabad, Peshawar. The prospectus will be delivered to you by mail. The envelope, containing the request should be sealed and marked 'MPH Prospectus'. Please provide your correct address.
3. Alternately the prospectus and application may be downloaded from the university website.

A non refundable Admission Test fee will have to be paid as well.

Completed applications should contain the following:

- Domicile certificate
- Attested photocopy of matriculation certificate
- Attested photocopy of intermediate certificate
- Final degree certificate along with transcripts
- Foreign students must submit attested photocopies of any language proficiency tests taken such as TOEFL
- Attested photocopy of identity card
- 3 passport sized photographs
- Professional resume (preferably one page)
- Attested photocopies of experience certificates
- Foreign students must submit two reference letters from teachers supervisor or employers

Completed application must reach The Registrar of the University by the closing date. Incomplete applications and application received after the closing date will not be entertained. Government employees can send applications in advance, but are required to get their NOC from their respective department to enroll in the program.

### **Admission Procedure**

#### **MPH Admission Committee**

University has its own MPH admission committee, comprising of the Director, the MPH Program Coordinator, the Registrar and senior faculty members. The MPH admission committee is responsible for the selection of applicants to be admitted to the MPH Program. It establishes procedure for the timely review of applications to the program. Deferrals of admission are at the discretion of the MPH admission committee.

#### **Final Selection**

The applicant's acceptance is contingent upon all required documents including official transcripts. The MPH admission committee is responsible for identifying those students with missing documents and / or credentials which do not meet eligibility standards.

The final selection shall be done on the basis of the following distribution of marks;

<b>Criteria</b>	<b>Maximum weightage</b>
Previous academic record score	10%
Previous public health experience score	10%
Admission Test score	50%
Interview score	30%
Total score	100%

The final decision regarding the selection of the candidates rests with MPH Admission Committee and cannot be contested. Students offered admission should submit a letter of acceptance to the registrar, within seven days of selection.

**APPENDICES**

**FORM-RPF**

**RESEARCH PROPOSAL FRAMEWORK  
EVALUATION PERFORMA**

*Please fill in the blanks with the given codes and where necessary tick the appropriate box.*

Student name: \_\_\_\_\_ Date: \_\_\_\_\_

Grade (4=exceptional; 3=fully met;  
2=partially met; 1=not met/ missing)

<b>A. Core Competencies Appropriately Demonstrated</b>	<b>Yes/No</b>	<b>B. Framework –Specific Criteria</b>	<b>Grade</b>
• History		• Public health importance	
• Quantitative sciences (assessment/ analysis)		• Feasibility of the overall proposal	
• Biological considerations		• Presentation of the written product	
• Social/ cultural/ behavioral/ considerations		• Design appropriate to answer the question	
• Environmental and / or occupational consideration		• Population choice reasonable and feasible	
• Management/ resource and/ or policy consideration		• Sample size appropriate to answer question	
		• Analysis appropriate to answer the question	
		• Budget appropriate	
		• Ethical issues appropriately addressed	
		• Overall assessment	

**Result:**  Unconditional Pass:  Conditional Pass:  Fail:

Comments/ specific instructions:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Signature of Evaluator:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**FORM-PRF****PRACTICUM REPORT FORMAT****Title page****Executive summary**

Concisely describes the practicum and the salient results and conclusions.

## Table of content

## 1.0 Introduction

1.1 Problem or issue (statement of the public health problem(s) or issue(s))

1.2 Objectives (learning/ outcome objectives)

1.3 Literature review/ background (review of the relevant literature (if any), organizational context)

## 2.0 Methods

2.1 Setting (description of the site at which you did the practicum)

2.2 Oversight (the role(s) of your immediate supervisor/ mentor(s))

2.3 Methods (methods used to achieve each project objectives in 1.2)

2.4 Timeline (outline of key project activities/dates)

## 3.0 Results

## 4.0 Discussion and conclusion

*(Please feel free to add any other relevant items or issues in any section of your report)*

## 5.0 References

## 6.0 Appendices

**FORM-SEF**

**SUPERVISOR EVALUATION FRAMEWORK  
EVALUATION PERFORMA**

**KMU Master of Public Health Program: Practicum Evaluation by Immediate  
Supervisor / Mentor**

Thank you for your sponsorship of this student. Please complete this evaluation form. The information will be useful in preparing this student for future work and help us enhance the MPH Program.

Student's Name: \_\_\_\_\_

Immediate Supervisor/Mentor's Name: \_\_\_\_\_

Title: \_\_\_\_\_

Organization: \_\_\_\_\_

Date: \_\_\_\_\_

Using the rating scale below, please circle the student's level of performance during the practicum on the criteria listed below:

**1= Exceeded expected performance level**

**2= Met expected performance level**

**3= Failed to meet the expected performance level**

**NA= Not applicable**

**Criteria**

1. Student met agreed upon time commitment
2. Student was dependable and responsible in carrying out assignment and duties
3. Student functioned well within the organization
4. Student functioned well with community stakeholders and / or clients
5. Student was able to identify source of data and information required for the practicum
6. Student was able to analyze and / or synthesize data and information
7. Student completed the necessary background research
8. Student completed assignment/ projects in the agreed upon time frame

**Rating**

1	2	3	NA
1	2	3	NA
1	2	3	NA
1	2	3	NA
1	2	3	NA
1	2	3	NA
1	2	3	NA
1	2	3	NA

**Criteria**

9. Student's written work was completed and well prepared
10. Student had the necessary knowledge and skills for this practicum

**Rating**

1	2	3	NA
1	2	3	NA

11. Student conducted himself/ herself in a professional manner
12. Student worked well with others

1	2	3	NA
1	2	3	NA

### Comment

Please provide comments on the following items.

1. Any of the previous criteria on which the student was rated as 3 (failed to meet expected performance level):

2. Your overall impression of the student's work on this practicum.

3. Any areas where the student's academic preparation for assigned work could be improved.

4. How useful the practicum was for your organization.

Would you be willing to sponsor another student of the MPH Program.

Immediate Supervisor/ Mentor's Signature:

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Date: \_\_\_\_\_

Official Seal:



**FORM-TD****THESIS DEFENCE – VIVA VOCE  
EVALUATION PERFORMA**

*Please fill in the blanks with the given codes and where necessary tick the appropriate box.*

Student name \_\_\_\_\_ Date \_\_\_\_\_ Grade \_\_\_\_\_  
(4=exceptional; 3=fully met; 2=partially met; 1=not met/ missing):

**Area**

<b>Grade</b>

**I. Speaker Presentation**

- Was speaker dressed formal/ appropriate for the presentation?
- Was the speaker' voice loud enough? Understandable?
- Did the speaker make eye contact with audience?
- Did the speaker (s) hold your interest?
- Was the speaker convincing/effective?

**II. Content**

- Was the target audience identified?
- Was the appropriate content presented?
- Was the issue clearly identified and defined?
- Was the presentation appropriate to the target audience?
- Was sufficient supporting detail provided?
- Were the recommendations/ assertions supported?

**III. Organization**

- Was the content organized and presented in a coherent manner?
- Were new or unfamiliar terms explained?
- Did the presentation of ideas flow smoothly?

**IV. Audio- Visuals**

- Were visual (graphics, transparencies/ slides) used effectively?
- Was the quality of slides appropriate (readable, not cluttered)?
- Was an appropriate number of visual aids used?
- Were visuals clearly explained?
- Did the visual add to the presentation?

**V. Time Utilization**

- Was time appropriately allocated to parts of the presentation?
- Were the time constraints followed?

- Did it appear that the presentation had been rehearsed

**VI. Questioning**

- Were questions addressed with confidence and knowledge?
- Did the speaker interact with the audience?

**Total**

**Result:**  **Unconditional Pass:**  **Conditional Pass:**  **Fail:**

Comments/ Specification Instructions:

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**Signature of Examiner:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**FORM-MPHT**

**MPH THESIS  
EVALUATION PERFORMANCE**

Student name: \_\_\_\_\_ Date: \_\_\_\_\_

Grade (4=exceptional; 3=fully met; 2=partially met; 1=not met/ missing):

<b>A. core competencies <u>Appropriately Demonstrated</u></b>	<b>Yes/No</b>	<b>B. Framework –specific criteria</b>	<b>Grade</b>
• History		• Abstract /executive summary	
• Quantitative sciences (assessment/ analysis)		• Statement of the problem	
• Biological considerations		• Magnitude of the problem	
• Social/ cultural/ behavioral/ considerations		• Key determinants	
• Environmental and / or occupational consideration		• Prevention/ intervention strategies	
• Management/ resource and/ or policy consideration		• Policies and priority setting	
		• Recommendation	
		• Implementation and practice	
		• Evaluation	
		• Overall assessment	

Result:  Unconditional Pass:  Conditional Pass:  Fail:

Comments/ specific instructions:

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**Signature of Evaluator:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**SAMPLE FORMATS FOR COURSE SCHEDULE**  
**Sample 1: MPH 410 EPIDEMIOLOGY**

**COURSE SCHEDULE**

<b>WEEK / DATE</b>	<b>MONDAY 9 AM – 12 NOON</b>
	<b>LECTURE TOPICS</b>
Week 1 –	Introduction
Week 2 –	Dynamics of Disease Transmission
Week 3 –	Measuring the Occurrence of Disease
Week 4 –	Natural History of Disease
Week 5 –	Randomized Clinical Trials
Week 6 –	Cohort Studies
Week 7 –	Case-Control and Cross-sectional Studies
Week 8 –	Review Session
<b>Week 9–</b>	<b>MID- TERM EXAM</b>
Week 10 –	Estimating Risk
Week 11 –	More on Estimating Risk
Week 12 –	Validity and Reliability of Screening Tests
Week 13 –	Validity and Reliability of Screening Tests
Week 14 –	Association to Causation
Week 15 –	Bias, Confounding and Interaction
Week 16 –	Evaluating Health Services
Week 17 –	Review Session
<b>Week 18-</b>	<b>FINAL EXAM</b>

**Sample 2: MPH 421 STATISTICAL METHODS IN PUBLIC HEALTHH  
COURSE SCHEDULE**

<b>WEEK / DATE</b>	<b>THURSDAY 9 AM – 12 Noon</b>  <b>LECTURE TOPICS</b>
Week 1	Introduction to Biostatistics
Week 2	Descriptive Statistics
Week 3	Measures of Central Tendency
Week 4	Basic Probability Concepts
Week 5	Probability Concepts Continued
Week 6	Probability Distributions
Week 7	Probability Distributions Continued
Week 8	Review Session
Week 9	MID- TERM EXAM
Week 10	Sampling Distributions
Week 11	Distribution of Sampling Proportions
Week 12	Estimation, and Confidence Intervals
Week 13	Estimation and Confidence Intervals Continued
Week 14	Review Session
Week 15	Hypothesis Testing
Week 16	Hypothesis Testing Continued
Week 17	Review Session
Week 18	FINAL EXAM

**Sample 3: MPH 450 NUTRITION****COURSE SCHEDULE**

<b>WEEK / DATE</b>	<b>WEDNESDAY 9 AM – 12 Noon</b> <b>LECTURE TOPICS</b>
Week 1	Introduction, Basic Nutrition
Week 2	Macronutrients
Week 3	Micronutrients, Other Nutrients
Week 4	Digestion, absorption and transport; Metabolism
Week 5	Energy balance and body composition; planning a healthy diet
Week 6	Life Cycle Nutrition
Week 7	Life Cycle Nutrition
Week 8	Nutrition and Infection
Week 9	MID- TERM EXAM
Week 10	Nutrition and Disease
Week 11	Nutrition and Disease
Week 12	Food Biotechnology: Consumer concerns about food & water
Week 13	Food Science Research
Week 14	Nutritional Assessments
Week 15	Nutrition Assessment Survey – Questionnaire
Week 16	Nutrition Assessment Survey
Week 17	Nutritional Survey Data Analysis in EpiInfo
Week 18	FINAL EXAM

**MPH 430: Public Health Management and Policy**

Course Title: Public Health Management and Policy

Course Code: MPH 430

Course Credits: 3

**Objectives of the course:**

Includes a description of the health care system, an understanding of population based health care, concept and methods of health management, current issues in health policy and the application of these concepts using case studies. Topics include role of the manager, organizational design and control, professionals in organizations, adaptation and accountability. Grades based on continuous evaluation.

**Recommended Reading/ Text**

1. Detels R, Holland W W, McEwan J, Solmwnn G, "Public Health" (Volumes 1,2,3), 1997, London: Oxford Medical Publication.
2. Chapman S, Lupton D, "The fight for Public Health", 1994, London:BMJ
3. Walt G,"Health Policy – An introduction to process and power" 1994, WUP Press: Johannesburg

**Readings:** Assigned with each class.

<b>Grading:</b>	Class assignments	25%
	Mid-term Exam	25%
	Final Exam	50%