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**department of public health**

**faculty of allied health sciences**

**Daffodil international university**

**MASTER IN PUBLIC HEALTH (MPH)**

**program Syllabus**

**MPH**

**Program Syllabus: Master of Public Health (MPH)**

**Introduction:**

Daffodil International University (DIU) is one of the leading private universities in Bangladesh in the sense of economy, education, health and other aspects of modern educations. The education system is changing and merging with the information technology.

DIU is very concerned about the change of common health problems specially communicable and chronic disease of Bangladesh. Most of the diseases are preventable and controllable and which could be possible by the active role of Public Health Specialist. The field of Public Health is a multidisciplinary subject which extends from basic medical subjects to highly specialised public health subjects and technology. The requirement of human resources with MPH degree in Bangladesh will serve in different health program that would be introduced in the coming days of DIU. With this novel view MPH degree is highly professional, credential for making leaders in the area of health field. Based on the extensive teaching, innovative local priority based research, change of socioeconomic status, the DIU established academic collaboration with the world reputed recognized universities and leading international organization which offers Master of Public Health (MPH).The program emphasizes the development of skills and capability in management aspect which will be able to make communication of health programs.

**Aims**

* To impart knowledge for understanding and appreciation of the importance and scope of public health as a key discipline.
* To provide background knowledge for assisting with the identification and prioritization of health problems in the community.
* To impart training for developing research and learning skills necessary to assist with the development and implementation of action and intervention strategies for implementing public health.
* To complement and to promote the teaching curriculum in Public Health education in a way that will secure national, regional and international collaboration as well as establishing Public Health research as a prime discipline of medical education and health care services. To impart knowledge and skill on individual disciplines.

**Objectives**

* Become capable to state, explain and identify concept, objectives, goals, importance, elements, priority areas regarding human health promotion and other public health areas.
* State the importance, activities and role in public health improvement of various public health institutes/ organizations.

* Organize, arrange, conduct and present seminars, workshops, meetings and research on critical public health problems.
* Define, explain and understand basic epidemiology, group behaviors, leadership, community organization, community development and community empowerment.
* Define concept, components, characteristics, types, advantages & disadvantages, steps, barriers of communications, and types, advantages & disadvantages, and uses of specific methods & media and to develop different media and its uses in various programs.
* Define and explain the concept and components of school health programs, training technology, models of training process and development of curriculum & module components of lesson plan and preparation, and task analysis.
* Monitor and evaluate healthcare activities, and conduct and coordinate research in the field of public health, and demonstrate relevant knowledge and skill in assessing economic aspects of health and healthcare system.
* Become skill in coordination intersectoral and multisectoral collaboration to promote human health.

**Admission Requirements**:

* Graduation in any discipline of science, nutrition, nursing, health science, social sciences, anthropology and economics with a grade point average of 2.5 or more on a scale of 4.0.
* Graduation in any discipline with work experiences in health care organization and graduate having M.B.B.S., B.D.S., M.D. or 4 years Bachelor’s degree in Social Science are preferred.
* No 3rd division.

**Regulation for the Master of Public Health under DIU**

Course structures for this program are stated below:

1. Program duration (12 months: 52 credits)

Total duration of MPH program is 12 months, these 12 months consists of three semesters, and each semester comprises four months.

**Program Schedule:**

The schedules of three semesters are as follows:

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| **Sl. No.** | **Semester** | **Class /Study activities** | **Core Subjects** | **Duration** | **Examination** |
|  | Spring Semester | 1st semester | Major-7=21cr | 1 January - 15 April | 16 April - 30 April |
|  | Summer Semester | 2nd semester | Major/ Elective-15cr | 1 May - 15 August | 16 August - 31 August |
|  | Fall Semester | 3rd semester | Dissertation, 10cr, Practicum and internship-3cr, Computer learning -3cr | 1 September - 15 December | 16 December - 31 December |

2. The 52 credits of course work required for the MPH degree include core course, major courses and some elective courses.

3. Outline of the required MPH courses

Credit wise distribution of MPH program

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| **Sl. No.** | **Name of the course** | **Number of course** | **Semester** | **Total Credit** |
| 1 | Core Course | 7 | 1st semester | 7X3=21 |
| 2 | Major/Elective course | 5 | 1st/ 2nd semester | 5X3 15 |
| 3 | Dissertation | 1 | 3rd Semester | 10 |
| 4 | Computer learning | 1 | 3rd Semester | 3 |
| 5 | Practicum/Internship | 1 | 3rd Semester | 3 |
| **Total required credits** | **15** | **03** | **52** |

4. Examination System:

Examination System will be in credit based

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| 1 | Theory and tutorials: | 9 hours 20 Min. | One credit |
| 2 | For Practical  | 9 hours 20 Min. | One credit |
| 3 | Practical includes:  | Assignment, presentation, Seminars, Field Visit, Group work. |

In order to complete MPH program: all students must fulfill the following course regardless their major area.

Mark Distribution:

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| **Specification** | **Mark** |
| Attendance | 10 |
| Class Test`: Quiz-2X5 | 10 |
| Presentation: Subject specific | 5 |
| Assignment: 1000 words written | 10 |
| Mid Term Exam | 25 |
| Final Exam | 40 |
| **Total** | **100** |

**Course Structure:**

Course for this program are stated below:

**CORE COURSE STRUCTURE:**

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| **Sl. No.** | **Course Type** | **No. of Courses** | **Credit Hours** |
| 1 | Core Course | 7 | 21 |
| 2 | Courses in Major area | 3 | 9 |
| 3 | Elective course | 2 | 6 |
| 4 | Dissertation | 1 | 10 |
| 5 | Practicum/Internship | 1 | 3 |
| 6 | Computer learning | 1 | 3 |
| **Total** | **15** | **52** |

LIST OF COURSES ACCORDING TO SEMESTER WISE:

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| **SEMESTER- 1****Core Courses** | **Seven core courses** | **Total Credit Hour 21** |
| **Sl. No.** | **Course code** | **Course Title** | **Credit Hour** |
| 1 | MPH-502 | Biostatistics-I | 3 |
| 2 | MPH-503 | Research Methodology | 3 |
| 3 | MPH-504 | Public Health Information, Education and Communication  | 3 |
| 4 | MPH-513 | Epidemiology-I | 3 |
| 5 | MPH-514 | Reproductive & Child Health | 3 |
| 6 | MPH-517 | Occupational and Environment Health | 3 |
| 7 | MPH-515 | Hospital Management | 3 |
| **Total Credits** | **21** |

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| **(Any one from the following major areas)** |
| **Sl. No.** | **Course Code** | **Course** | **Credits** |
| Major 1 | MPH-513 | Epidemiology (3 Major Course plus 2 elective Courses)  | 15 |
| Major 2 | MPH-514 | Reproductive & Child Health (3 Major Course plus 2 elective Courses)  | 15 |
| Major 3 | MPH-515 | Public Health and Hospital Administration (3 Major Course plus 2 elective Courses) | 15 |
| Major 4 | MPH-516 | Nutrition (3 Major Course plus 2 elective Courses) | 15 |
| Major 5 | MPH-517 | Occupational & Environmental Health (3 Major Course plus 2 elective Courses) | 15 |
| Major 6 | MPH-518 | Dental Public Health (3 Major Course plus 2 elective Courses) | 15 |
| **Total credit Hours for Each Major** | **15** |

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| SEMESTER- 2Course Code: MPH 513**Major:1****Epidemiology** | Three major course plus two elective courses | Total Credit Hours 15 |
| **Sl. No.** | **Course code** | **Course Title** | **Credit Hours** |
| **Major Courses** |
| 1 | MPH-5131 | Epidemiology-II  | 3 |
| 2 | MPH-5132 | Applied Epidemiology | 3 |
| 3 | MPH-5133 | Advanced biostatistics | 3 |
| **Elective Courses** |
|  | MPH-5134 | Epidemiology of CD & NCD  | 3 |
|  | MPH-5135 | Field Epidemiology | 3 |
| **Total Credits** | **15** |

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| SEMESTER- 2Initial Code: 514**Major: 2****Reproductive & Child Health** | Three major course plus two elective courses | Total Credit Hours 15 |
| Sl. No. | Course Code | Course Title | Credit Hours |
| **Major Courses** |
| 1 | MPH-5141 | Gender and population | 3 |
| 2 | MPH-5142 | Safe Motherhood Initiative and Component | 3 |
| 3 | MPH-5143 | Adolescent Health  | 3 |
| **Elective courses** |
|  | MPH-5144 | Maternal and Child Nutrition | 3 |
|  | MPH-5145 | Sexual Health | 3 |
| **Total Credits** | **15**  |

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| SEMESTER- 2Initial Code: 515**Major: 3****Hospital Management** | Three major course plus two elective courses | Total Credit Hours 15 |
| Sl. No. | Course Code | Course Title | Credit Hours |
| **Major Courses** |
| 1 | MPH-5151  | Health Care System Management and Administration | 3 |
| 2 | MPH-5152  | Medical record, Documentation and Information Management | 3 |
| 3 | MPH-5153  | Human resources management (HRM)  | 3 |
| **Elective Courses** |
|  | MPH-5154 | Health Economics and Financing | 3 |
|  | MPH-5155 | Hospital and Health Care Services | 3 |
| **Total Credit Hours** | **15** |

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| SEMESTER- 2Initial Code: 516**Major: 4****Nutrition** | Three major course plus two elective courses(These Major courses open when students are available.) | Total Credit Hours 15 |
| Sl. No. | Course Code | Course Title | Credit Hours |
| **Major Courses** |
| 1 | MPH-5161 | Food Safety and hygiene | 3 |
| 2 | MPH-5162  | Community Nutrition | 3 |
| 3 | MPH-5163  | Applied Nutrition | 3 |
| **Elective Courses** |
|  | MPH-5164 | Nutritional Epidemiology | 3 |
|  | MPH-5165 | Nutrition Education and Communication | 3 |
| **Total Credit Hours** | **15** |

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| SEMESTER- 2Initial Code: 517**Major: 5****Occupational and Environment Health** | Three major course plus two elective courses | Total Credit Hours 15 |
| Sl. No. | Course Code | Course Title | Credit Hours |
| **Major Courses** |
| 1 | MPH-5171 | Occupational and Environment Health Epidemiology  | 3 |
| 2 | MPH-5172  | Occupational and Environment Health Toxicology | 3 |
| 3 | MPH-5173  | Disaster Management, Climate Change and its effect on Health | 3 |
| **Elective Courses** |
|  | MPH-5174 | Occupational and Environment Health and safety | 3 |
|  | MPH-5175 | Occupational and environmental policies, strategies, Regulation and occupational Environmental & Disease | 3 |
| **Total Credit Hours** | **15** |

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| SEMESTER- 2Initial Code: 518**Major: 6****Dental Public Health** | Three major course plus two elective courses(Major courses open when students are available for the students of dentistry) | Total Credit Hours 15 |
| Sl. No. | Course Code | Course Title | Credit Hours |
| **Major Courses** |
| 1 | MPH-5181 | Community Dentistry and Epidemiology of Dental Disease | 3 |
| 2 | MPH-5182  | Fundamentals of Dental Public Health Practice | 3 |
| 3 | MPH-5183  | Implementing strategy in Dental service | 3 |
| **Elective Courses** |
|  | MPH-5184 | Oral health and Diseases in population | 3 |
|  | MPH-5185 | Preventive Dentistry | 3 |
| **Total Credit Hours** | **15** |

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| SEMESTER- 3 | Course Title | Total Credit Hours 15 |
| Sl. No. | Course Code | Credit Hours |
| **Major Courses** |
| 1 | MPH-855 | Dissertation | 10 |
| 2 | MPH-500 | Computer learning/SPSS | 3 |
| 3 | MPH-888 | Practicum and Internship | 3 |
| **Total Credit Hours** | **16** |

Others elective Course which will be offered according to major area, which can be taken by the student choice

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| **Ongoing Existing Elective Courses** |
| **Sl. No.** | **Course Code** | **Course Title** | **Credit Hours** |
|  | MPH-500 | Computer Learning with Lab | 3 |
|  | MPH-501 | Introduction to Public Health | 3 |
|  | MPH-401 | Statistical Methods Public Health | 3 |
|  | MPH-402 | Policy Approach to Health Care | 3 |
|  | MPH-403 | Promotion and Advocacy of Health Care | 3 |
|  | MPH-404 | Public Health (Reproductive Health) | 3 |
|  | MPH-405 | Introduction to Demography | 3 |
|  | MPH-406 | Public Health and Epidemiology | 3 |
|  | MPH-407 | Gender Poverty and Health Equity | 3 |
|  | MPH-408 | Introduction to Health Economics | 3 |
|  | MPH-409 | Epidemiology-III | 3 |
|  | MPH-410 | Economic Evaluation of Health Care | 3 |
|  | MPH-411 | Medical Social Anthropology | 3 |
|  | MPH-412 | Environmental Health | 3 |
|  | MPH-413 | Principles of Microbiology, Parasitological and Medical Entomology | 3 |
|  | MPH-415 | Development and Globalization | 3 |
|  | MPH-416 | Clinical Epidemiology | 3 |
|  | MPH-417 | Epidemiology of Non Communicable Disease | 3 |
|  | MPH-418 | Preventive Dentistry | 3 |
|  | MPH-419 | Community Dentistry & Epidemiology of Dental Diseases | 3 |
|  | MPH-420 | Oral health and Diseases in population | 3 |
|  | MPH-421 | Fundamentals of Dental Public Health Practice | 3 |
|  | MPH-422 | Implementing strategy in Dental service | 3 |
|  | MPH-423 | Social & Behavioral Aspects of Public Health | 3 |
|  | MPH-424 | Ethics in Public Health Practice | 3 |
|  | MPH-425 | Health Management Information System | 3 |
|  | MPH-426 | Adolescent Health | 3 |
|  | MPH-427 | Maternal and Child Health | 3 |
|  | MPH-428 | Safe Motherhood Initiative and Component | 3 |
|  | MPH-429 | Health Service Administration | 3 |
|  | MPH-430 | Operational Management and Leadership Development | 3 |
|  | MPH-5164 | Nutritional epidemiology | 3 |
|  | MPH-5165 | Nutrition Education and Communication | 3 |

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| SEMESTER- 1**Core Courses** | Seven core courses | Total Credit Hours 21 |
| **Sl. No.** | **Course code** | **Course Title** | **Credit Hours** |
| 1 | MPH-502 | Biostatistics-I | 3 |
| 2 | MPH-503 | Research Methodology | 3 |
| 3 | MPH-504 | Public Health Information, Education and Communication  | 3 |
| 4 | MPH-513 | Epidemiology-I | 3 |
| 5 | MPH-514 | Reproductive & Child Health | 3 |
| 6 | MPH-517 | Occupational and Environment Health | 3 |
| 7 | MPH-515 | Hospital Management | 3 |
| **Total Credits** | **21** |

## **Course Profile**

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| Course Title: **Biostatistics-I** | Course Code: **MPH 502** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** Biostatistics I is a 3-credit introductory level biostatistics course designed for the health care professionals. This course will be dispensed using four modules which will cover topics on: data presentation techniques, describing data with numerical summary measures, probability and probability distributions, sampling distributions, statistical inferences from small and large samples, analysis of categorical data, simple correlation and simple linear regression analysis.

**Objectives:** Upon completion of the course, students will be able to

* Demonstrate awareness of the problems involved in data collection and management.
* Explain and apply basic bio statistical techniques using computing programs to analyze and interpret data from studies on health.
* Effectively communicate statistical results to persons without specialized statistical training.
* Participate in drawing conclusions from data and present them as reports/papers.
* Understand and critically evaluate scientific literature on issues of public health and medicine.
* Interact with statistician in statistical language quite comfortably.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn basic concepts of Biostatistics as well as different uses of measurement Scales | Basic concept, uses and measurement Scales | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know how to organize raw data. | Organizing Raw Data | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn how to present data. | Presentation of Data | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Measures of Central Tendency and its proper uses. | Measures of Central Tendency | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Measures of Dispersion and its proper uses. | Measures of Dispersion | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn Normal Distribution | The Normal Distribution | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn Standard error, Confidence Interval and p value | Standard error, Confidence Interval and p value | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn Chi Square Test | Chi Square Test | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about Hypothesis and its testing | Hypothesis testing: The Difference between Two Means | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn effective sampling techniques as well as will be able to determine the best sampling method for a given research problem | Sampling techniques | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Biostatistics: A Foundation for the Analysis in the Health Science, 10th edition, Wayne W. Daniel.
2. Medical Statistics:A Textbook for the Health Sciences (latest edition), David Machin, Michael J Campbell, Stephen J. Walters.

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| Course Title: **Research Methodology** | Course Code: **MPH 503** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** Research Methodology is a 3-credit course designed for health care professionals. Research in the context of public health very important as its provide all aspects of information necessary for planning and the effective implementation of a health system scientifically.

**Objectives:** On successful completion of this course, students will be able to:

• Understand basic concepts of research and its methodologies

• Identify appropriate research topics

• Select & define appropriate research problem and parameters

• Organize and conduct research in a more appropriate manner

• Write a research report and thesis

• Write a research proposal

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn basic concepts of research methodology. | Overview: Definition, Types of research, Steps in research | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know variables like independent, dependent intervening and Confounding variables | Variables: independent, dependent intervening and Confounding variables | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define the problem. | Selecting a research problem | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about the techniques of literature review. | Literature review: importance, techniques of literature review, referencing system | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Formulation of Hypothesis, Statement of objectives. | Formulation of Hypothesis, Statement of objectives | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn Sampling techniques. | Sampling techniques | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to calculate Sample size estimation. | Sample size estimation | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn Data-collection methods properly. | Data-collection methods | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about Data-collection instruments. | Data-collection instruments: Development and Pre-testing of a data collection instrument | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn Qualitative Research Methodology | Qualitative Research Methodology | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn how to analyze data. | Steps in data analysis | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn ethical issues in health research. | Ethical issues in health research | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to prepare protocol. | Protocol writing | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Methods and Techniques, C.R. Kothari, Publisher-New Age International, 2004.
2. A Step-by-Step Guide for Beginners, Ranjit Kumar, Sage Publishing, 2015.
3. Basic Concepts, 2nd edition, Sadiqa Tahera Khanam.
4. Designing and Conducting Health Systems Research Projects- Colien M. Varkevigser, Indra Pathmanathan and Ann Browntee. International Development Research Centre, Canada, 1991

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| Course Title: **Public Health Information Education and Communication (PHIEC)** | Course Code: **MPH 504** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** Public Health Information Education and Communication (PHIEC) is a 3-credit course designed for public health care professionals. Health communication is imperative in every aspect of health and well-being, including disease prevention, health promotion and quality of life. Intervention efforts to change behaviors are communicative acts and behavior change communication is the central objective of public health intervention.

**Objectives:** On successful completion of this course, students will be able to:

* Understand basic concepts of Public Health, public health problem and way to solve, health promotion
* To learn about behavior sciences, Health Communication,
* Identify appropriate BCC model and the effectiveness of BCC national practice,
* Know about BCC & SBCC practice in the field
* Ensure BCC tool appropriate for the Bangladesh cultural and religious Context
* Know about barriers to communication

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn basic concepts of Public health as well as will be able to define health and public health, core functions of public health, public health approach, Mission, vision of public health, essentiality of “IEC” in Public Health etc. | Introduction to Public Health Information Education and Communication: | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define Health education and its aims as well as will be familiar with different methods and materials of health education, can explain stages of Health Education, where & how health education can be happened | Methods of Health Education: | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be familiar with Importance of networks and community, social marketing, and Seven ‘C’s of health communication 7 C’s of communication and its use in public health | Importance of networks and community, social marketing, and Seven ‘C’s of health communication | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about physiological, psychological, the impact of stress, gender , dialect, jargon , and cultural barriers of communication and will be able to solve these problems | Barriers to Health Communication | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define peer and will be able to know about peer education, aims of peer education, benefits of peer education, criteria for selection of peer educators, support to peer educators, what to supervise in peer education, Aladin Framework etc.. | Peer Education | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Introduction to Behavioral science, concepts, components and its scope & utilization | Introduction to Behavioral science | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Behavior Change Communication , its necessity, process and steps of BCC, Conceptual Examples of BCC activities, Different names of BCC, What can BCC do, Hierarchy of Communication Effects, Introduction to Materials Development, Main Idea, Steps for Developing Materials | Behavior Change Communication | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn SBCC Definition, Core elements, Benefits, Steps for designing & Implementing SBCC programs, Key characteristics of High quality SBCC | Social Behavior Change Communication (SBCC) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn Health Promotion, WHO Principles of Health Promotion, Preventable health problems related to lifestyle, Health Sectors, Non-Health Sectors, Important areas for consideration in Health promotion. | Health Promotion | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define determinants of health, will be familiar with Policymaking, Social factors, Health services, Individual behavior, Biology and genetics, Determinants of Prevention | Determinants of Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define as well as will learn about Monitoring & Evaluation, Monitoring process, Monitoring and Planning, Different levels of Monitoring, Reasons for carrying out an Evaluation, Tools of Evaluation. Differences between Evaluation & Monitoring | Monitoring and evaluation of Bangladesh | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. The Handbook of Global Health Communication by Silvio R. Waisbord, Rafael Obregon, 2012
2. Health Behavior and Health Education: Theory, Research, and Practice by Karen Glanz, 1990
3. Public Health Communication: Evidence for Behavior Change Edited by Robert C. Hornik, 2002

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| Course Title: **Epidemiology-I** | Course Code: **MPH 513** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** Epidemiology 1 is a 3-credit course designed for public health care professionals. ‘Epidemiology’ is the basic science of public health. Often called “the cornerstone” of public health, epidemiology is the study of the distribution and determinants of diseases, health conditions, or events among populations and the application of that study to control health problems. Epidemiological methods are frequently used by public health professionals to determine relevant risk factors associated with disease occurrence. Knowledge of these risk factors is used to direct further research investigation and to implement disease control measures as well as to promote health.

## **Objectives:** On successful completion of this course, students will be able to:

* Understand the practice of epidemiology as it relates to real life
* Makes for a better appreciation of public health programs and policies.
* Explore public health issues like cardiovascular and infectious diseases
* Know about the advantages and limitations of epidemiologic research

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to understand the foundations of epidemiologic principles as applied to the study of diseases and physiologic conditions occurring in groups of population | Introduction to epidemiology including definitions, foundation, basic concepts, scopes, and applications of epidemiologic principles. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to comprehend the basic concepts and measures of disease occurrence in populations. | Understanding disease agents, host, environment, and importance of time, place and person and their interrelationships. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Develop appropriate epidemiological research methods and study designs to investigate particular research questions. | Epidemiological research methods and study designs | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to identify cause and effects and various relationship. | Concepts of cause and effects and their relationship. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to determine the rates and ratios of disease frequency and measures of association between risk factors and conditions. | Measures of disease frequency, rates, ratios, and vital statistics. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about the advantages and limitations of epidemiologic research study designs and their applications.Examine the sources of bias in epidemiologic research (confounding, selection bias, and measurement error) and the means to reduce bias. | Types of epidemiologic investigations, descriptive, analytical, cross sectional, cohort, and intervention (clinical trial). | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to identify the Epidemiologic investigations, outbreak study and surveillance. | Epidemiologic investigations, outbreak study, and surveillance | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to gain knowledge about epidemiology of infectious and non-communicable diseases. | Epidemiology of infectious and non-communicable diseases. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to understand the screening methods, concepts of reliability, validity, sensitivity, specificity, predictive value. | Screening methods, concepts of reliability, validity, sensitivity, specificity, predictive value. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to Define the advantages and limitations of epidemiologic research study designs and their applications. | Experimental design, field trial, quasi-experimental study. | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Text book of Community Medicine & Public Health (latest edition), Rashid, Kabir & Hyder
2. Basic Epidemiology: R. Beaglehole, R. Bonita, T. Kjellstrom
3. Epidemiology:An introduction: Kenneth J. Rothman
4. Epidemiology: Leon Gordis, 5th Edition, 2013, Saunders
5. A Dictionary of Epidemiology, Edited by Miquel Porta 5th Edition
6. Essentials of Epidemiology in Public Health. Ann Aschengrau, George R. Seage III, Third Edition

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| Course Title: **Reproductive and Child Health** | Course Code: **MPH 514** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** This course aims to provide an overview of reproductive and child health in its national and international context, and within a public health framework

**Objectives:**

* Sessions will include the topics of: concept of reproductive health, prevention of sexually transmitted infections, fertility regulation, reproductive health care services, child growth and development, child mortality, integrated management of childhood illness, under-nutrition in children and perinatal interventions. This course will also deal with strategies, policies and programs to improve child health in a developing country.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| develop comprehensive knowledge on reproductive health and the factors associated with reproductive health, | Introduction to Reproductive health: historical background, concept, components | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Understand the concept of family planning and fertility | Family planning and population control | Lecture, discussion, group work | Assignment, quiz, problem solving |
| identify the common reproductive infections and their prevention | Common reproductive tract infections(RTIs),sexually transmitted infections,(STIs)and HIV/AIDS | Lecture, discussion, group work | Assignment, quiz, problem solving |
| understand safe and unsafe abortions | InfertilityAbortions | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Evaluate the policies and programs of RH in developing countries | Reproductive health care services, policies and programs | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Understand the reason behind childhood mortality  | Childhood mortality and morbidity | Lecture, discussion, group work | Assignment, quiz, problem solving |
| identify with common childhood problems and their prevention | Common child health problems in Bangladesh | Lecture, discussion, group work | Assignment, quiz, problem solving |
| grow awareness about child rights and child abuse. | Child rights and child abuse | Lecture, discussion, group work | Assignment, quiz, problem solving |
| have knowledge on local customs influencing child survival | Child survival and child survival programs | Lecture, discussion, group work | Assignment, quiz, problem |
| Explore the strategies and projects taken up by GO and NGOs to improve child health in the country and relate it with international programs  | International and national strategies, policies and programs to improve child health in a developing country. | Lecture, discussion, group work | Assignment, quiz, problem solving |

**Recommended Books:**

1. Reproductive Health in Developing Countries: Expanding Dimensions, Building Solutions.National Research Council (US) Panel on Reproductive Health; Tsui AO, Wasserheit JN, Haaga JG, editors.Washington (DC): [National Academies Press (US)](http://www.nap.edu/); 1997

# Reproductive, Maternal, Newborn, and Child Health

1. Disease Control Priorities, Third Edition (Volume 2)Editors: Robert E Black, Ramanan Laxminarayan, Marleen Temmerman, and Neff Walker.
2. Washington (DC): The International Bank for Reconstruction and Development / The World Bank 2016 Apr 5.
3. ISBN-13: 978-1-4648-0348-2ISBN-13: 978-1-4648-0368-0

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| Course Title: **Hospital Management** | Course Code: **MPH 515** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** The course is designed to understand and apply resource management concepts (personnel, finance, and material resources) and the processes and strategies needed in specific hospital/health care sectors for efficient resource management, ensure patient-centered service, and managing problem solving issues. The course content covers modern change management, analyze existing hospital service policies of Bangladesh and enhance their alignment within the local and national context.

**Objectives:**

* The main objective of this course is to enable the students to become familiar with the existing health care system of Bangladesh identify roles and responsibilities of government and non-government stakeholders in Health Care Waste Management and guaranteeing effective, efficient and needs-oriented management in health care facilities.

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| **Learning Outcomes** | **Course Content** | **Teaching/ Learning Strategy** | **Assessment Strategy** |
| Understand concept of hospital and its background | Define Hospital as an institute,Background, public health concept and modern concept of hospital | Lecture, PPP, Google class, Assignment, Group work | Quiz test, Presentation question and answer Written examination |
| Update knowledge on function of hospital manager/ Administrators | Role of Civil surgeon, Upazila Health and Family Planning Officer | Lecture, PPP, Google class, Assignment, Group work | Quiz test, Presentation question and answer Written examination |
| Be aware about segregation of Medical Waste, storage and transportation of MW. | Segregation of Medical Waste and disposing of MW according to colour code.Implementation status of MWM Rule 2008Recycle, reduce and reuse of MW | Lecture, PPP, Google class, Assignment, Group work | Quiz test, Presentation question and answer Written examination |
| Be able to explain sources of nosocomial infection | Importance of hygiene in hospitalRole of health professional to prevent nosocomial infection | Lecture, PPP, Google class, Assignment, Group work | Question and answer Presentation |
| Be able to describe role of General Hospital | Indoor and outdoor servicesGeneral hospital as a teaching and research instituteKeep contact with local community | Lecture, PPP, Google class, Assignment, Group work | Question and answer, Presentation |

**Recommended Books:**

1. Bangladesh Medical Waste Management Rule 2008, under Environment Protect Act 1995. an ordinance to make special provision in regard to public health
2. Health Legislation in Bangladesh: A content Analysis and Scope for Improvement: April 2001. Prepared by: Abul Barkat, Mumd. Azizul Karim, Md. Motiur Rahman Shah, Md. Ibrahim Ali
3. Health sector Governance: Better Governance for Better Health. Principles and guidelines for Governance in Hospital. WHO 2014

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| Course Title: **Occupational & Environmental Health** | Course Code: **MPH 517** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** The course is designed to address elements of environment and environmental health, Indoor air pollution and health effect of IAP, Arsenic contamination of ground water and its health effect, Climate change, global warming and global environmental health. Occupational this course entails OHS situation and OHS strategies in Bangladesh and principals of OHS according to ILO. Common health problem of Garment Workers, Agriculture Workers and Lead Battery Workers are included in the course curriculum to aware the students on health problem of respective occupation.

**Objectives:**  On successful completion of this course, students will be able to:

* The objective of this course is to orient the students on safe working environment and prevention of work-related diseases as well as promotion of employee’s health. Provide information on good practice relating to premises and equipment
* The course also aims to define environment, as it relates to health, as “physical, chemical, and biological factors external to a person, and all the related behaviors” and  preventing or controlling disease, injury, and disability related to the interactions between people and their environment.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Understand Environment and environmental health | Environment, environmental health,Environmental burden of disease, Global burden of disease and National burden of disease.Define DALY and Calculation of DALY. | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Question answer, Assignment, Presentation Examination |
| Apprehend Weather, Climate, Green House Gases and its effect. | Weather and climate,Global warming, Green House Gases (GHG) and necessity of GHG effect for survival of organism on earth surface,Characterize the terms carbon sink, carbon trading, carbon foot print, have idea on Kayoto protocol. | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Question answer, Assignment, Presentation Examination |
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| Classify the terms Adaptation, Mitigation and Vulnerability, understand health effect of climate change. | Adaptation, Mitigation, Vulnerability, effect of climate change on human health, extreme weather events in terms of temperature variable and temperature variance. | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Question answer, Assignment, Presentation Examination |
| Describe Indoor Air and IAP, Health problem of IAP, identify causes of IAP and its prevention of IAP. | Indoor Air and Indoor Air Pollution,Health effect of IAP.Clean fuel and association between clean fuel and human development,Prevention of IAP and use of Improved cooking stoves. | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Question answer, Assignment, Presentation Examination |
| Define occupational health and make list of major occupational diseases in Bangladesh, | Occupational diseases in Bangladesh,Causes of occupational diseases,Occupational Health and Safety (OHS) situation in selected occupationsUse of PPE | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Question answer, Assignment, Presentation Examination |
| Be familiar with principles of OHS and ILO guideline | Occupational Health and Safety (OHS) Principles and ILO Guideline for preventive and protective measure at workplace. | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Question answer, Assignment, Presentation Examination |

**Recommended Books:**

1. Occupational and Environmental Health: Recognizing and Preventing Disease & Injury, edited by Barry S. Levy, David H. Wegman,7th Edition, 2018

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| Course Title: **Applied Epidemiology** | Course Code: **MPH 5132** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** Introduction to Public Health is a 3-credit course, a basic course in epidemiology is directed at public health professionals from different countries including developed and developing countries. Its content includes presentations and discussions of epidemiologic principles, basic statistical analysis, public health surveillance, field investigations, surveys and sampling, and discussions of the epidemiologic aspects of current major public health problems in international health. Included a small group discussion of epidemiologic case exercises based on field investigations. Participants are encouraged to give a short presentation reviewing some epidemiologic data from their own experienced data for their research.

**Objectives:** On successful completion of this course, students will be able to:

* Demonstrate an understanding of the key concepts in the discipline of epidemiology;
* Apply epidemiological principles to surveillance and disease control within animal and human populations;
* Communicate effectively with researchers from different disciplinary backgrounds;
* Select an appropriate study design when confronted with an epidemiological investigation;
* Question and develop a detailed study protocol capable of answering a given research question;
* analyze and interpret epidemiological data derived from cross-sectional, case-control and follow-up studies ;propose appropriate solutions and mitigatory measures to control epidemic conditions

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to gain fundamental knowledge on Applied Epidemiology, epidemiologic approach, exemplary activities of Applied epidemiology. | Introduction to Applied Epidemiology and Major contributors of Epidemiology | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to comprehend the basic concepts of source of data, primary research methods and techniques, justification of epidemic survey, interview techniques, developing a epidemic questionnaire etc. | Identify key sources of data for epidemiologic purposes. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about how to different type of epidemic study (Cross-sectional, Case controlCohort and Intervention study) in practical problem solving. | Epidemiological study methods | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Know about how to conduct surveillance and how infectious disease can be controlled by surveillance **a**pplying basic principles of epidemiology. | Infectious Disease Surveillance and Outbreak Investigation | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about different type of risks and can calculate the risk measurement and which risk is very important. | Concept of risk how could be measure risk | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know how to measure epidemiological outcomes (calculation), and Interpret epidemiologic results in a causal framework. | Methods of measuring epidemiological outcomes | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about how to formulate a research a question in epidemiologic research also can identify different epidemiologic problems of importance. | Formulate a research question. Identify major epidemiologic problems of importance. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about standard format of epidemic report writing, critiquing of epidemic report and writing report. | Epidemiologic information in a scientific report. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn global traditional healing practices about Contagion theory, Supernatural theory, Personal behavior theory and Miasma theory, The Germ Theory, The Life Style Theory, The Environmental Theory, The Multi Causal Theory, etc. | Recognize potential ethical and legal issues in epidemiologic studies. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to at the end of this chapter, the students will be able understand and write different parts scientific writing. | Research Methodology, Scientific writing | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. The Development of Modern Epidemiology, Walter W. Holland,Jorn Olsen,& Charles Du V.Florey (2007.1st edition); Oxford University Press,
2. Center for Disease Control , Principles of Epidemiology: An Introduction to Applied Epidemiology and Biostatistics (2nd edition)
3. Basic Epidemiology published by World Health Organization R Bonita R Beaglehole T Kjellström (2nd edition)

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| Course Title: **Advanced Biostatistics** | Course Code: **MPH 5133** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** Advanced Biostatistics is a 3-credit course designed for public health care professionals. There are a number of teaching and learning modes in this course. The course lectures provide advanced information and concepts and application of statistics in health research. Due to the limited timeframe, not everything will be covered in lectures. Lectures are intended to supplement material covered in the readings. The tutorials and interactive learning sessions are designed to develop and clarify topics covered in the readings and lectures. Use of the discussion board will be encouraged and will support learning around the course materials. Assignments provide an opportunity to undertake exploratory and in-depth analysis of some key concepts introduced in the course.

## **Objectives:** On successful completion of this course, students will be able to:

* On successful completion of this course, students will be able to:
* Apply advanced statistical concepts commonly used in Health Sciences;
* Use advanced analytical techniques to generate results;
* Interpret results of commonly used statistical analyses in written summaries; and
* Demonstrate statistical reasoning skills correctly and contextually.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn advance stages biostatistics will be able to compare more than two means, Analysis of Variance. | Comparing more than two means , Analysis of Variance: one-way; two-way | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Exploring multivariate relationship, Multiple correlation and Regression | Exploring multivariate relationship, Multiple correlation and Regression | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to determine true association- controlling confounder effect | Determining true association- controlling confounder effect | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be familiar with sample size and its influence. | Influence of sample size, | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know adjustment for level of significance | Adjustment for level of significance | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about distribution-free methods | Distribution-free methods | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know Common fallacies and misuse of Statistics | Common fallacies and misuse of Statistics | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Reporting Statistical Findings | Reporting Statistical Findings | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about Factorial ANCOVA | Factorial ANCOVA | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn Multinomial Logistic Regression, and Survival Analysis | Multinomial Logistic Regression, Survival Analysis | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be familiar with Statistical Techniques of Data Analyses used in Public Health | Statistical Techniques of Data Analyses used in Public Health | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Advanced Biostatistics: K C Bhuiyan (latest edition)
2. Principles of Biostatistics: Marcello Pagano and Kimberlee Gauvereav
3. Biostatistics: A foundation for analysis in Health Sciences, Wayne W. Daniel

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| Course Title: **Geriatrics** | Course Code: **MPH 431** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** The world is moving towards transition of population pyramid and number of elderly people are increasing. So, people are now living longer and enjoying longer active life. The incidence of chronic disease is high among the elderly people. Therefore proper attention should be given to the well-being of the elderly population particularly for long-term care, physical functioning, housing and social network. Ageing is an integral part of life. Healthcare and social work has the most obvious link to working with older people. Geriatric care and the care of older adults hasn't been seen as exciting for higher studies. As our population ages, there's an increase in demand for the skills to deal with illnesses that affect older adults, such as dementia. This subject is designed to aware the students on social care and the social care system of elderly people.

**Objectives:**

* The main objective of this course is to develop professionals capable of understanding and responding to the current social priorities of the complex needs of an increasingly elderly population

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Be able to explain projected population .Importance of gerontology | Transition of population pyramidWHO projected increased number of elderly peopleNeed of gerontologist in coming decades | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Quiz test, Assignment PresentationExamination |
| Get clear idea on UN convention and rights of elderly people. | Aging demography, social gerontology, Aging EpidemiologyRight of elderly people according to UN conventionSenior citizenship rule 2013 of Bangladesh governmentCare delivery for elderly people | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Quiz test, Assignment PresentationExamination |
| Get clear concept on physiology of aging, diagnosis & management of acute and chronic illness among elderly people | Physiology, Pathophysiology and biology of aging peopleFundamentals of acute and chronic illnessDiagnosis and management of acute and chronic illness in home settings. | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Quiz test, Assignment PresentationExamination |
| Be able to identify aging related common diseases, explain loss 3 senses among elderly people. | Aging associated common diseasesDementia, risk factors of dementia, prevention of dementiaIs aging a disease? Your opinionLoss of 3 senses among elderly people | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Quiz test, Assignment PresentationExamination |
| Be able to differentiate adult & geriatric medicine | Difference between adult and geriatric medicineActive aging, pillars of active agingCorrelation between Functional capacity and age. | Lecture PPP, Group discussion, Assignment, Question answer, Google class | Quiz test, Assignment PresentationExamination |
| Get understanding on theories of aging | Theories of aging | Do | Quiz test, Assignment PresentationExamination |
| Be able to describe elderly care in developed and developing countries | Elderly care, gender discrepanciesElderly care in developed and developing countriesCost of elderly care in developed and developing countries | Do | Quiz test, Assignment PresentationExamination |

**Recommended Books:**

1. *Frailty and the Geriatric Gianta: BY* Dr. John Puxty, puxtyj@providencecare.ca
2. World Population data sheet. Population Reference Bureau 2010
3. Teaching Geriatrics in Medical Education II. Department of Ageing and Life course: WHO

References: Global Survey on Geriatrics in Medical Education. WHO/NMH/NPH/ALC/02.7

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| Course Title: **Global Health** | Course Code: **MPH 429** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:**  Global Health has taken a new meaning in the last decade. It has grown from a disciple that represented efforts of industrialized nations to help poor countries deal with their health problems to that which now deals with a new range of health threats that go beyond national boundaries. In considering this paradigm shift, a new terminology, “global health” which more accurately reflects the notion of shared health problems and solutions, has emerged to replace the term, “international health.” Indeed, issues of global health are interconnected with the most demanding socio-economic, physical, and biological stresses of our time. These issues lie at the nexus of development and require mechanisms that support the best of interdisciplinary and multidisciplinary thought, as well as cultural competencies. With increased globalization, inequity, and poverty, global health has become a subject of heightened interest among scholars and practitioners of public health in high, middle, and low income countries.

**Objectives:** On successful completion of this course, students will be able to:

* Define the major global health related challenges, programs and policies.
* Introduce with world’s vast diversity of the determinants of health and diseases.
* Analyze current and global health priorities including emerging infectious diseases, poverty, conflict and emergencies, health inequality, health system reforms
* Know about major global initiatives for disease prevention and health promotions.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to know the definition of global health ,the global context of public health, key concepts in relation to global health, etc. | Introduction to Global Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Know about health system, health system framework, health financing, functions of health financing system, unproductive health budgeting, source of health care. | Health systems and financing in a global perspective | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn the definition of gender and sex, gender issues on health, global feature of gender based violence and violence against women, impact of violence, cost of violence. | Gender & health(Violence and injuries) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about global status of maternal and child mortality and morbidity, MDG, safe mother hood components and initiatives. etc. | Maternal and child health globally | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about global burden of malnutrition, death for malnutrition, cause of malnutrition, strategies to improve the nutritional status etc. | Nutrition and global health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about HIV/ AIDS as global public health issues, effects of HIV/AIDS, affecting countries, response of WHO and other international organization to fight HIV/AIDS etc. | The global health impact of HIV/AIDS | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to gain mainly the knowledge about global funding and the role of different international organizations in addressing globalhealth problems etc. | International cooperation for health and well being | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Birn, A.E., Pillay, Y. & Holtz, T. (2009). *Textbook of international health: Global health in*

*a dynamic world, 3rd Ed.* Oxford: Oxford University Press.

1. Easterly, W.R. & Birdsall, N. (2008). *Reinventing foreign aid*. Massachusetts: The MIT Press.
2. Easterly, W.R. (2007). *The white man's burden: Why the West's efforts to aid the rest*

*have done so much ill and so little good.* New York: Penguin Press.

1. Ehiri, J.E. (ed.) (2009). *Maternal and child health: Global challenges, programs, and*

*policies.* New York: Springer-Verlag.

1. Frost, L.J. & Reich, M.R. (2008). *Access: How do good health technologies get to poor* *people in poor countries?* Harvard Center for Population and Development Studies.Cambridge, Massachusetts: Harvard University Press.

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| Course Title: **Human Resource Management** | Course Code: **MPH 5153** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** ‘Human resources management (HRM)’ is a 3-credit course designed for public health care professionals. HRM is concerned with managing people effectively in the workplace. This function is carried out by most managers in organizations. However, it is the duty of a specialist human resource manager to provide advice, guidance, assistance and support on employment matters to all those who have direct responsibility for the management of people in the organization. The main function of a human resource department is to ensure the recruitment, selection, training, development and retention of staff necessary for the efficient and effective management of the organization. The purpose of this course is to emphasize these skills and knowledge in human resource management.

##  **Objectives:** Upon successful completion of this course, a student will be able to:

* Understand the concept of human resource management;
* Understand importance of HRM and its function;
* Have exposure to the view of HRM from the perception of both management and subordinate employees;
* Identify critical areas of training and development, staffing and strategy;
* Learn safety welfare and employees health service;
* Describe human resource management in health care.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to gain fundamental knowledge on Human Resource Management. | Introduction to Human Resource Management | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to comprehend the different Functions of Human Resource Management. | Functions of Human Resource Management | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know Challenges For Today’s Human Resource. | Challenges For Today’s Human Resource Managers | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about Electronic Health Records (EHRs) | Electronic Health Records (EHRs) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Know about Principles of Health Administration. | Principles of Health Administration | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about importance and steps of Planning in HRM. | Planning in HRM | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to understand Role towards patients, organizations & community. | Role towards patients, organizations & community | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about leadership in Healthcare. | Leadership in Healthcare | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Health care Market, reasons behind its failure & important factors associated with its success. | Marketing Healthcare Management | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Human Resource Metrics | Human Resource Metrics | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about Fundamentals of Budgeting and Financial Management | Fundamentals of Budgeting and Financial Management | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Managing Human Resources in Healthcare Organizations, Leiyu Shi, 2007
2. Basic Concepts of Health Care Human Resource Management By Niles, 2013

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| Course Title: **Health Care System Management & Administration** | Course Code: **MPH 5151** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** The students will learn historical, political, social and cultural events of health care system and health care trends. They will utilize health care management theory to improve health care management and assume mid-level leadership roles to facilitate advocacy initiative and ethical care. The themes of Health Care Systems Management course reflects disciplinary foundations and is responsive to contemporary developments of Health Care System and projected to student’s demand. This course will prepare the student for employment in Healthcare Management, Healthcare Quality Improvement and Health Care Coordination.

**Objectives:**

* The objective of this course is to prepare the students to understand trends of health care services, manage resources for healthcare systems effectively and improve overall quality of healthcare systems and services.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Understand basic concept of Management and Administration | Define Management and AdministrationFunction Management and Administrator,Difference between Management and Administration | Lecture, PPP, Question and answer | Quiz, Assignment |
| Be able explain theories of Healthcare Management | Theories of Healthcare Management |  |  |
| Be aware about BD Environment Protection Act 2010 and National Health Protection Act 2014 | Environment Protection Act 2010 and its relation with MWM Rule 2008.National Health Protection Act 2014Responsibilities of stakeholders. | Group work, Lecture, Hand out, Assignment | Presentation of Assignment, Quiz test, question answer |
| Know National Health care system and health policy of BD describe role of primary, secondary and tertiary level health care service provider**.** | Health service situation in Bangladesh and National Health Policy 2011Categorization of Health managers of government institutes and their responsibilities.HNPSP approach, Community Clinic and Health For All (HFA) | Hand out, lecture, Group work, Assignment | Presentation of Assignment Quiz test, question answer |
| Be able to describe organogram of DGHS, DGFP and DGNM | Organogram of Directorate General of Health servicesOrganogram of Directorate General of Family PlanningOrganogram of Directorate General of Nursing and Midwifery. | Lecture, PPP, Group work, Hand out, Assignment, discussion | Presentation of AssignmentQuiz test, question answer |
| Be able to narrate background of DGNW. | Goal and objective of nursing servicesDimension of nursing practicesPre-liberation and post-liberation stages of nursing servicesFormation Directorate General of Nursing and Midwifery services. | Lecture, PPP, Group work, Hand out, Assignment, discussion | Presentation of AssignmentQuiz test, question answer |
| Be able to identify responsibilities of teaching institutes and professional organizations of health sector. | Responsibilities of Medical Colleges, Nursing Colleges, Medical Assistants Training Institutes, NIPSOM, BSMMU,Responsibilities of professional organizations e.g. BMA, BMRC, IEDCR, IPH, etc.Role of director Medical Education of the DGHS | Lecture, PPP, Group work, Hand out, Assignment, discussion | Presentation of AssignmentQuiz test, question answer |
| Be able to earn knowledge on basic concept of Medical Information system in Bangladesh | Medical Information System in BangladeshDigitalization of Medical Information System in Bangladesh | Lecture, PPP, Group work, Hand out, Assignment, discussion | Presentation of AssignmentQuiz test, question answer |

**Recommended Books:**

1. Health Management Information System: By Jack Smith
2. Essential of Health Care Finance: BY Willium O. Cleverley
3. Understanding Health Policy: By Thomas S. Bodenheimer and Kevin Grumbach
4. Hospital and Health Care Administration: Appraisal and Referral Treatise: By Gupta
5. National Health Policy 2011,Bangladesh Environmental Protection Act 1995 updated in 2010.

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| Course Title: **Health Economics & Financing** | Course Code: **MPH 5154** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** ‘Health Economics and Financing’ is a 3-credit course designed for public health care professionals. Globally ‘Health Economics’ is a rising field and is a vital aspect of public policy in developed and developing countries. This course will cover a number of topics including basic economic concepts important for the study in health economics, why health is different from other good, health care financing in Bangladesh and other countries, health insurance and importance of health for development.

## **Objectives:** Upon successful completion of this course, a student will be able to:

## Understand and apply the key concepts of economics within the context of the health system;

## Describe major types of economic principles as well as its application in decision-making process;

## Understand and describe the main features of the Bangladesh health system and health care financing;

## Write concise reports on health economic issues

## Discuss new and emerging topics in the field of health economics

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to gain fundamental knowledge on Basic concepts of health economics. | Introduction: Basic concepts of health economics | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to comprehend the different types of economy and economic systems. | Macro and Microeconomics & Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know Concepts in Quality of Health Care, Costs and Quality. | Concepts in Quality of Health Care : Costs and Quality | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about to identify the various types of data required to describe the occurrence of a disease in time, place and person; the sources of data on health and health related statistics globally and Bangladesh. | Measuring Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Know about Principles of Health Economics | Principles of Health Economics | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about Supply and Demand for Health Care. | Demand for Health Care | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to understand key terms of Health Care Financing. | Health Care Financing | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about Healthcare Financing system in Bangladesh. | Healthcare Financing in Bangladesh | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Health care Market, reasons behind its failure & important factors associated with its success.. | Health care Market & Insurance | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about positive and negative externalities. | Externalities | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn health insurance, social insurance, and its barriers to implement in Bangladesh. | Health Insurance | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Economic Analysis in Health Care by Stephen Morris, Nancy Devlin, David Parkin., 2007
2. Health Economics by Jay Bhattacharya, Timothy Hyde, Peter Tu, 2013
3. Introduction to Health Economics Edited by Lorna Guinness and Virginia Wiseman, 2nd Edition, 2011

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| Course Title: **Social and Behavioral Aspects of Public Health** | Course Code: **MPH 423** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:**  Social and Behavioral Aspects of Public Health is a 3-credit course, designed to help students develop basic literacy regarding social concepts and processes that influence health status and public health interventions. The course also hopes to help students develop insight into populations with whom they have worked in the past or will work in the future, and to develop one kind of effective writing tool (the narrative) for communicating about psychosocial issues in public health. These overall aims are approached through lectures, discussion, readings, work shopping, individual compositions, and group discussion of student writings.

**Objectives:**  On successful completion of this course, students will be able to:

* To familiarize students with views on key concepts that forms a basis for literacy in the social and behavioral aspects of public health: culture, race/ethnicity, gender, poverty/disparities, factors related to behavior change, community, organizational climate, and family.
* To familiarize students with the concept of a narrative as a therapeutic, policy, and investigative tool.
* To help develop empathy for and a collaborative stance toward populations with whom one will work in the field of public health.
* To promote interest in further study of the social and behavioral determinants of health.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn basic concepts of Public health as well as will be able to define social determinants of health, culture, social view of health and common health problems in Bangladesh etc… | Concept of behavioral Sciences and its Application in Public Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define factors affecting health, key determinants of health, impact of culture on health | Cultural Perspective of health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know ecology and ecosystem, ecological imbalance, prevention of ecological imbalance, ecological concepts of health, concept of disease & illness etc. | Ecology and Meaning of health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be familiar with the concepts of gender and sex, gender equality, also able to know how gender influence on the health of men, gender based violence, violence against women and women, common type of violence against women, impact of violence. | Gender and health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about the concept of family, the family & health, family structure and effect of health, family dynamics and health, factors affect family health, effects of family on health. | Role of Families to participate in health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define race and ethnicity, and how the information of race and ethnicity used in public health implication etc. | Race and Ethnicity in public health implications | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about social support, social support and health, effect of social support on health, social capital, social capital and health etc. | Poverty, Social Support, and Social Capital how contribute to health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about spirituality, religion , how religion makes difference in health status, nurses role in spirituality, ethical and professional boundaries for the nurses, spiritual assessment etc. | Role of spirituality in public health and/or medical care. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about the concept of behavior, behavioral change, behavioral change for health, behavioral change communication (BCC), key elements of behavioral changes, factors influencing behavioral change, communication strategy, ecological model health behavior change, health promotion model (HBM), behavior change strategy , key challenges for behavior change etc. | Change within Systems factors within medical practices that influence the process of change. | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. *Health Behavior and Health Education: Theory, Research, and Practice.* Glanz, K., Rimer, B. K., & Viswanath, K. (2008) *4th Edition. John Wiley & Sons, Inc. San Francisco, CA.*
2. Social Psychology of Health. Psychology, Salovey, P., & Rothman, A.J. (Eds.). Press: New York, NY
3. Social Epidemiology. Berkman, L.F., & Kawachi, I. (Eds.). Oxford University Press: Cary, NC
4. Health Promotion & Planning: An educational and ecological approach. Green, L.W., & Kreuter, M.W 3rd Edition. Mayfield Publishing Company: Mountain View, CA, 2007

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| Course Title: **Introduction to Public Health** | Course Code: **MPH 501** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** Introduction to Public Health is a 3-credit course designed for public health care professionals. ‘Introduction to Public Health’ course provides an overview of public health core functions and essential services: like key public health terms, determinants of health and their effects on population health. It includes fundamental concepts of public health such as the historical context of old versus new public health, healthy public policy, health protection, surveillance and monitoring of communicable and non-communicable diseases, managing domains for public health action, etc.

## **Objectives:** On successful completion of this course, students will be able to:

* Define and describe the history, role, concept of public health and its relationship with disease, its actions, settings and intervention types at a local and global level.
* Develop basic knowledge on the New Public Health and Healthy Public Policy and how it works in policy making as an ecological framework.
* Develop and manage action plans to determine solutions to reduce the incidence of communicable and non-communicable disease, and its social and economic impacts on a population.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to gain fundamental knowledge on Health, Public Health, Public Health Mission, Core Functions, Public health approach, Six Components Necessary for Effective Public Health Program Implementation, etc. | Introduction: Health & Public Health, Global Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to comprehend the basic concepts of Public Health Key Terms like clinical care, epidemic, endemic, pandemic, health outcome, intervention, determinants, etc. | Public Health Key Terms. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about history and historical markers in the development of Public Health. | History of Public Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Know about public health workforce, as well as about essential services of Public health. | Public Health Activities, & Essential Services | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about Healthy Public Policy, policy instruments, basis of policy cycle, etc. | Public Health Policy | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Major Discipline in Public Health. | Major Discipline in Public Health. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about why culture is important in health, cultural competence and quality health care. | Cultural competency & Quality Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about global health and the Effects of Globalization on health | Global Health, Globalization and Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to gain knowledge about key concepts and terms of epidemiology, Calculating rates, etc. | Epidemiology: Key concepts and terms | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn global traditional healing practices about Contagion theory, Supernatural theory, Personal behavior theory and Miasma theory, The Germ Theory, The Life Style Theory, The Environmental Theory, The Multi Causal Theory, etc. | Traditional healing practices: Global & Bangladesh Context | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to at the end of this chapter, the students will be able to define family and family health as well as describe the reasons why family health important in Public Health. | Family Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Define Hygiene.Describe the importance of hygiene to the individual and community | Personal Hygiene | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to differentiate between development and economic growth and describe the relationship between the health sector and development and identify and define relationships existing between individual and community health and various socio-economic conditions. | Health and Development | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know global status of mental health and its Bangladesh context. | Mental Health | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Introduction to Public Health by Elizabeth Parker and Mary Louise Fleming, 2015
2. Introduction to Public Health by Karl Schneider, 1999

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| Course Title: **Food Safety & Hygiene** | Course Code: **MPH 5161** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** This short course is aimed at providing basic food safety and hygiene information and advice for departments handling food for human consumption. The ultimate aim is to prevent food poisoning. This course vigorously discuss about food safety hazards, taking temperature refrigeration, chilling & cold holding of food, and cooking.

**Objectives:**  On successful completion of this course, students will be able to:

* Provide information on good personal food hygiene practice
* Provide information on good practice relating to premises and equipment
* Provide information on good operational food safety practice
* Provide information on the basics of Hazard Analysis and Critical Control Point (HACCP) and risk assessment
* Provide information on the basic legal requirements relating to food safety

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn basic concepts of Food Safety, Food Hygiene, Principles of Food Hygiene, Food Hazards, Personal Hygiene, Cleaning & Sanitizing etc. | Introduction to Hygiene | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define Micronutrient Malnutrition and its consequences and preventions, Food-based Strategies. | Micronutrient Malnutrition | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Food-borne diseases and its preventions, Cause of food-borne illness, Food borne infections vs intoxication, Keys to safer food | Food-borne diseases | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be familiar with Food Handling related issues like Personal Hygiene, Cleaning, Principals of safe food storage, Food Premises & Equipment | Food Handling | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Concepts of Food Anthropology, Cultural perceptions in foods. | Food Anthropology | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Cleaning and Waste Management: Cleaning, Waste, Pest Control and HACCP etc.. | Cleaning and Waste Management | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Food Control related issues like Delivery, Storage, Temperature Control, Allergens | Food Control | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Quality Management System: International organization for standardization (ISO) applied in food quality and control (ISO 9001,9004,22000 and ISO26000), BRC global Standard, GMP and HACCP (Hazard Analysis and Critical Control Point), Implementing HACCP in food processing. | Quality Management System | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Food Hygiene and Sanitation, [Sunetra Roday](https://www.amazon.in/Sunetra-Roday/e/B002P8YQEQ/ref%3Ddp_byline_cont_book_1) (2017)publishers – Amazon.
2. Ethical traceability and Communicating Food, Coff, C., Korthals, M. and Barling, D. (2008).

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| Course Title: **Community Nutrition**  | Course Code: **MPH 5162** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** Community nutrition h is a 3-credit course, designed to Community nutrition is a discipline that strives to improve the nutrition and health of individuals and groups within communities. Nutrition programming can occur in many community settings, including worksites, health centers, clinics, hospitals, schools, churches, recreational and sports centers, elderly feeding sites and homes. Community nutrition encompasses any nutrition program whose target is the community, whether funded by a government (federal, state, city) or sponsored by a private group (as in a worksite or hospital weight management program). This course explores communities and their composition and influences on nutrition habits and nutrition status. Community, state, and national food and nutrition programs and services will be discussed with emphasis on program goals, target audiences and policy formulation. This course also explores program development via assessing needs, developing objectives, implementing interventions and evaluating programs.

**Objectives:** On successful completion of this course, students will be able to:

* Identify characteristics that define the community nutritionist's professional roles and responsibilities, including advocacy.
* Demonstrate knowledge and skills related to current and emerging public health nutrition and community nutrition through evidence-based practice.
* Effectively assess a target population to determine their nutrition education needs and apply knowledge of the role of environment, food and lifestyle choices to develop a nutrition education session/class which will affect behavior change and enhance wellness in a target population.
* Implement and evaluate a nutrition education session/class.
* Demonstrate an understanding of cultural competence in the development of educational materials and describe the influence of culture on beliefs, values and behaviors.
* Describe the policy making process and explain how laws and regulations are developed.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn basic concepts of Historical perspectives: Concepts and importance of nutrition education.  | Nutrition Education | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know the group exercise on the preparation of nutrition education materials.  | Field Testing and Nutrition Education Materials | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know Mass media, importance of practical demonstrations and role place in nutrition education. Preparation and demonstration of education materials.  | Dissemination of Nutrition Knowledge | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be familiar with the Messages in Nutrition education: Audio and visual aids in nutrition education. Communication strategies in nutrition education. | Nutrition Awareness Building | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define Growth monitoring, Interpretation of monitoring data. Advantages and limitations of growth monitoring etc. | Identification of target Population | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Maintaining hygienic condition in daily life sanitation to ensure availability of pure drinking water. etc. | Environment protection & human development | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Champion VL, Skinner CS. The Health Belief Model. *Health Behavior and Health*

 *Education: Theory, Research, and Practice* 4thed. San Francisco, CA: Jossey-Bass. 2008; 45-65.

1. Kristal AR, Glanz K, Curry SJ, Patterson RE.How can stages of change be

best used in dietary interventions? *J Am Diet Assoc*.1999;99:679-684.

1. Story M, Kaphingst KM, Robinson-O’Brien R, Glanz K.

Creating healthy food and eating environments: Policy and environmental approaches. *Annu Rev Public Health* 2008;29:253-272.

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| Course Title: **Applied Nutrition**  | Course Code: **MPH 5163** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** Introduction to Public Health is a 3-credit course. After completing this course, the student should be able to discuss metabolic functions and needs of the human body, have a basic knowledge of drugs and nutrition, provide information on feed economics, and understand basic diet therapy.

## **Objectives:** On successful completion of this course, students will be able to:

* provide an advanced course in Nutrition applying it to the human body and relating nutrition to disease states;
* Understand metabolic functions and needs of the cell and body;
* Provide knowledge of food economics quality to increase purchasing power;
* To give a basic understanding of the use of drug therapy and the interaction possibilities with foods; and
* Understand the basics of diet therapy.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to know about Insufficient food production and Unequal distribution of food. | A etiology of Nutritional disorders | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Anthropometric : Measuring weight, height and other measurements, Skinfold Thickness measurements; Biochemical: Blood constituents, Urinary creatinine; Clinical assessment: Signs & symptoms of PEM and micronutrient deficiencies; Dietary assessment : Individual, household and national level.etc.  | Parameters used for the measurement of growth and development | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Historical background, etiology, diagnosis, management, treatment and prevention. Present status of PEM in Bangladesh and rest of world. IDD-Etiology, historical background, etiology, physiology sign and symptoms, diagnosis consequence, management, treatment and prevention of IDD. Anemia- Definition, historical background, etiology, physiology sign and symptoms, diagnosis consequence, management, treatment and prevention of anemia etc.  | Nutritional Deficiency disorders | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Know about Importance of breast feeding, scientific evidence on the benefits of breast feeding, complication in the complementary feeding practices, weaning food, colostrum-composition, and importance of new born food. etc.  | State of breast feeding and complementary feeding | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about the Definition, classification, feeding procedure, complications, advantages of tube feeding, supplementary feeding, intravenous feeding and composition of tube, supplementary and intravenous feeds etc. | Specialized feeding methods | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Definition, classification, principles, basic requirement and application of fortification and enrichment.  | Food fortification | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about Cereal and cereals products, vegetables, fruits and their products. Meat, fish, egg and novel protein, milk and milk products etc.  | Food composition table | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Ellie Whitney & Sharon R***.* Understanding Nutrition (12th Edition)** Rolfes Thomson Wadsworth (2011)
2. Pamela G. Kittler & Kathryn P. Sucher, *Food and Culture (5th Edition)* Thomson Wadsworth (2008) ISBN: 0-495-11541-X

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| Course Title: **Ethics in Public Health Practice** | Course Code: **MPH 424** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** Ethics in Public Health Practice is a 3-credit course designed for health care professionals. Ethics Understanding of Ethics is very important in public health decision making. In addition, it is essential to know nuances of ethical issues in conducting public health research involving humans.

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**Objectives:** On successful completion of this course, students will be able to:

• Understand basic concepts of ethics, bioethics and research ethics.

• Apply ethical principles in conducting research with human subjects.

• Develop Informed Consent Form for conduction of Public Health Research.

• Organize and conduct research following ethical standard

• Follow ethical principles in making decision in public health practice.

• Perform duties as a member of ethics review committee

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn basic concepts of Bioethics | Concept of Bioethics. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know four basic principles of Bioethics | Basic Principles of Ethics. | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define the problem. | Conflict of Interest | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to understand issues related to Public Health Ethics | Understanding Public Health Ethics | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about risk & benefit in public health practice | Risk & Benefit | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn ethical issues in conducting health research involving human subjects | Ethical Issues in Health Research | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know importance of confidentiality and inducement in health research | Confidentiality & Inducement | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn different international guidelines on research ethics | Guidelines on Research Ethics | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know how to develop informed consent Form | Informed Consent Form | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn issues related to clinical research | Ethics in Clinical Research | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to understand the terms and relationship between them | Cultural Pluralism, Religion and Bioethics | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn formation and functions of Ethics Review Committee | Functional Modalities of Ethics Review Committee | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to publish papers following ethical standard | Publication Ethics: Authorship, Scientific Misconduct | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Principles of Biomedical Ethics. Tom L. Beauchamp and James F. Childress, 7th Edition, 2012. Oxford University Press.
2. Public health ethics and practice by Stephen Peckham, 2009

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| Course Title: **Safe Motherhood Initiative and Component** | Course Code: **MPH 5142** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:**  Safe Motherhood Initiative and Component is a 3-credit course designed to provide an overview of the status of maternal health in a developing country, identify the causes of maternal morbidity and mortality. It incorporates the concept and components of safe motherhood. The course describes the problems during the antenatal intra-natal and post-natal period and measures to prevent these. It will also discuss the role of emergency obstetric care in averting maternal mortality and morbidity. The course also deals with pre-natal care and its importance in preventing neonatal and infant deaths. Social and ethical issues that impact maternal and pre-natal are also considered. The course also includes the various maternal and childhood programs undertaken in Bangladesh and the interventions in MCH care.

**Objectives:** On successful completion of this course, students will be able to:

* Define the leading health problems of women, infants and children in the developing world and Bangladesh.
* Assess the factors affecting the health of women, infant and children. This includes identifying determinants and risk factors influencing the health of women, infants and children.
* Describe and critique the components MCH/FP programs that are designed to improve the health of women and children. This includes designing specific interventions on the topics of safe motherhood.
* Analyze a specific MCH problem, develop a plan for implementation and evaluation and write a report of the program.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to the status and concept of maternal mortality and morbidity, cause of maternal morbidity, finding the MMR, IMR, CMR and NMR etc. | Maternal Morbidity and Mortality | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know the concept of reproductive health, importance of public health, safe motherhood, ensuring safe motherhood, effective strategies to achieve safe motherhood, focus antenatal care, pregnancy spacing minimizing delays etc. | Safe Motherhood Initiative (Concept & Component) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know the definition of antenatal care, goal of antenatal care, importance of antenatal care, models of antenatal care provisions, health interventions during ANC, factors affecting mothers utilizations of antenatal care, components of antenatal care, calculating EDD and BMI, health teaching during pregnancy etc. | Antenatal Care during Pregnancy | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Know about the definition of intra-natal care, stages of labor, management of the labor, domiciliary delivery, referral system of Bangladesh, essential newborn care etc. | Intra-natal Care | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about the concept of postnatal period, postnatal care, management of normal and abnormal puerperium, definition, risk factors and management of puerperal sepsis, routine PNC, health & nutrition education etc. | Post-natal Care | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about the back ground of Emergency Obstetric Care (EmOC): social and medical issues, current approach of EmOC, assumptions and key functions of EmOC, process indicators of EmOC etc. | Emergency Obstetric Care (EOC) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about complication of pregnancy, trimester wise management of the complications, medical conditions of pregnancy. | Management of Complication of Pregnancy | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to gain knowledge about reproductive health in pregnant women and its consequences in developing countries, what services are needed for a healthy mother and children, safe motherhood service for mortality reduction, EOC services, safe motherhood : historical lessons for implementation, safe motherhood: policies for quality programs, indicators measuring process, challenges of maternal mortality and morbidity etc. | Current issue of Safe Motherhood and Parental Care | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about promotion of breast feeding, advantage for both bonding, benefit of breast feeding: children, maternal, societal, physiology of lactation, Bangladesh breast feeding status of Bangladesh, etc. | Promotion of Breast Feeding | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. WHO Report Bangladesh (Women & Children Health)
2. Bangladesh Demographic Health Survey (BDHS) 2014
3. Guide line or peri-natal care (7th edition) 2012; published by American Academy of Pediatrics
4. Maternal, Neonatal and Child Health Programs in Bangladesh
5. Review of good practices and lessons learned (First edition) 2007, published by BRAC, Dhaka, Bangladesh

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| Course Title: **Adolescent Health** | Course Code: **MPH 5143** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale**: The purpose of this course is to prepare health professionals in health sector and related disciplines who will be able to plan, organize and manage various activities in the field of adolescent health

**Objectives:**

* The course covers adolescent growth and development, adolescent sexuality. The course specially deals with the adolescent sexual and reproductive health issues, components and care of ASRH and the situation in developed and developing countries perspective. It will also explore the magnitude and consequences of adolescent pregnancy. This course will also analyze the emotional, behavioral and mental health problems of the adolescents. The different policies, programs and strategies to improve adolescent health will be also dealt here.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| The student will analyze the various risk and protective factors within the context of family, peer and society in adolescence | Adolescent Health: introduction and Ecological Model | Lecture, discussion, group work | Assignment, quiz, problem solving |
| describe the biological and psychological developmental processes that occur during adolescence and puberty | Adolescent development: Pubertal,cognitive.social and neurological | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Understand the importance of family, resilient factors in family and parenting  | Adolescence in a Social Context | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Know the various risk behaviors of adolescent period and interventions to reduce them | Risk behaviors of adolescent | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Understand the serious consequences of use of drugs , alcohol and smoking role of family and society in prevention of substance use | Substance abuse in adolescents | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Analyze the socio cultural and economic factors influencing adolescent sexuality and vulnerability of females in sexual and reproductive health problems | ASRH situation: global, developed and developing country’s perspective | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Explore the web of factors responsible for early marriage and pregnancy in adolescents and the key interventions | Consequences and magnitude of adolescent pregnancy | Lecture, discussion, group work | Assignment, quiz, problem solving |
| To identify the various behavioral and mental health challenges faced by the adolescents and interventions | Emotional, behavioral and mental health challenges in | Lecture, discussion, group work | Assignment, quiz, problem solving |
| To assess adolescent criminal behavior and various remedies | Adolescent delinquency | Lecture, discussion, group work | Assignment, quiz, problem solving |

**Recommended Books:**

# International Handbook on Adolescent Health and Development

The Public Health Response

Editors: Cherry, Andrew L., Baltag, Valentina, Dillon, Mary E. (Eds.)

# Adolescent Health Understanding and Preventing Risk Behaviors:

Ralph J. DiClemente (Editor), John S. Santelli (Editor), Richard A. Crosby (Editor)

ISBN: 978-0-470-17676-4

Jun 2009, Jossey-Bass

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| Course Title: **Gender and Population** | Course Code: **MPH 5141** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** ‘Gender & Population’ is a 3-credit course designed for public health care professionals. This course will introduce students to gender as a theoretical concept and a category of analysis in public health-that is, the way gender has contributed to deferentially structuring women and men’s experiences of health. The course aims to gender’s role in the construction of public health in diverse societies as well as to understand basic measures used in population and public health. In public health it is imperative to address issues related to health of population and gender, gender equity, gender equality, and its interacting determinants of well-being and disease.

## **Objectives:** On successful completion of this course, students will be able to:

* Understand the social and cultural factors and its influence on Gender and health.
* Learn about the interfaces among gender, class, race/ethnicity and sexuality will also be emphasized.
* Learn about introduction to definitions used in population and public health, basic theories, and
* Know about conceptual frameworks linking major determinants of health with a range of individual and population health outcomes.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to gain fundamental knowledge on Gender and Population and Its Consequences for Health. | Introduction to Gender & Population (Concept of Sex & Gender) Gender and Its Consequences for Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to comprehend the basic concepts of gender gap and how to close the gender gap. | Closing the Global Gender Gap | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know basic concepts of gender equity and equality. | Concept of Gender Equity and EqualityGender Equality: Gender Quiz | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about Global public health and gender theory as well as its necessity of integration. | Global public health and gender theory: The need for integration | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Know about Gender and Governance in Bangladesh | Gender and Governance in Bangladesh | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about Gender Development. | Gender Development (GAD) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to understand terminology used in population health, epidemiology, and public health, including major types of study design and their advantages and disadvantagesand basic measures used in population and public health. | Human Population | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about Population Growth and its affect on Gender Inequality.. | Population Growth Affect Gender Inequality | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about the Gender Based Violence status of the Country, causes, consequences and ways to protect it and Socioeconomic impact of GBW/VAW . | Gender Based Violence (GBV) , Socioeconomic impact of GBW/VAW | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know Gender Analysis Matrix.knowledge about Perspectives in Medical Anthropology. | Gender Analysis Matrix (GAM) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn The importance of gender analysis in research. | The importance of gender analysis in research for health systems strengthening | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Population Health by David B. Nash, Raymond J. Fabius, Janice L. Clarke, Alexis Skoufalos
2. Handbook on Gender and Health, Edited by Jasmine Gideon, 2016
3. Gender, Health and Healthcare: Women’s and Men’s Experience of Health and Working in Healthcare Roles By Jacqueline H. Watts, 2015

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| Course Title: **Maternal and Child Nutrition** | Course Code: **MPH 5144** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** This course provides an overview of current issues concerning the nutrition of mother and children and the effectiveness of nutrition interventions.

**Objectives:**

* The objective of the course is understand nutrition and how our bodies utilize them. This course also deals with the consequences of under and over nutrition. In a developing country, women are at high risk of under nutrition, especially during pregnancy and lactation. Learners need to know the cycle of under nutrition in women and how it affects pregnancy and lactation as well the health of the newborn. Learners also need to know the various aspects of child growth and development and identify the common nutritional problems of childhood. The importance of breastfeeding and its comparison with formula feeding will be discussed in details. Childhood obesity which is a growing concern among the affluent segment of the society will also be dealt with.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| The students will be able to learn about various nutrients, food guide pyramid and RDA | Introduction to nutrition | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Assess the appropriate methods methods of nutritional status assessment particularly in pregnancy | Assessment of nutritional status of mother in pregnancy | Lecture, discussion, group work | Assignment, quiz, problem solving |
| To understand the importance of preconception nutrition and role of folic acid during preconceptional period  | Nutrition care of mother | Lecture, discussion, group work | Assignment, quiz, problem solving |
| To assess dietary requirement in each stage of pregnancy  | Nutrition in pregnancy & lactation | Lecture, discussion, group work | Assignment, quiz, problem solving |
| To discuss the various nutritional problems in pregnancy with special reference to developing countries, food taboos and interventions | Common nutritional problems in pregnancy and lactation with interventions | Lecture, discussion, group work | Assignment, quiz, problem solving |
| To explore the benefits of breast feeding to the child, mother and society and disadvantages of formula feeding | Breast feeding | Lecture, discussion, group work | Assignment, quiz, problem solving |
| To discuss the various ways to assess nutritional status of children and detect malnutrition | Assessment of nutritional status of children | Lecture, discussion, group work | Assignment, quiz, problem solving |
| To describe weaning, importance of healthy weaning food and nutritional requirement in each stage of childhood  | Nutritional care of children | Lecture, discussion, group work | Assignment, quiz, problem solving |
| Discuss in details about protein energy malnutrition and various deficiency diseases and interventions | Nutritional deficiency in children with interventions | Lecture, discussion, group work | Assignment, quiz, problem |
| To explore the causes and prevention of childhood obesity | Childhood obesity | Lecture, discussion, group work | Assignment, quiz, problem |
| To address the special nutritional need of the specially gifted children  | Nutritional requirement of physically and mentally challenged children | Lecture, discussion, group work | Assignment, quiz, problem solving |
| To explore the various programs of childhood nutrition at national level | Childhood nutrition intervention programs | Lecture, discussion, group work | Assignment, quiz, problem solving |

**Recommended books**

1. Maternal, infant, & child nutrition: a resource book for health professionals, [Sarah M. Hinton](https://www.google.com.bd/search?tbo=p&tbm=bks&q=inauthor:%22Sarah+M.+Hinton%22&source=gbs_metadata_r&cad=6), Health Sciences, the University of California Consortium, 1981,

# Maternal and Child Nutrition: The First 1,000 Days,Jatinder Bhatia, Zulfiqar Ahmed Bhutta, Satish C. Kalhan,Karger Medical and Scientific Publishers, 2013

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| Course Title: **Introduction to Demography** | Course Code: **MPH 405** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** Introduction to Demography is a 3-credit course designed for public health care professionals. Primarily ‘demography’ is a key component of public health. As public health is concerned with the promotion of health among populations, it becomes obvious that having a solid seize of the demographics of a specific population is a huge advantages and vital step in planning public health interventions.

## **Objectives:** On successful completion of this course, students will be able to:

* Identify appropriate sources of data,
* Perform basic demographic analyses using various techniques,
* Ensure their comparability across populations,
* Produce population projections,
* Interpret the information gathered by the different demographic methods.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to understand and conceptualize demography as well as | Define demography, demographic focus | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to explore demographic process like Marriage, migration, fertility social mobility, mortality | Marriage, migration, fertility social mobility, mortality | Lecture, discussions, group works | Assignment, quiz, problem solving |
| At the end of this lesson students will be able to-Learn about historical Shift of birth and death rates from high to low levels in a population and will be able toexplore decline of mortality usually precedes the decline in facility, and will be able to identify population rapid population growth during the t.. period. | Illustrate demographic cycle | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to identify basic sources of demographic data, categories of demographic data, explore methods of collection. | Explain demographic data and mention the sources of these data | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to relate to a date intermediate to two censuses and take the results of these censuses into account as well as will relate to a past or current date following a census and take that census (earlier census) into account, but not the later census, estimate, explain justification of population estimation. | Describe population estimation with the methods and calculation using formula | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about demographic applications in research and planning | Demographic applications in research and planning | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to identify the importance of fertility, calculate fertility by using different techniques.Will be able to interpret all types of satisfy. | Define fertility and calculate fertilityStatistics using formula | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to gain knowledge on mid-year population, growth of population, population density, population pyramid.to enumerate total calculate all types measure, and will be capable to interpret all these types of measurement | Enumerate and Calculate mid – year population, growth of population, population density,Population pyramid | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Demography and Population Studies (latest edition): O S Shrivastava
2. The Methods and Maternals of Demography (latest edition), Edward G. Stockwell, Academic Press, New York

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| Course Title: **Medical Social Anthropology** | Course Code: **MPH 411** | Credit Hours: **3.0** | Total Marks: **100** |

## **Rationale:** ‘Medical Social Anthropology’ is a 3-credit course designed for public health care professionals. Introduction to Medical Social Anthropology, Culture, Gender & Health, Medical Pluralism, Pluralism in Bangladesh, Medical Sociology & Social Epidemiology, Social determinants of Health Inequality, Equity, Social Pathology, Social Medicine, Anthropological Methods & Perspectives in Medical Anthropology, Theoretical Approaches in Medical Anthropology, Biosocial Approaches, Anthropology's Contribution to Public Health Policy Development.

## **Objectives:** On successful completion of this course, students will be able to:

* Understand the key concepts in medical and social anthropology.
* Learn about the original critical research that builds the knowledge base of medical anthropology
* Explore both traditional healing and modern medical technologies.
* Prepare medical and other health professional students for the complexities of clinical practice and for effective scientific engagement in an increasingly diverse and internationally linked world.
* Understand the social factors associated with various diseases and its prevention through social medicine

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to gain fundamental knowledge on sociology, and medical anthropology and its 28Health Prospect 2012, Vol. 11Role of Medical Sociology and Anthropology inPublic Health and Health System Development. | Introduction to Medical Social Anthropology | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to comprehend the basic concepts of Culture, Gender & Health, social and cultural perceptions of sickness etc. | Culture, Gender & Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know Medical Pluralism, Pluralism in Bangladesh. | Medical Pluralism | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know traditional healing and modern medical technologies and Traditional healing practices in rural and urban Bangladesh. | Traditional healing and modern medical technologies, Traditional healing practices in rural Bangladesh | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to-Know about Medical Sociology, Social Epidemiology, differences between epidemiology and social epidemiology, etc. | Medical Sociology & Social Epidemiology | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about social determinants of health, health equity, equality, inequality. . | Social determinants of Health | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Social Pathology in Public Health. | Social Pathology | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about Social Medicine, its history, importance. | Social Medicine | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to gain fundamental knowledge on qualitative research as well as various methods of conducting anthropological research, and its importance in public health. | Methods of conducting anthropological research | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to gain knowledge about Perspectives in Medical Anthropology. | Perspectives in Medical Anthropology | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn, Theoretical Approaches in Medical Anthropology, | Theoretical Approaches in Medical Anthropology, | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn about Anthropology's Contribution to Public Health Policy Development | Anthropology's Contribution to Public Health Policy Development | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Biosocial Approaches | Biosocial Approaches | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know criminology, the impact of social capital on crime and health. | Social Capital, Criminology | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Medical Anthropology By Robert Pool; Wenzel Geissler, 2005
2. Anthropology and Public Health : Bridging differences in culture and society By Robert A. Hahn & Marcia C. Inhorn
3. Cultural Diversity in Health and Illness: Rachel E. Spector, 2012

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| Course Title: **Field Epidemiology** | Course Code: **MPH 5135** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** Public Health Information Education and Communication (PHIEC) is a 3-credit course designed for public health care professionals. This introductory course will cover the purpose and implementation of the steps in an outbreak investigation, and corresponding public health roles and responsibilities. It not only will help learn outbreak investigation methods; it provides technical skills to use the Centers for Disease Control and prevention’s Epi Info relational database software as a data management tool during outbreak investigations.

**Objectives:** On successful completion of this course, students will be able to:

* Be familiar with data sources and methods for detecting an outbreak
* Recognize key formatting and content considerations for designing Questionnaires
* Recognize sound interviewing techniques for questionnaire administration
* Know when to use different study designs (case control, cohort, cross-sectional)
* Understand the methods and role of the environmental health Investigation within an outbreak investigation

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn basic concepts of Definition of Field EpidemiologyCore activities of Epidemiology | Concepts and core activities of Field Epidemiology | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define Data Sources Data Collection methods (Survey, FGD, IDI) Data Collection toolsData management | Data Sources, Collection Methods and Tools | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about how to different type of epidemic study (Cross-sectional, Case controlCohort and Intervention study) in practical problem solving. | Different Types of Study Designs | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to understand Outbreak detection, Defining Hypothesis, Generating Hypothesis, Testing Hypothesis | Outbreak Detection, Generating and Testing Hypotheses | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Definition and importance of Epidemic/OutbreakPreparedness of epidemic investigation, Steps of outbreak investigation | Investigation of an Epidemic/Outbreak | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define peer and will be able to know about, interpretation of results, reparation of ReportPublication of Reportetc. | Formatting and Content consiaderations for outbreak investigation report and response | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Definition of surveillance, Core activities of surveillance, Steps of surveillance, How to conduct surveillance, Evaluation of surveillance etc. | Epidemiological surveillance systems | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Basic Epidemiology by WHO – 2nd Edition
2. Essential Epidemiology by Penny Webb – 2nd Edition
3. Principles of Epidemiology in Public Health Practice By CDC, USA—3rd Editions

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| Course Title: **Computer Learning/SPSS with Lab** | Course Code: **MPH 500** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** The course is designed to help students develop basic literacy regarding social Computer operations and practical applications of basic computer operational knowledge, internet browsing and SPSS data management. The course also hopes to help students develop a skill so that they themselves can perform their thesis work. These overall aims will be approached through lectures, readings, visualization, individual compositions, and group discussion of student

**Objectives:**  On successful completion of this course, students will be able to:

* Know the overall theoretical knowledge on basic computer operations applicable in the office.
* Operate the computer in basic office operational level;
* Perform basic knowledge in operation SPSS data entry, formatting and analysis of statistical data.

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Able to learn basic concepts and definition of Computer, Characteristics of Computers, computer organization, Brief History, software, Types of software**,** Common Menu Bar Features, Steps in using key boards and mouse**,** Some useful keyboard shortcuts in Windows**,** Functions of CPU, Memory and Hard Drive | Theoretical operation(Basic computer-1) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to define computer memory, types of computer memory, definition of computer memory, types of computer memory, function of application software, windows XP elements, options available in start menu, file management in window, computer security, virus in computer and how to protect computer etc. | Theoretical operation(Basic computer- 2 ) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know Components of Computers, Computer turn-on, turn-off, desktop orientationKeyboard and Mouse, Connecting keyboard, mouse, monitor and printer to CPU and checking power supply, Using Mouse and key boards; Using right Button of the Mouse and Moving Icons on the screen, Status Bar, Menu Bar, Viewing of File, Folders and Directories, Creating and Renaming of files and folders, Creating Short cuts, Software Setup. model, Pre-requisites of effective communication, Communication media, etc. | Lab-1 ( Knowing computer)Overview/ Introduction | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to operate Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus; Printing of word document. | Lab-2 (Understanding Word Processing) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to know about Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation / handouts | Lab-3 (Making Small Presentation) | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to perform Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration; Instant Messaging etc. | Lab-4 (Communications and collaboration*)* | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Use of SPSS, Creating data entry format, data entry, data cleaning, data analysis | Lab-5 (Communications and collaboration*)* | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. A Guide to Microsoft Office 2000 Professional; Bruce Presley, Beth Brown, Elaine Malfas and Vickie Grassman (2000); Publishers-Lawrenceville
2. Computer Networks and Internets with Internet Applications (4th Edition), Douglas Comer, Ralph Droms (2003), Publishers-Prentice Hall Press
3. Home Office Computing Survival Guide, Tech Republic (2002) Publishers-CNET

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| Course Title: **Nutrition Education and Communication** | Course Code: **MPH 5165** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** This course aims at introducing students to the theories and skills necessary to design and implement nutrition education programs. It shows how nutrition education can facilitate dietary changes in a group of people. It introduces students to nutrition education basics, definition, history, aims field and challenges. The course introduces students to the science of nutrition, its application in health education process. The students will learn about nutrition education definition, rationale, impact, role of health educator and nutrition services, and nutritional population problems. Also, the need of Nutrition Education programs in KSA will be explored. Specific educational needs of patients' population with specific health conditions will be emphasized. Also it discusses nutrition education methods, approaches in nutrition counseling and nutrition education challenges.

## **Objectives:** On successful completion of this course, students will be able to:

* Identify basic elements of communication to influence behavior
* Describe nutrition education and health education processes
* Compare between the role of a health educator and nutrition education specialist
* Identify the behavioral theories, and how it's important to build theoretical educational program
* Explain how a health educator can help a client with nutritional problems related to certain health conditions
* List steps a client can take to implement nutrition education
* List all nutrition educational needs of different patients populations
* List the need, rationale and the meaning for Nutrition education.
* Describe nutrition education and health education processes.
* Explain theories of nutrition education

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| **Learning Outcomes** | **Course Content** | **Teaching Learning Strategy** | **Assessment Strategy** |
| Will be able to know the definition of Concepts, definition and determinants of community health and nutrition education, factors influencing the good health and nutrition, history, needand effectiveness. Role of nutrition educators etc. | Introduction to nutrition education | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Social interaction, theory of reasoned action, and other developed by workers in the field. e.g.Tana level, Hilly areas. | Social interaction | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Nutritional awareness building and communication strategies, promotional strategy for a commodity/ food product etc.  | Nutritional awareness and promotional activities |  |  |
| Will be able to-Know about how to use nutrition education materials. | Nutrition Education materials | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to learn the Theories of human behavior and health choices. Health belief model, Theory of planned behavior –motivation and stages of change.   | Human behavior and health choice | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Will be able to know about Social Cognitive Theory /Trantheoreticalmodel and stages of change/ Diffusion of Innovations Theory | Social Cognitive Theory | Lecture, discussions, group works | Assignment, quiz, problem solving |
| Able to learn about Needs assessment-educational assessment Assessing patients and family needs, coping techniquesetc.  | Needs assessment | Lecture, discussions, group works | Assignment, quiz, problem solving |

**Recommended Books:**

1. Judiann McNulty Challenges and issues in nutrition education (2013) Published Food & Agricultural Organization (FAO) Available at: [http://www.fao.org/ docrep/017/ i3234e/ i3234e.pdf](http://www.fao.org/%20docrep/017/%20i3234e/%20i3234e.pdf)

2. [Betsy Holli](https://www.amazon.com/s/ref%3Ddp_byline_sr_book_1?ie=UTF8&text=Betsy+Holli&search-alias=books&field-author=Betsy+Holli&sort=relevancerank), Judith A Beto (2018) Nutrition Counseling and Education Skills for Dietetics Professionals (SixthEdition) Published by Amazon

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| Course Title: **Nutritional Epidemiology** | Course Code: **MPH 5164** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** This course is designed for the students of MPH Program who are interested in conducting or better interpreting epidemiological studies relating diet and nutritional status to disease and health. There is an increasing awareness that various aspects of diet and nutrition may be important contributing factors in chronic diseases. There are many important problems, however, in the implementation and interpretation of these studies. The purpose of this course is to examine methodologies used in nutritional epidemiological studies, and to review the current state of knowledge regarding diet and other nutritional indicators as etiologic factors in disease.

**Objectives:** At the conclusion of the course, students would be able to-

* Describe the utility and limitations of different epidemiological study designs for research in nutritional epidemiology;
* Describe the strengths and limitations of different methods of measuring diet and identify when specific dietary methods may be most appropriate;
* Explain the statistical methods commonly used in nutritional epidemiology to analyze diet-disease relationship;
* Describe the different methods for assessment of nutritional status with their strengths and limitations;
* Describe the current state of epidemiological evidence for relationships of diet to the development of selected diseases and
* Describe strategies that can be used to evaluate or adjust for other dietary and lifestyle factors that may explain or influence relationships of diet and disease.

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| **Learning outcomes** | **Course content** | **Teaching learning strategy** | **Assessment strategy** |
| Upon completion of this class, students will be able to understand-What are some of the historical development in nutritional epidemiology research?What is the definition and Importance of nutritional epidemiology?What are the goals,Advantages and disadvantages of nutritional epidemiology?What types of study designs are used in nutritional epidemiological research? | Introduction to Nutritional Epidemiology:Historical development of nutritional epidemiologyDefinition, Importance andGoals of nutritional epidemiologyAdvantages and disadvantages of nutritional epidemiologyEpidemiological study designs used in nutritional epidemiology research | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| Upon completion of this class, students will be able to understand-Identification of chemicals comprising foodsWhat are Food composition data sources and computation systems?How Epidemiological approach to diet is applied?  | Food and Nutrients:Chemicals those comprise foodsDiet versus foodFood composition data sources and computation systemsEpidemiological approach to diet | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| Upon completion of this class, students will be able to understand-What is nutritional status and nutritional assessment?What are the purposes of nutritional status?What are the different methods for assessing nutritional status?  | Assessment of nutritional status:Definition of nutritional status and nutritional assessmentPurpose of nutritional assessment Different methods for assessing nutritional status (Direct methods- Anthropometric methods, biochemical/laboratory methods, clinical methods and dietary evaluation methods. Indirect methods- vital health statistics, ecological variables and economic factors) | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| After completion of the class, the students will be able to understand-What is dietary assessment?Purpose of dietary assessmentPrinciples of dietary assessmentWhat are the food consumption methods at different levels ( FFQ, 24 hours recall method etc.)  | Dietary assessment of food consumption: Definition of dietary assessment?Purpose of dietary assessmentPrinciples of dietary assessmentFood consumption methods at different levels ( FFQ, 24 hours recall method etc.) | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| After completion of the class, the students will be able to understand-Why is validity an issue when measuring energy intake?What factors affect validity of reported energy intake?How is validity of energy intake assessed? What is the effect of poor validity of energy intake in epidemiological studies? | Energy intake validation and dietary under and over reporting: Why validity is an issue in measuring energy intake?Factors affected validity of reported energy intakeAssessment of energy intake by validityEffect of poor validity of energy intake in epidemiological studies | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| After completion of the class, the students will be able to understand-What is physical activity? Distinguish between physical activity, exercise and physical fitnessWhat are the current physical activity guidelines ?How is physical activity measured?What are the sources of measurement error in studies of physical activity? | Measurement of physical activity in nutritional epidemiology:Definition of physical activityDifferences between physical activity, exercise and physical fitnessCurrent physical activity guidelines Measurement of physical activitySources of measurement error in studies of physical activity | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |

**Recommended Books:**

1. Willett W. Nutritional Epidemiology (2nd edition). New York: Oxford University Press, 1998
2. Hu F. Obesity Epidemiology. New York: Oxford University Press, 2008
3. Margetts BM, Nelson M. Design Concepts in Nutritional Epidemiology. New York: Oxford University Press,1997

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| Course Title: **Epidemiology-II** | Course Code: **MPH 5131** | Credit Hours: **3.0** | Total Marks: **100** |

**Rationale:** The course will expand the student's understanding of causality and threats to validity in Epidemiological research. The focus will be on the assessment and control of bias, including Selection bias, information bias, and confounding. The concept of effect modification

(Interaction) will be appraised. Students will learn how to assess effect modification and control of confounding in a variety of study designs including case-control and cohort studies.

**Objectives:** After full participation in this course, students will be able to:

* Overview of epidemiological study designs
* Cross sectional study design
* Case-control study design
* Prospective study design
* Clinical trial design
* Standardization for rates
* Bias in epidemiological studies
* Questionnaire development and data collection
* Concept of causality
* Protocol development
* Ethical issues in research
* Critical review and scientific written
* Outbreak investigation
* Define epidemiological problem analysis and epidemiological approach to solve the problem
* Epidemiological surveillance of health related states and Eventsin population
* Epidemiology of health related states and events in population
* Epidemiological methods of experimental trail,. Quasi experimental design

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| **Learning outcomes** | **Course content** | **Teaching learning strategy** | **Assessment strategy** |
| Upon completion of this class, students will be able to understand-What are some of the historical development in nutritional epidemiology research?What is the definition and Importance of nutritional epidemiology?What are the goals,Advantages and disadvantages of nutritional epidemiology?What types of study designs are used in nutritional epidemiological research? | Introduction to Nutritional Epidemiology:Historical development of nutritional epidemiologyDefinition, Importance andGoals of nutritional epidemiologyAdvantages and disadvantages of nutritional epidemiologyEpidemiological study designs used in nutritional epidemiology research | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| Upon completion of this class, students will be able to understand-Identification of chemicals comprising foodsWhat are Food composition data sources and computation systems?How Epidemiological approach to diet is applied?  | Food and Nutrients:Chemicals those comprise foodsDiet versus foodFood composition data sources and computation systemsEpidemiological approach to diet | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| Upon completion of this class, students will be able to understand-What is nutritional status and nutritional assessment?What are the purposes of nutritional status?What are the different methods for assessing nutritional status?  | Assessment of nutritional status:Definition of nutritional status and nutritional assessmentPurpose of nutritional assessment Different methods for assessing nutritional status (Direct methods- Anthropometric methods, biochemical/laboratory methods, clinical methods and dietary evaluation methods. Indirect methods- vital health statistics, ecological variables and economic factors) | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| After completion of the class, the students will be able to understand-What is dietary assessment?Purpose of dietary assessmentPrinciples of dietary assessmentWhat are the food consumption methods at different levels ( FFQ, 24 hours recall method etc.)  | Dietary assessment of food consumption: Definition of dietary assessment?Purpose of dietary assessmentPrinciples of dietary assessmentFood consumption methods at different levels ( FFQ, 24 hours recall method etc.) | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| After completion of the class, the students will be able to understand-Why is validity an issue when measuring energy intake?What factors affect validity of reported energy intake?How is validity of energy intake assessed? What is the effect of poor validity of energy intake in epidemiological studies? | Energy intake validation and dietary under and over reporting: Why validity is an issue in measuring energy intake?Factors affected validity of reported energy intakeAssessment of energy intake by validityEffect of poor validity of energy intake in epidemiological studies | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |
| After completion of the class, the students will be able to understand-What is physical activity? Distinguish between physical activity, exercise and physical fitnessWhat are the current physical activity guidelines ?How is physical activity measured?What are the sources of measurement error in studies of physical activity? | Measurement of physical activity in nutritional epidemiology:Definition of physical activityDifferences between physical activity, exercise and physical fitnessCurrent physical activity guidelines Measurement of physical activitySources of measurement error in studies of physical activity | LectureGroup discussionTutorial /Practical | Written examinationPresentation (Individual/group)Assignment |

**Recommended Books:**

1. Willett W. Nutritional Epidemiology (2nd edition). New York: Oxford University Press, 1998
2. Hu F. Obesity Epidemiology. New York: Oxford University Press, 2008
3. Margetts BM, Nelson M. Design Concepts in Nutritional Epidemiology. New York: Oxford University Press,1997