Angels' Signature School of Science and Technology (ASUSTECH)
www.asustech.ng

SYLLABUS

Master of Public Health

(MPH)

&

Master of Science Epidemiology

(M.Sc Epidemiology)

PROGRAMMES

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1. Background Note:

The Interdisciplinary School of Health Sciences in Angels' Signature School of Science and Technology (ASUSTECH) is one of the pioneering public health teaching programmes in the country. The School offers three courses, Diploma in Community Health Extension Workers (CHEW), Master of Public Health (MPH) and M.Sc. Epidemiology. These courses aim at orienting students with theoretical principles and practical dimensions of Public health. The courses deliberate on escalating importance of public healthfrom local to global level, from field to laboratory levels.

2. Academic programmes

2.1. M.P.H. Programme

Public health is an interdisciplinary study in the faculty of life sciences and focuses mainly on training human resources in the science of public health, with a strong understanding ofthe determinants of health and the public health system in the country, the community context, and the influences like globalization, urbanization, global and national policies anda strong foundation in research methodology. The other mandate of the course is to undertake relevant research to analyze complex public health issues and work collaboratively with government, communities, academics, etc. for promoting health and preventing diseases/ disease conditions and provide evidenced based advice for healthy living.

2.2 M.Sc. in Epidemiology

The M.Sc. Health Sciences course focuses exclusively on the field of public health biology. The course trains students in basic concept of public health and epidemiology, followed by laboratory knowledge and skills from the fields of microbiology, biochemistry, immunology and nutrition as applied to health and disease, and their applications in disease surveillance, outbreak investigations, identifying transmission patterns, risk factors and biomarkers, early detection of pathogens etc. The course exposes students to the advanced methods and techniques that can be helpful in translating knowledge gained in the laboratory to field. The course includes a strong grounding in the ethical, legal, regulatory and social aspects of new health technologies entering the private and public health sectors of the country.

3. Competencies and skills

The teaching programme educates students to integrate the knowledge and skills of public health into careers in a variety of fields. Through interdisciplinary approach and integrating classroom learning, community exposure, academic research, the school prepares students for leadership positions, developing evidence-based solutions for critical health problems. Students develop competencies as public health professionals to actively engage communities to promote and protect health and, reduce health disparities among disadvantaged, underserved and vulnerable populations.

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4. Eligibility

The courses are open to students with an undergraduate degree in life sciences (including microbiology, zoology, biotechnology, biochemistry, etc), clinical sciences, Physiotherapy, Nursing, Pharmacology, Nutritional Sciences. The courses are also open to the students from Social sciences (such as Anthropology, Psychology, Medical Sociology) with exposure and experience of work in the field of public health.

Number of seats for MPH: 15

Number of Seats for M.Sc. Epidemiology: 15

Admission: is only through common entrance test (CET) for students within Nigeria and meeting the minimum qualification. All admissions are guided by the rules and regulations of ASUSTECH.

5. Credits

The department implements choice based credit system. Students need minimum 90 credits in order to obtain the Master's degree. The 80 credits can be accumulated by completing core courses and elective courses of the choice of the student. Completing allcore courses is mandatory for obtaining a degree.

6. Teaching and evaluation

MPH and M.Sc. Epidemiology are offered as two-year full-time courses. The two-yearcourse is further organized into four teaching Semesters. Each Semester consists of 15 weeks of teaching. There is atleast one assessment for every 4 hours of teaching.

Assessment may be in the form of tutorial, test, presentation, term papers, assignments etc. Fifty percent assessment is done during term so that there is continuous evaluation of the student, remaining 50% assessment is done at the term end examination (held around April-May and Oct-November respectively).

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MPH programme

Background

The purpose of the course is to provide knowledge on determinants of health, distribution of diseases and disorders and factors responsible for such health and disease pattern in the population. The science of public health is interdisciplinary in nature and integrates with life sciences, social and behavioural sciences, statistical sciences. The MPH programme of the College was initiated for creating human resource with skills to improve public health, who have ability to develop and implement innovative programmes for health promotion and disease prevention and those who can contribute to the policy making.

Goal and Objectives of the MPH Programme

Goal is to prepare public health practitioners having the knowledge and skills to improve community health for sustainable development.

Objectives:

- To impart knowledge on methods of disease prevention and health promotion
- To develop ability to design and implement strategies to enhance public health and strengthen the health systems
- To develop the critical ability to analyse and understand the impact of public health policies on health status and indicators
- To impart skills for conducting research in public health to enhance evidence-based decision making

About the revised MPH Course

MPH degree programme is divided into four semesters. The courses in each semester are designed to ensure students acquire identified competencies. The revised MPH curriculum, will be taught with interdisciplinary spirit; integrating knowledge and practice across disciplinary boundaries to address public health challenges.

The curriculum is composed of several core and elective courses, some of which are concentrated in a single semester, whereas other courses like nutrition, social epidemiology, extend in succeeding semesters of MPH study.

The Core Courses

The core courses lay basic foundation of public health. The core courses offer students a comprehensive introduction to public health discipline. The core is composed of a series of courses (of varying number of credits/hours of teaching). The core courses are organized under following themes;

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1. Courses covering epidemiological methods; quantitative and qualitative research methods, research design and evaluation
2. Courses on health systems in Nigeria, structure, organization, management, Policy
3. Courses on human physiology, immunology ,pathogen biology and nutrition
4. Courses based on social, behavioral determinants of health such as social epidemiology, health behaviour, gender and health

These courses have both theoretical and practical components which are divided into smaller modules. Faculty from different disciplinary background have developed and will collaboratively teaching the content of these courses to bring interdisciplinary perspectives, tools, and experiences to each content area. The MPH students complete their core coursework spanning across four semesters.

Elective Courses

The elective courses continue to emphasize disciplinary knowledge and the expertise of the faculty. Therefore, MPH programme has several options that allow the curriculum to be tailored to the needs of a student with diverse backgrounds, areas of interest, and experience levels. Although all students are strongly encouraged to learn basic courses during the first semester, they have the flexibility from semester II onwards. The elective courses are complimentary to the core courses.

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MPH and MSc Epidemiology Course Structure

Subject Code	Subject Title	Number of Credits	Subject Code	Subject Title	Number of Credits
SEMESTER I					
Core Courses			**Elective Courses**		
MPH101	Fundamentals of public health	2	**NIL**		
MPH102	Epidemiology	3			
MPH103	Biostatistics	4			
MPH104	Basic nutrition	2			
MPH105	Population and health	1			
MPH106	Social epidemiology I	2			
MPH107	Human biology	3			
SEMETER II					
Core Courses			**Elective Courses**		
MPH201	Infectious diseases and control programmes	4	MPH206	Immunology	2
MPH202	Public health nutrition	3	MPH207	Field study of public health programmes	2
MPH203	Quantitative research methods	4	MPH208	Ageing & Society	3
MPH204	Qualitative research methods	4	MPH209	Monitoring & evaluation	1
MPH205	Health policy and planning	2			
SEMESTER III					
Core Courses			**Elective Courses**		
MPH301	Non-communicable diseases,	3	MPH305	Diagnostics	3

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	injuries and control programmes				
MPH302	Nutrition methods and techniques	3	MPH306	Public health internship	2
MPH303	Maternal and child health and programmes	3	MPH307	Health Behaviour	2
MPH304	Research project I	5	MPH308	Social epidemiology II	2
			MPH309	Gender issues & health	1
			MPH310	Global Health Case studies	1
SEMESTER IV					
Core Courses			**Elective Courses**		
MPH401	Health systems management	2	MPH406	Integrative Medicine and Public Health	3
MPH402	PH in disasters and outbreaks	1	MPH407	Health economics	1
MPH403	Environmental and occupational health	2	MPH408	Disability and public health	2
MPH404	Urbanization and health	2	MPH409	Bioethics, biosafety and regulations	1
MPH405	Research project II	5	MPH410	Critical reading	2

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Semester I

Semester I		
Core Courses		
Subject Code	**Subject Title**	**Number of Credits**
MPH101	Fundamentals of public health	2
MPH102	Epidemiology	3
MPH103	Biostatistics	4
MPH104	Basic nutrition	2
MPH105	Population and health	1
MPH106	Social epidemiology I	2
MPH107	Human biology	3
Elective Courses – Nil		

Explanatory note for semester I

Semester I introduce students to the discipline of public health. Students are also exposed to the two supportive disciplines of public health that is epidemiology and biostatistics. Key determinants of health viz human physiology, nutrition, social and population are also discussed.

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MPH101 Fundamentals of Public Health: 2 credits

Course Objectives:

- To introduce students to the discipline of public health
- To give an overview of the methods of prevention and health promotion
- To understand the determinants and measures of disease and health related states
- To understand the status of health and disease at global and national levels

Course outline:

1. Health, its determinants and public health
2. The science and practice of public health
3. History of public health
4. Disease, its measures and prevention
5. Measures of disease in population
6. Global health and epidemiological transition
7. Sources of global health data
8. Functional organization of the public health system in Nigeria
9. Evolution of global public health initiatives : primary health care, selective primary health care, MDGs, SDGs

Suggested Reading:

1) Class handouts
2) Oxford textbook of Public Health Ed. Roger Detels, James Mcewen, Robert Beaglehole, and Heizo Tanaka Oxford University Press (OUP) 4th Edition: 2002.
3) Public Health at the Crossroads – Achievements and Prospects. Robert Beaglehole and Ruth Bonita 2nd Edition Cambridge University Press
4) Maxcy-Rosenau-Last Public Health & Preventive Medicine, Fourteenth Edition Ed Robert Wallace, MD, et al.
5) International Public Health: Diseases, Programs, Systems, and Policies by Michael Merson, Robert E Black, Anne J Mills - Jones and Bartlett Publishers.
6) Preventive and Social Medicine, K Park, Bansaridas Bhanot Publishing House.

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MPH102 Epidemiology: 3 credits

Course Objectives

- To familiarise students on science and methods of epidemiology
- To understand the applications of epidemiology in public health decision making

Course Outline

1. Historical aspects, definition, aim and uses
2. Descriptive epidemiology
3. Risk measurement, Measurement of morbidity and mortality: Incidence, Prevalence, Age-adjustment and survival analysis, use of morbidity and mortality
4. Epidemiological study designs
5. Bias, confounding and interaction
6. Causal association
7. Disease Surveillance

Suggested reading:

1) Gordis Leon. Epidemiology (Fifth edition), Elsevier Saunders, 2013.
2) Dona Schneider and David E. Lilienfeld. Lilienfeld's Foundations of Epidemiology, Fourth Edition, Oxford University Press, USA, 2015.
3) Porta Miquel. A Dictionary of Epidemiology, Oxford University Press, USA, 2014
4) Somerville Margaret, et al., Public Health and Epidemiology at a Glance, Second Edition, Wiley-Blackwell, 2016
5) Beaglehole. R. Bonita, et. al Basic Epidemiology, 2nd Edition, WHO Publication, Geneva, 2006.
6) Spassoff R.A. Epidemiologic Methods for Health Policy, Oxford University Press, 1999
7) Barkar, D.J.P., Practical Epidemiology: Churchill pub, Livingstone, 1991.
8) Knox E. G. Epidemiology in health care planning: A Guide to the Uses of a Scientific Method, Oxford University Press, USA.

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MPH 103 Biostatistics: 4 credits

Theory Credits 2

Course objectives

- To introduce students to the use of bio-statistics in health sciences
- To understand the role of biostatistics as a supportive discipline of epidemiology

Course Outline

1. Introduction to biostatistics: Descriptive and Inductive statistics
2. Describing data: Variables: Nominal, Ordinal and Interval scale variables. Measures of central tendency: Mean (arithmetic, geometric, harmonic) Median, Mode; Merits and demerits of different measures. Measures of dispersion: Range, Variance, Standard Deviation; Merits and demerits of different measures of dispersion. Measures of Skewness and Kurtosis; Graphical presentation of data
3. Introduction to the concept of probability, events; exhaustive, mutually exclusive events; laws of probability, additive and multiplicative laws of probability and its properties
4. Discrete probability distributions: Binomial probability distribution and Poisson distribution and their properties. Continuous probability distribution. Introduction to normal distribution and its properties
5. Sampling methods: Type of sampling, Probability sampling, Non-probability sampling, sample size determination
6. Correlation: Concept of correlation, Pearson correlation coefficient, and its properties; Spearman ranks correlation coefficient
7. Concepts in Inductive statistics: Population, sample parameter, and statistic. Sampling distribution of mean and standard error. Statistical hypothesis, critical region, level of significance, and two types of errors.
8. Test of Significance: T-test for small samples and tests based on normal distribution for large samples. Testing the association of attributes and Chi-square goodness of fit
9. Nonparametric tests: One sample test, two sample tests, linear regression, multiple linear regressions, one way ANOVA and two way ANOVA

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Biostatistics practical: 2 Credits

Course Objectives

- To train students in use of statistical software
- To explain use of data in decision making
- To make students aware of pitfalls in statistical analysis

Course outline

1. Introduction to statistical software
2. Working with data: Computing variables, recoding variables, sorting data, grouping data, ensuring quality of data
3. Exploring data: Descriptive statistics, Frequencies, compare means, frequency tables and crosstabs, multiple response analysis
4. Analysing data: Pearson correlation, The Chi-Square Test of Independence, comparing means: One sample t tests, Paired t tests, Independent samples t tests, and One-way ANOVA
5. Multivariate analysis: Linear regression, logistic Regression analysis

Suggested reading:

1) Fundamentals of Statistics (Seventh Edition): S.G. Gupta. Himalaya Publication, Mumbai, 2017
2) Introduction to Biostatistics and Research Methods(Fifth Edition): P.S.S. Sundar Rao, J. Richard, Prentice Hall, New Delhi, 2012
3) Bio-Statistics: A foundation for Analysis in the Health Sciences: Daniel, W.W., John Wiley and Sons Pub., Canada, 1991.

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MPH104 Basic Nutrition: 2 credits

Course objectives

- To understand the role of nutrients in the physiological processes

Course outline

1. Introduction to nutrition, inter relationship between food, nutrients & health. Nutritional Status. Common terms related to nutrition.
2. Energy: Introduction, Physiological fuel value,. Basal Metabolic Rate, Total Energy Expenditure, Specific dynamic action, Respiratory Quotient
3. Carbohydrates: Classification, function, sources, RDA & deficiency
4. Fibre – types, role in health and diseases.
5. Lipids: Classification of fatty acids, Function, sources, RDA, & deficiency. Saturated fat, MUFA, PUFA, essential fatty acids, prostaglandins. Cholesterol – introduction, sources, requirement.
6. Proteins: Classification of amino acids. (essential & non- essential), functions of protein, sources, RDA & Deficiency. Evaluation of the protein quality – biological value, protein efficiency ratio, nitrogen retention, net protein utilization.
7. Vitamins: Classification – Fat soluble & water soluble, function, sources, RDA & deficiency.
8. Minerals: Major minerals – Ca, P, Mg, Na, K. Minor minerals – Fe, I, F, Zn, Co, Mn, Se, S, Cr., Function, sources, RDA & deficiency.
9. Water: Role of water in the body, its requirement, extracellular & intracellular fluid, maintenance of water balance

Suggested Reading:

1. Mann, J. and Truswell, S. eds., 2017. Essentials of human nutrition. Oxford University Press.
2. Eastwood, M.A., 2013. Principles of human nutrition. Springer.
3. Bender, D., 2014. An introduction to nutrition and metabolism. CRC Press.

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MPH 105 Population and Health: 1 credit

Course objectives

- To familiarize students to the fundamentals of population studies and its links with health
- To impart practical knowledge and skills of demographic and health data sources and practical use of data

Course outline

1. Introduction to population and health: definition, scope, Concept of demography, Population components, Demographic transition theory
2. Sources of demographic and Health data : Population census, Vital registration system, Sample Registration System etc (demonstrate the practical use of the data and its advantages and limitations.)
3. Population composition: Levels and trends in the sex and age structure of the population of world and developed and developing countries
4. Concepts, definition, determinants and measurement of fertility, mortality and migration, population projection
5. Life tables: Concept, importance and methods
6. Population policy: Population policy linkages with health issues

Suggested reading:

1) The Springer Series on Demographic Methods and Population Analysis: Ed.: **Land**, Kenneth C. "The Plenum Series on Demographic Methods and Population Analysis" Durham, NC 27708-0088, USA , 2014
2) Population Studies and Development from Theory to Fieldwork: **Petit**, Véronique (Ed.) Springer International Publication AG 2018
3) Handbook of Population: Ed. Dudley Poston and Michael Micklin. Springer publication, Edition one, 2006
4) The methods and Materials of Demography (Second edition): Siegel, Jacob S., and David A. Swanson,: Elsevier Academic Press, San Diego, 2004

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MPH106 Social Epidemiology I: 2 credits

Course objectives

- To introduce students to the social determinants of health

Course outline

1. Background and History of social epidemiology: glossary of social epidemiology

2. Social determinants of health: socio economic position, education, occupation, ethnicity and health, measurement of determinants, mechanisms and pathways through which income, education, and occupation affect health.

3. Inequalities and Disparities in Health: Poverty, discrimination, vulnerability, income inequality and impact on health outcome, measuring poverty, measuring health inequalities.

4. Ecological perspective in social epidemiology: Social capital, social cohesion, and health, community-level mechanisms/processes through which community social capital contributes to health improvement.

5. Concept of prevention in social epidemiology

6. Public health strategies to reduce health disparities

Suggested reading:

1) Berkman LF, Kawachi I & Glymour MM. Social Epidemiology. New York: Oxford University Press, 2014.
2) Kawachi I, S.V. Subramanian, Daniel Kim. Social Capital and Health, Springer 2007
3) Oakes & Kaufman , Methods in Social Epidemiology. Jossey-Bass Pub, 2006
4) Gwikel Julie. Social Epidemiology. Columbia University Press, 2006
5) Krieger N. Embodying inequality: epidemiologic perspectives, Baywood Pub, 2005
6) Marmot M, Richard G. Wilkinson, Social Determinants of Health, Oxford University Press, 2006

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MPH107 Human Biology: 3 credits

Course objectives:

- To provide an understanding about the structure and function of the human body

Course outline

1. Human life cycle : growth and development, sexuality and conception
2. Cells and tissues of the human body
3. Homeostasis
4. Structure and function of organs and systems ; musculo-skeletal, cardiovascular, respiratory, digestive, urino-genital, lymphatic, nervous system and sense organs

Suggested reading:

1) Textbook of Medical Physiology : A. C. Guyton, Prism Books Pvt. Ltd., Bangalore,
2) Anatomy and Physiology for Nurses : R.S. Winwood, J.L. Smith, Education Academic and Medicinal Publishing Division of Hodder and Stoughton, London,
3) Atlas of Anatomy : Casey Horton, Marshall Cavendish Books, London,
4) Lehninger, Principles of Biochemistry.

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Semester II

Semester II		
Core Courses		
Subject Code	**Subject Title**	**Number of Credits**
MPH201	Infectious diseases and control programmes	4
MPH202	Public health nutrition	3
MPH203	Quantitative research methods	4
MPH204	Qualitative research methods	4
MPH205	Health policy and planning	2
Elective Courses		
Subject Code	**Subject Title**	**Number of Credits**
MPH206	Immunology	2
MPH207	Field study of public health programmes	2
MPH208	Ageing & Society	2
MPH209	Monitoring & evaluation	1

Explanatory note on semester II

The objective of semester II is to expose students to the epidemiology of infectious diseases and also functioning of various prevention and control programmes in Nigeria. The quantitative methods and qualitative methods provide practical exposure to different types of methods of epidemiological research, collection of data in the population, its organization and analysis. Students also learn appropriate computer based skills.

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MPH201 Infectious Diseases and Control Programmes: 4 credits

Course objectives:

- To understand the biology of pathogens and the mechanism of action of antibiotics and antivirals
- To understand the pathology, pathogenesis, clinical manifestation, mode of transmission, prevention and control of diseases of bacterial and viral etiology
- To understand the principles of infectious disease control programmes
- To orient students about the national disease control programmes,
- Critical evaluation of various disease control programmes

Course outline

1. General overview of infectious diseases and their impact in developing countries
2. Epidemiology of infectious diseases
3. Structure of prokaryotic cell, pathogenic modifications
4. Anti-microbial agents, drug resistance
5. Infectious disease control programmes (including agent biology, epidemiology, pathogenesis and pathology, clinical presentation and management; public health strategies and mechanisms)
    a. Vaccine preventable diseases: TB, polio, diphtheria, tetanus, measles.
    b. Respiratory diseases: Tuberculosis, leprosy, ARI's
    c. Intestinal : Diarrhoea, typhoid, worm infestations
    d. Contact : STIs and AIDS
    e. Vector borne : malaria and filaria, JE, dengue,leptospirosis,
    f. zoonotic : plague and rabies
6. Neglected tropical diseases

Suggested reading:

1) Duguid et al. Textbook of Medical microbiology
2) Javetz and Melnick : Adelbergs Medical Microbiology
3) World Health Organization : Report on infectious diseases, and Report on Multidrug resistance , World Health Organization, Geneva
4) Principles and Practice of Medicine : Davidson, Edward, Bouchier et. Al., Pearson Professional Ltd. London
5) Biology of Disease : Jonathan Phillips, Paul Murray, Blackwell Science Ltd. Australia,
6) Human Virology : A textbook of Students of Medicine and Microbiology, Dentistry, Leslie collier, John Oxford, Oxford University Press, Tokyo
7) Textbook of Medicine : Cecil, Bennett, et al., Harcourt Brace Joanvich Inc. U.S.A.
8) Nelson K E : Infectious disease epidemiology : theory and practice
9) Griesecke J : Modern infectious disease epidemiology
10) National Disease Control Programmes websites and class handouts

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MPH202 Public Health Nutrition: 3 credits

Course objectives

- To understand the global and national burden of nutritional deficiencies
- To identify public health nutrition interventions
- To study the impact of nutritional policies and programmes and nutritional status of the population

Course outline

1. Introduction to public health nutrition
2. Nutrition Transition: Demographic, economic transition, poverty alleviation, food consumption patterns
3. Undernutrition: global and Nigerian prevalence of undernutrition, risk factorsconsequences
4. Micronutrient deficiency disorders: prevalence, risk factors, Interventions that worked globally, lessons learnt.
5. Overnutrition: Evolutionary principle, Obesity: prevalence and risk factors: Physical activity and inactivity, screening of those at nutritional risk, Life style diseases: Interventions that worked globally, lessons learnt.
6. Guidelines for prevention of non- communicable diseases
7. Food Security: Factors affecting food security, economics food security and community development, Food security bill

Suggested reading:s

1) Vir S.C., (2015), Public health nutrition in developing countries (Part I and II), Woodhead Publishing Nigeria Pvt, Ltd.
2) WHO and Chan, M., (2011) 'Haemoglobin concentrations for the diagnosis of anemia and assessment of severity', Geneva, Switzerland: World Health Organization, Geneva pp. 1–6.
3) Cashman, K. D., Sheehy, T., & O'Neill, C. M. (2018). Is vitamin D deficiency a public health concern for low middle income countries? A systematic literature review. European journal of nutrition, 1-21.

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MPH203 Quantitative Research Methods: 4 credits

Course objectives:

- To introduce students to quantitative research methods in public health including issues of ethics and biosafety
- To train students in the method of analysis of data and report writing. The information from this course will be subsequently used for planning health interventions

Course outline:

1. Types of research; steps in conducting research
2. Ethics in research
3. Survey methods and their application to public health research
4. Survey design and planning, sampling, construction of questionnaire,
5. Data collection , analysis
6. Report writing

Suggested reading:

1. Health Research Methodology: A guide for training in research methods. Second Edition. WHO, 2001.
2. Kothari, C.R., 1990. Research Methodology: Methods and Techniques. New Age International. 418p.
3. John Creswell (2013). Research Design: Qualitative, Quantitative, and mixed methods
4. approaches. Fourth edition, Sage Publications

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MPH204 Qualitative Research Methods: 4 credits

Course objectives:

- To orient students about use of various qualitative data collection methods for use in public health research.
- To introduce various interpretive analytic approaches, explore their use, and guide students in applying them to data.
- To introduce computer software used for data analysis

Course outline

1. Foundation of qualitative research and epistemology
2. Approaches in qualitative research: Substantive theory, Grounded theory approach, interpretivist approach, Role of theory in qualitative health research
3. Research Designs: Conceptual framework, Pure designs, mix-methods designs
4. Introduction to Qualitative data collection methods

   4.1 Interview
   4.2 Focus Group Discussion
   4.3 Observation
   4.4 Case Study
   4.5 Participatory methods
5. Sampling in qualitative research: Sample size, sample selection techniques,
6. Quality Control of qualitative data: setting standards, judging quality, validity and credibility
7. Analytic approaches, methods, and techniques: Principles of analysis, Steps in analysis; thematic analysis, content analysis, narrative analysis,
8. Computer assisted applications for qualitative analysis and Presenting, report writing and paper writing using qualitative data

Suggested reading:

1) Ulin P, Robinson E, Tolley E. Qualitative Methods in Public Health : A field guide for Applied Research, Jossey Bass Pub, 2005
2) Russell Bernard H., Gery W. Ryan Analyzing Qualitative Data: Systematic Approaches, *SAGE Publications, 2010.*
3) Green J, Thorogood J, Qualitative methods for Health research, Sage Pub, 2004
4) Catherine Pope, Nicholas Mays, Qualitative Research in Health Care, John Wiley & Sons, 2008
5) David Silverman Interpreting Qualitative Data: Methods for Analyzing Talk, Text and Interaction *SAGE Publications, 2006*
6) Carol Grbich Sage Pub, Qualitative Research in Health 1999
7) Matthew B. Miles, A. Michael Huberman, Qualitative Data Analysis Sage Pub, 1994

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MPH205 Health Policy and Planning: 2 credits

Course objectives

- To understand health systems and health policy making processes
- To understand the health planning from the perspective of national and global developments concerning health sector.

Course outline: Unit I: Understanding health policy and systems (Credit 1)

1. Health systems – goals, elements and characteristics, multi-levels of operations, interactions and interrelationships
2. Health systems frameworks: six building blocks of health systems – Governance, Financing, Human resource
3. Overview of the health system in Nigeria, human resource,
4. Health system development and strengthening
5. Health Policy and analysis – policy actors, focus and forms of policy analysis – policy analysis triangle

Unit 2 Health Planning (Credit 1)

1. Definition of Planning, Health Planning Models
2. History of Planning in Nigeria
3. Development of Nigeria National Health Policy
4. Global agendas
    a. Health for all- Millennium Development Goals- Sustainable Development Goals
    b. Primary Health Care - Universal health coverage

Suggested reading:

1. National Health and Research Policy Documents
2. Collins, C., Green, A., 2014. Valuing Health Systems: A Framework for Low and Middle-Income Countries. SAGE Publications.
3. De Savigny, D., Adam, T., Policy, A. for H., Research, S., Organization, W.H., 2009. Systems Thinking for Health Systems Strengthening, Alliance Flagship report series. Alliance for Health Policy and Systems Research.
4. Gilson, L., Alliance for Health Policy and Systems Research, World Health Organization, 2012. Health policy and systems research: a methodology reader.

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MPH206 Immunology: 2credits

Course objectives

- To provide a basic knowledge of the immune response and its involvement in health and disease

Course outline

1. Introduction, basic concepts in immunology, components of the immune system
2. Innate immunity: Different lines and layers of defense, The complement system
3. Adaptive immunity- humoral and cell mediated: The structure of a typical antibody molecule, Interaction between the antibody and specific antigen; Antigen processing and presentation
4. Cytokines and immunomodulation Hypersensitivity and allergy
5. Vaccines and Vaccination: immunology of selected infectious diseases of public health importance Applications of immunology in diagnosis and management of common diseases

Suggested reading:

1) Essential Immunology: - Ivan Roitt, Blackwell scientific publications, London Edinburgh Boston, Australia, 1997.
2) Immunology : Janis Kuby, W.H. Freeman and company, U.S.A.1992
3) Immunobiology : The immune system in health and disease: J. Travers, current biology pub, New York, 1997.
4) Vaccines Prospects and perspectives: Harmindar Sing, Rajesh Bhatia, Forward pub. Co., Delhi, 1993
5) Relevant documents and Suggested texts therein from the WHO website
6) WHO Technical Publications: Vaccines, Human Genetics Program series.
7) Harrison's Principles of Internal Medicine 16th Ed.-2005

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MPH207 Field study of public health programmes: 2 credits

Course objectives

- To orient students to the organization and delivery of public health activities

Course outline:

1. Functional organization of the public health system
2. Infectious disease control programmes
3. Reproductive, maternal and child health services
4. Water sanitation programme and nutritional interventions

Suggested reading:

1) Class handouts
2) Rural health care system in Nigeria, Ministry of Health and Family Welfare,Government of Nigeria
3) Joint Monitoring Mission Reports, World Health Organization, World Bank and Government of Nigeria
4) Evaluation Reports – International and National

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MPH208 Ageing & Society: 2 credits

Course Objectives:

1. To provide an overview of demographic, social, psychological and health issues related to population ageing

2.To expose students to the health status of older adults, disease and disability burden and challenges to public health due to population ageing

Course outline:

1.Demographic trends and epidemiological description of the major health problems and issues for older populations and their implications for public health

2. Theories of ageing and biology of ageing : Identify the components of usual versus successful aging, behavioural, social and environmental factors that influence successful ageing

3. Chronic conditions and Disability in older adults: their implications for public health, functional decline, Fall prevention

4. Nutrition of older adults : frailty , obesity in older adults

4. Health care services for older adults: strategies to prevent diseases and promote health in elderly

5. Dementia, Alzheimers and other mental health conditions in older adults : its implications for families and society , Alzheimer's Disease and Caregiving

6. Socio-cultural change and social care needs of older adults : Historical shifts in position, , family care giving, current social care giving needs of ageing adults

7. End of life care

8. Policy and programmes for welfare of older adults: Policies and programs from Nigeria and around the world that support healthy ageing will be examined.

Suggested reading:

1. Prohaska,T.R. Lynda A. Anderson, Robert H. Binstock (eds) 2012. Public Health for an Aging Society. USA: JHU Press. ISBN: 9781421404356
2. Whitbourne S.K. 2001. Adult development and ageing. Biopsychosocial perspectives John Wiley & sons.
3. Hofer S.M. Duane F Alwin. Ian Stuart Hamilton . 2011. An introduction to gerontology. UK: Cambridge University Press.
4. Scott M. 2008. Handbook of cognitive ageing. Interdisciplinary perspectives. USA: Sage publications

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5. Albert S.M.2014. Public Health and Aging: An Introduction to Maximizing Function and Well-being. USA: Springer publication
6. Schweda,M. Larissa Pfaller, Kai Brauer, Frank Adloff, Silke Schocktanz. 2017. Planning later life: bioethics and public health in ageing societies,: Routledge

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MPH209 Monitoring & Evaluation: 1 credit

Course objective

- To expose students to the methods of monitoring and evaluation in the broader framework of health and nutrition programmes.
- To build students capacity to develop framework for monitoring and evaluation independently

Course outline:

1. Introduction to monitoring and evaluation : difference between monitoring and evaluation
2. Programme Logic models and Theory of change
3. Deciding on key aspects of the program to monitor, identifying data sources , designing sound data collection and collation tools
4. Evaluation principles and approaches for field-based programs, Identifying evaluation questions and developing a learning agenda, Selecting an appropriate evaluation design, Collecting evaluation data
5. Developing Objectives and indicators for M&E : quantitative and qualitative indicators
6. Evaluation : types, evaluation question,
7. Identifying program stakeholders and their information needs
8. Selecting appropriate communication tools for different audiences

Suggested reading:

Class handouts

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Semester III

Semester III		
Core Courses		
Subject Code	**Subject Title**	**Number of Credits**
MPH301	Non-communicable diseases, injuries and control programmes	3
MPH302	Nutrition Methods and Techniques	3
MPH303	Maternal and child health and programmes	3
MPH304	Research project I	5
Elective Courses		
Subject Code	**Subject Title**	**Number of Credits**
MPH305	Diagnostics	3
MPH306	Public health internship	2
MPH307	Health Behaviour	2
MPH308	Social Epidemiology II	2
MPH309	Gender issues & health	1
MPH310	Global Health Case Studies	1

Explanatory note on semester III

The curses offered in this semester provide indepth understanding of dual burden of diseases in Nigeria. The courses discuss burden of non-communicable diseases, morbidities and mortality during maternity and child hood. The course on nutrition methods and techniques provides hands on training in conducting nutritional assessment in the population. The elective courses in this semester are combination of theoretical and practical courses. Course on health behaviour imparts skills in development and assessment of health education material and also provides knowledge on theories of behaviour. Whilegender and health course is complementary as it provides deeper understanding of the reasons for variation in maternal health statistics. Social epidemiology II course helps students understand why health inequalities exist and what are ways in which they can be researched and documented. A course on diagnostics and Public health internship provides hands on training and imparts necessary skills to work in the field of public health.

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MPH301 Non-communicable Diseases, Injuries and Control Programmes: 3 credits

Course Objectives:

- To give an understanding of the pathophysiology of major NCDs. Classification, clinical manifestations, diagnosis and, treatment.
- To understand the risk factors for common NCDs, and methods of disease control and health promotion
- To give an understanding of the pathophysiology of some common mental health problems

Course outline:

1. Epidemiology of NCDs, risk factors, global status, prevention and control, global initiatives
2. National strategies for control of NCDs (epidemiology, pathophysiology including biochemical and genetic parameters, cardinal signs, clinical and diagnostic features (with special emphasis on biochemical parameters), treatment (emphasize pharmacological component) prevention and control

a. Diabetes
b. Cardiovascular diseases
c. Asthma and COPD
d. Cancer
e. Musculo-skeletal conditions

3. Tobacco, obesity and other risk factors for NCDs
4. Unintentional Injuries- prevention and control; global and national strategies
5. Introduction to mental health, health promotion, National Mental health policy of Nigeria
6. Epidemiology of Major Mental Disorders burden of mental health morbidities, psycho-social, etiology of mental and behavioural disorders; depression, schizophrenia, Alzheimer's, Parkinson's, senile dementia, suicides

Suggested reading:

1) Class handouts
2) World Health Organization (2016). Global Report on Diabetes. WHO Press, Switzerland
3) World Health Organization 2014: GLOBAL STATUS REPORT on Non-communicable Diseases

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4) World Health Organization 2013: Global Action Plan for the Prevention and Control of Non-Communicable Diseases, 2013-2020, WHO, Geneva, Switzerland
5) Standard Treatment Guidelines: Hypertension Screening, Diagnosis, Assessment, and Management of Primary Hypertension in Adults in Nigeria- Quick Reference Guide May 2016Ministry of Health and Family Welfare, Government of Nigeria
6) Prevention of cardiovascular disease: guidelines for assessment and management of total cardiovascular risk: World Health Organization. ISBN 978 92 4 154717 8 (NLM classification: WG 120) © World Health Organization 2007

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MPH302 Nutrition Methods and Techniques: 3 credits

Course objective:

- To orient students to the research methods in the field of public health nutrition.
- To develop their skills in nutrition research methods and to update them with the current techniques in nutrition research.

Course outline:

1. Principles of nutritional epidemiology
2. Nutritional Survey, Surveillance, Monitoring and Evaluation
3. Tools and Techniques: Anthropometry
    a. Height and weight measurements
    b. BMI, Z score, WHO software's: Anthro, Anthroplus
    c. Circumference measurements- MUAC cut offs: SAM, MAM, Old classification in comparison with new. Other circumferential measurements
    d. Skinfold measurement
    e. Comparison to standards
    f. Technical error of measurement
    g. Growth charts- growth monitoring, Types of charts, target height, percentiles, deriving third percentile.
4. Dietary and Nutrient intake analysis – Energy expenditure, energy balance, Diet recall, Food frequency, Weighment method, comparison with standards; Units of measurement in foods, Standardization of foods for portion sizes, Nutritional questionnaires
5. Nutritional screens - Physical examinations for clinical signs and symptoms, Biochemical assessment methods, cut offs.
6. Standards for comparison – RDA, NCHS standards, ICMR standards

Suggested reading:

1) Willett, W. (2012). Nutritional epidemiology. Oxford University Press.
2) Margetts, B. M., & Nelson, M. (Eds.). (1997). Design concepts in nutritional epidemiology. OUP Oxford.
3) Frisancho, A. R. (1990). Anthropometric standards for the assessment of growth and nutritional status. University of Michigan Press.
4) Cohen, B. E. (2002). Community food security assessment toolkit (pp. 02-013). Washington, DC: US Department of Agriculture, Economic Research Service.
5) Billig, P., Bendahmane, D., & Swindale, A. (1999). Water and sanitation indicators measurement guide. Food and Nutrition Technical Assistance Project, Academy for Educational Development.
6) World Health Organization. (1995). The use and interpretation of anthropometry: report of a WHO expert committee. World Health Organ Tech Rep Ser., 854, 312-409.

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7) Holick, M. F. (2009). Vitamin D status: measurement, interpretation, and clinical application. Annals of epidemiology, 19(2), 73-78.

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MPH303 Maternal and Child Health and Programmes: 3 credits

Course objectives

- To introduce students to the essential components of maternal and child health and health care programme
- To discuss global and national maternal and child morbidity and mortality trends its important interventions to responsible for the change in trends

Course outline

Unit 1 Women's , maternal Health

1. Burden of reproductive ill-health: unintended pregnancies, unsafe abortions, MTP act, non sexually transmitted infections, infertility, violence against women
2. Evolution of the concept of reproductive health and its implications
3. Early human development and public health implications, Gametogenesis, fertilization, implantation, Fetal development, Preconception period , maternal and paternal risk factors for maternal and fetal outcomes , Developmental origins of adult diseases
4. Antepartum – antenatal care and significance, physiological changes during pregnancy, complications of pregnancy, high risk pregnancy
   Intrapartum- stages of labour and delivery, components of labour, danger sign and management of labour complications of labour and delivery
   Postpartum – care, complications of postpartum
5. Maternal morbidity and mortality; levels and causes of maternal mortality
6. Contraception, sterilization, population control

Unit 2 Child Health

1. Levels and trends in child mortality , major causes of neonatal, infant and child mortality and public health interventions
2. Major causes of neonatal mortality; Preterm births, low birth weight and public health interventions ; birth defects
3. Common morbidities among young children; lower respiratory tract infections, diarrhoea,
4. Immunization; coverage, factors
5. Infancy and child hood : Growth and development; physical, motor, cognitive, psycho-social and language development
6. Child nutrition
7. Policy and programmes: the main national and international interventions for prevention of reproductive and childhood/adolescent morbidity and mortality, including RMNCHA+, JSSK, RBSK, IYCF, IMNCI, maternity benefit schemes

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Suggested reading:

1) Kotch Jonathan B. Maternal and Child Health: Programs, Problems, and Policy in Public Health 3rd Edition Jones & Bartlett Learning; 3 edition (May 11, 2012) ISBN-13: 978-1449611590
2) Ehiri John(Ed.) Maternal and child health: Global challenges, programes and policies . Springer-Verlag US 2009
3) Behrman RE and Kliegman R. Nelson's textbook of paediatrics. Elsevier Inc Publication 2016 ISBN: 978-1-4557-7566-8

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MPH304 AND MPH 405 Research project I and II :5+5 credits

Course objective :

The purpose of research project is to encourage students to undertake independentresearch and to foster research-related skills, which should benefit future study and employment.

Each candidate for the Masters of Public Health (MPH) is required to undertake a research project in Semester III and completes it by end of Sem IV. The research project must exhibit original investigation, analysis and interpretation. The research project is to be done with research supervisor.

Initiate research and formulate feasible research questions

Design, develop tools and conduct original research

Synthesize literature and conduct analyses

Present research findings and argument in a suitably structured and sequenced manner

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MPH 305 Diagnostics: 3credits

Course objective:

- To demonstrate the diagnostic methods that are used for supporting disease control and environmental health activities and the underlying principles

Course outline:

1. Microbiology -Gram staining, microbial growth curve, culture, antibiotic susceptibility testing, ZN staining for AFB, culture and staining

2. Haematological methods; TBC, WBC, RBC count

3.Biochemistry ; carbohydrate, protein, lipid estimation; measurement of haemoglobin

4. Immunology: ELISA and Western blotting

5. Environmental measures: Water quality testing; Study of malarial parasite ; vectors

6. Polymerase Chain Reaction; real-time PCR

Suggested reading:

1. Basic laboratory Methods in Medical Bacteriology, WHO, Geneva.
2. Basic laboratory Methods in Medical Parasitology, WHO, Geneva

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MPH306 Public Health Internship: 2 credits

Course objective:

To provide an understanding of day to day activities and functions of professionals working in the public health system

Course outline

Six-weeks internship at a public health facility, or with a disease control programme. Assessment through activity diary, journal and report submission and presentation. Report may be submitted in Semester III. This course is usually timed during the period between Sem II and III.

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MPH307 Health Behaviour : 2 credits

Course objectives:

- To introduce students to the factors affecting on health and illness behaviour of population, and methods of behavioural modifications

Course outline:

1. Introduction to health behavior research; attitude, behaviour, perception, risk, self efficacy etc and how these concepts used in prevention and health promotion programmes

2. Introduction to health behaviour theories and models : Health Belief Model, Transtheoretical model, Theory of Reasoned Action and Planned Behavior

3. Behaviour change communication : Adherence and Resistance, Motivation and behaviour change, illness, diseases and behaviour change , social and psychological factors contributing to long-term behavioural change

4. Health education : methods of health education interventions, ways of communication, and assessment of impact of health education

5. Health promotion and disease prevention : a) Lay Representations of illness, social and psychological factors involved in the illness experience b) Stress and illness: Stress and Coping, role of social support in stress, coping and health outcome c)Substance use and psychological intervention d) Pain and chronic illness

6. Methods to measure behavioural change : scale development and validation of a scale by taking examples from existing research, when to use scale , analysis of data gathered using scale.

7. Cultural Epidemiology Framework and respective domains: Cultural identity (Domain I), Illness Explanatory Model (Domain II), key social interpersonal relations (Domain III) and relevant societal structural features of the health systems acknowledging the potential impact of social status and political economy (Domain IV)

Suggested reading:

1) McDowell Ian, Measuring Health : A guide to relating scales and questionnaires. New York: Oxford University Press, 2006.
2) Scott Kahan, Andrea C. Gielen, Peter J. Fagan, Lawrence W. (eds)Green Health Behavior Change in Populations. USA: JHU Press, 09-Oct-2014
3) Karen Glanz, Barbara Rimer and K. Viswanath (eds) Health Behaviour : Theory Research and Practice. Jossey-Bass, July 2015
4) Prestwich,A. Jared Kenworthy , Mark Conner Health Behavior Change: Theories, Methods and Interventions. London and Newyork: Routledge, 6 October 2017, ISBN-13: 978-1138694811

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5) Baranowski, T., Perry, C.L., Parcel, G.S. 2002. How Individuals, Environments, and Health Behavior Interact. In: Glanz, K., Rimer, B.K., Lewis, F.M., editors. Health Behavior and Health Education: Theory, Research, and Practice. 3rd Edition. San Francisco, CA: Jossey-Bass. p. 165-184.
6) Gitlin L., Sara Czaja. Behavioral Intervention Research: Designing, Evaluating, and Implementing . New York: Springer Publishing Company , 2015 ISBN 13 9780826126580
7) Weiss, M. G., (2017). The promise of cultural epidemiology. Taiwanese Journal of Psychiatry, 31(1), 8–24.
8) Weiss M. G. (2018). Cultural Epidemiology: Conceptual framework and current directions of an interdisciplinary field. Bulletin of the Institute of Ethnography SASA

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MPH308 Social Epidemiology II: 2 credits

Course objectives:

- To explore both theories explaining the relationship between the social phenomena and health as well as methodological tools for studying this relationship

Course outline:

1. Theories, models and constructs: Approaches in social epidemiology, Population perspective,
2. Theory building perspective, (1) Bio-Psychosocial paradigm (2) social production of diseacrse, political economy of health, (3) eco-social theory and related multi-level frameworks, (4) Life course approach Explanatory models in Cultural epidemiology
3. Methods of social epidemiology: different methodological consideration and approaches within social epidemiology
4. Multilevel Approaches : Discussion on approached for research in social epidemiology
   a) Neighbourhood effect studies, compositional and contextual effects of neighborhoods on health; and describe how multi-level study designs help us to distinguish between them.
   b) Psycho-social environment, stress and health studies, Causal associations between job stressors and health, Work/life balance and gender differences in job strain
   c) Social support, Social network and its impact on health, social network analysis
   d) Life course approach,
5. Income inequality and health : Absolute income effect, Social comparisons and relative deprivation, Contextual effect of income inequality
   Causal Explanations in social epidemiology
6. Social epidemiology and policy

Suggested reading:

1) Bartley Mel. Health inequality : an introduction to theories, concepts, and methods Cambridge : Polity Press : 2004
2) Oakes & Kaufman , Methods in Social Epidemiology. Jossey-Bass Pub, 2006
3) Berkman LF, Kawachi I & Glymour MM. (2nd eds). Social Epidemiology. New York: Oxford University Press, 2014.
4) Dorling D. Injustice: why social inequality persists. Portland, OR: The Policy Press, 2010.
5) Lisa F. Berkman, Ichiro Kawachi, Social Epidemiology, Oxford University Press, 2000
6) Kawachi I, S.V. Subramanian, Daniel Kim Social Capital and Health, Springer 2007
7) Kawachi & L. F. Berkman , Neighborhoods and Health . Oxford University Press 2003
8) Krieger N. Embodying inequality: epidemiologic perspectives, Baywood Pub, 2005

DRAFT

MPH309 Gender Issues & Health: 1 credit

Course objectives:

- To introduce students to the concept of gender and importance of gender issues in in public health practice and research and policy planning

Course outline:

1. Concept of gender, distinguish sex from gender
2. Gender as determinant of health
3. Role of biology and sociology in health and health care
4. Gender and health inequities
5. Gender and disability
6. Gender perspective in public health in Nigeria:
7. Gender, Sexuality, and HIV/AIDS— social and structural contexts of HIV vulnerability

Suggested reading:

1) Rieker and Bird (2005) Rethinking gender differences in health: Why we need to integrate social and biological perspectives. Journal of Gerontology. Series B. 60B, II, 40-47.
2) Fausto-Sterling, Anne. Sex / Gender: Biology in a Social World. Routledge, 2012. ISBN: 9780415881463
3) Morrow, M. (2007). "Introduction: Beyond Gender Matters" and "Our Bodies, Our Selves' in Context: Reflections on the Women's Health Movement in Canada." In Women's Health in Canada: Critical Perspectives on Theory and Policy, edited by M. Morrow, O. Hankivsky, & C. Varcoe (pp. 3-63). Toronto: University of Toronto Press.
4) Nichols, F.H. (2000). History of the Women's Health Movement in the 20th century. J Obstet Gynecol Neonatal Nurs., 29(1), 56-64.
5) Springer, K.W, Hankivsky, O., & Lisa M. Bates, L.M. (2012). Gender and health: Relational, intersectional, and biosocial approaches. Social Science & Medicine, 74(11), 1661-1666.
6) Lorber, Judith and Lisa Jean Moore (2002). Women get sicker but men die quicker: Social epidemiology. In Gender and the social construction of illness. Lanham MD: Alta Mira Press, 13-36. 7.

DRAFT

MPH310 Global Health Case studies: 1 credit

Course objectives:

- To learn about health systems and services in high, medium, low income settings

Course outline:

Students will select any topic in the field of maternal and child health, infectious diseases, non-communicable diseases, injuries, mental health and prepare a dissertation on the health systems and health interventions in a different country and present an analysis of the similarities and differences with the existing situation in Nigeria

Suggested reading:

As per the discussion between student and mentor

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Semester IV

Semester IV		
Core Courses		
Subject Code	**Subject Title**	**Number of Credits**
MPH401	Health systems management	2
MPH402	PH in disasters and outbreaks	1
MPH403	Environmental and occupational health	2
MPH404	Urbanization and health	2
MPH405	Research project II	5
Elective Courses		
Subject Code	**Subject Title**	**Number of Credits**
MPH406	Integrative medicine and public Health	
MPH407	Health economics	1
MPH408	Disability and public health	2
MPH409	Bioethics, biosafety and regulations	1
MPH410	Critical reading	2

Explanatory note on semester IV

Semester IV provides students with an insight into the managerial and administrative modalities of health services, imparts knowledge on public health emergencies and disaster managements. It also exposes students to the traditional systems of medicines and the concept of integrative health. Students are also introduced to the basic concepts in health economics, bioethics and biosafety.

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MPH401 : Health Systems Management: 2 credits

Course objective:

- To familiarize students with the challenges of management of health care system in Nigeria
- To familiarize students with the principles and techniques of management

Course outline:

1. Health Care Systems in Nigeria: health care system includes many sectors or subsystems, types of service providers, sources and methods of financing, and regulations. Model of health care system in Nigeria.

2. Challenges in Public health delivery system: with ref to delivery, performance, effectiveness, efficiency, and equity, discussion about the sources of problems and potential solutions

3. Human resource management in public health (HRM) : nature of human resource management, limitations

4. Health management information system (HMIS) : health information sources, challenges in HMIS, advantages and lacunas in current system, recommendations to improve utilizationof current HMIS.

5. Brief overview of evolution of management theories and tools and techniques used in management : SWOT, Log Frame, PERT, CPM,

Suggested reading:s

1. Fallon L F., Eric J Zgodzinski. Public health management. Sundbury, MA: Jones and Barlett.2009.
2. Lieber J.G. , C. McConnel. Management principles for health professionals. Sundbury, MA: Jones and Barlett. 2010.
3. Buchbinder, SB, n.H.Shanks. Introduction to health care management. Sundbury, MA: Jones and Barlett. 2007.
4. Fallon L F., C.McConnell. Human Resource Management in Health care .Sundbury, MA: Jones and Barlett. 2007.

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MPH402 PH in disasters and outbreaks: 1 credits

Course objectives

To introduce students to the

Course outline

Unit 1 Public Health in Outbreaks

1. Disease outbreaks in Nigeria
2. Outbreak investigation
3. Epidemic control in Nigeria; integrated disease surveillance, legislation for the controlof outbreak in Nigeria , international health regulations

Unit 2 Disaster management

1. Introduction to Natural & Man-made Disasters
2. Disaster Preparedness: Disaster Preparedness Plan , Disaster Preparedness for People and Infrastructure, Role of technology in disaster Preparedness
3. Disaster management: Hazard, Risk and Vulnerability, Concept and Relationship, disaster Risk Reduction, risk Analysis Techniques, People Participation in Risk Assessment
4. Disaster Mitigation: Disaster Mitigation Strategies, Emerging Trends in Disaster Mitigation, Role of Team and Coordination,
5. Rehabilitation, Reconstruction & Recovery
6. Disaster Response : role and responsibilities of different governmental organizations at local, district, state and central level

Suggested reading:

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MPH 403 Environmental and Occupational Health: 2 credits

Course objective:

- To enable the students to identify the various sources of environmental threats and occupational hazards to health and the ways to manage these threats and hazards so as to prevent related diseases

Course outline:

1. Principles of environment health and human ecology

2. Food sanitation and safety

3.Vector and rodent control

4.Waste disposal

5. Environmental pollution : Environment health policy, Current and emerging issues in environment including global warming

6. Occupational health: Hazards at the workplace , Diagnostic criteria of various occupational diseases

7. Workplace safety : Prevention of occupational hazards (including accident prevention) Legislations related to occupational health, Employees State Insurance Scheme

Suggested readings:

Class handouts

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MPH404 : Urbanization and Health : 2 credit

Course Objective:

- To impart knowledge on the determinants of urban health, health care in urban areas, health of vulnerable sections in cities

Course outline:

1. Urban population: urban demography, epidemiology, changes in urban physical and social environment and their consequences for health

2. 'Urban' as determinant of health : defining health disparities and health equity; the determinants of urban health; locating and understanding health disparities using data, housing, segregation, built environment, food insecurity, violence and crime,

3. Urbanization and health outcome : emerging public health issues associated with rapid growth of urban population overcoming health inequities in urban settings,

4. Health services in urban areas: health services in urban areas, public health care access and other issues, inadequacy of public health services,

5. Health issues of the vulnerable population in urban areas

6. Urban Health planning: design and implementation of cost-effective health care system

Suggested reading:

1) Galea Sandro, David Vlahov. Handbook of urban health. Populations, methods and practice. USA: Springer publication 2008
2) Cecilia Tacoli Urbanization, gender and urban poverty: paid work and unpaid carework in the city, Published by UNFPA , March 2012
3) World Health Organization . Hidden cities: unmasking and overcoming health inequities in urban settings. WHO and United Nations Human Settlements Programme. 2010.ISBN 978 92 4 154803 8 (WHO)
4) Umar Benna, Urbanization and its impact on socio-economic growth in developing regions. Published by IGI Global. 2017
5) The Centre on Housing Rights and Evictions (COHRE), Women, Slums and Urbanisation: Examining the Causes and Consequences. Published by COHRE ,Geneva, Switzerland 2008. ISBN: 978-92-95004-42-9.
6) Peter Ellis and Mark Roberts. Leveraging Urbanization in South Asia Managing Spatial Transformation for Prosperity and Livability. Published by World Bank Group. Washington 2016. ISBN (paper): 978-1-4648-0662-9 ISBN (electronic): 978-1-4648-0663-6 DOI: 10.1596/978-1-4648-0662-9

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7) Gusmano MK, Rodwin VG, Weisz D. Health care in the world cities: New York, Paris, and London. Baltimore, MD: The Johns Hopkins University Press, 2010.

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MPH 407 Health Economics: 1 credit

Course objectives:

- To impart knowledge on health care financing health economics including cost-benefit and cost-utility analysis

Course outline:

1. Health financing, budgeting and economics
2. Overview on Health financing in Developing countries
3. Health financing concepts such as cost and cost classification
4. Budget management
5. Cost-effective analysis, Cost-benefit analysis and Cost-Utility analysis;
6. Economic analysis reporting for projects
7. Health insurance in Nigeria: Private insurance, community based insurance schemes

Suggested reading:

1) Essentials of Health Economics: Diane M. Dewar, series editor: Richard Rigelman, United states, 2010
2) Health Economics: Peter Zweifel and Friedrich Breyer, Oxford University Press, New York, 1997
3) Health Program planning and evaluation A practical, Systematic approach for community Health; L. Michele Issel Jones and Bartlett Publishers, Canada,2009
4) Health economics, an International Perspective; Barbara Mcpake, Lilani Kumaranayake and Charles Normand, Routledge, Taylor & Francis Group, New York, 2006
5) Health Economics in Nigeria (Edited), Prashant Panda and Himanshu Rout, New CenturyPubns, 2007

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MPH 408 : Disability and Public health : 2 credits

Course objectives

- To introduce students to disability as a public health issue
- To identify needs of the disabled and find ways to address the issues that the disabled face in developing countries

Course outline:

1. Defining disability: evolving concept of disability, medical model, social model and human rights perspective of disability

2.Disability and public health : issues of definition and ethics

3. Data sources and estimating disability: global and national level data sources, trends in developed and developing countries, epidemiological data on disability

3.Determinants of disability: preventable disability, developing preventative strategies for avoidable disabling conditions,

4.Health and social care needs of disabled: health care needs of disabled, accessibility, availability and affordability of health services for disabled, approach to comprehensive, integrated care for disabled, role of public health

5.social and psychological experience of disability, stigma and discrimination faced by affected individuals, identification of care needs, role of psycho-social support, approach to comprehensive, integrated care for disabled

6.Public health implications of disability: overview of policy, programmes, innovation, interventions, rehabilitation, reablement

Suggested reading:

1) Drum C.E. Krahn G.L., Hank Bersani Jr. Disability and Public Health. Washington, USA: American Public Health Association. Washington USA. 2016 Print ISSN: 0090-0036 | Electronic ISSN: 1541-0048
2) Lollar D.J, Anderson, ElenaM (eds) Public Health Perspectives on Disability: Epidemiology to Ethics and Beyond. USA: Springer Publication, 2011. ISBN 978-1-4419-73412
3) Berghs M, Atkin K, Graham H, Hatton C, Thomas C. Implications for public health research of models and theories of disability: a scoping study and evidence synthesis. Published by Public Health Res div of National Institute for Health research. 2016.
4) Beyrer C, and Pizer HF, (eds). Public health and human rights; evidence-based approaches. Baltimore, MD: The Johns Hopkins University Press, 2007.
5) Jean O'Hara Jane McCarthy Nick Bouras. Intellectual Disability and Ill Health - A Review of the Evidence . Cambridge University Press Nigeria Pvt Ltd, 2010. ISBN: 9780521728898, 0521728894

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MPH 409 Bioethics, Biosafety and Regulations: 1 credit

Course objectives:

- To introduce students to the ethical principles and practices in public health research
- To introduce students to the existing guidelines

Course outline:

1. Introduction to Bioethics – principles and history
2. Clinical research: clinical research designs, clinical trial, conduct and regulation
3. National Ethical Guidelines for biomedical and health research
4. Regulations for medical devices, drug and biological material regulations
5. Publication ethics and regulations – introduction; fabrication, falsification, or plagiarism; ethics in scientific publications, guidelines and best practices of publications, committee of publication ethics
6. Guidelines for biosafety , animal ethics , stem cell guidelines, data sharing policies

Suggested reading:

1) Guidelines and e-learning tools of Committee of Publication Ethics
2) CONSORT Checklist-CONSORT statement. 2010. Available on www.consortstatement. org/media/default/downloads/consort2010
3) The University of Illinois at Chicago. Evidence Based Medicine: PICO. Available on http://researchguides.uic.edu.

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MPH410: Critical Reading: 2 credit

Course objective

To introduce students to critical reading, analysis and interpretation of academic articles

Course outline:

The course will focus on capacity building to improve reading, understanding, analysis and interpretation of academic article. . Students will be given a research article and mentored to understand the research gap, research questions, objectives, methods and results and understand how to identify the novel contributions of the research , how they contribute to existing knowledge and limitations of the study

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