

West Africa

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## **GUIDANCE CURRICULUM**

Master of Public Health (MPH)

College of Medicine and Health Sciences



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### MASTER OF PUBLIC HEALTH (MPH) CURRICULUM

### Introduction:

The American International University West Africa (AIUWA) Master of Public Health (MPH) degree has been developed with a multi-disciplinary approach and special focus and commitment to the World Health Organisation's (WHO) goal to achieve full health potential for all people in the world, with two main aims: to promote and protect people's health throughout their lives; and to reduce the incidence of the main diseases and injuries, and alleviate the suffering they cause. The AIUWA MPH program is a full-time over six semesters (two year) degree program. The program will provide courses that combine mandatory academic and professional subjects, enabling students to graduate with both academic degrees combined with professional qualifications and high level of entrepreneurial skills. Students will be trained and prepared academically, practically and professionally to "hit the ground running" in the public and private sectors. Our curriculum is therefore aligned with the needs of the market in such a way that graduates are employable and are able to perform on their jobs with minimal supervision.

### Aim:

The aim of the AlUWA MPH program is to provide a foundation in the science and art of public health on a global scale. The knowledge, skills and attitudes you acquire will enable you to put public health principles into effect in both research and applied public health contexts. As students progress, they will develop a thorough understanding of all the main disciplines of public health, providing a strong basis for a high-level career in the field. The main courses will cover epidemiology with emphasis on quantitative and qualitative research methods, including the application of appropriate study designs, their critical appraisal and the essential principles and procedures for ethical practice; health systems and health promotion. The course will focus on comprehensive analysis of infectious disease, nutrition, environmental health, health infrastructure, and health project management in an international context, particularly focusing on health issues in low-income countries. Thorough assessments with intervention strategies covering worldwide health needs will be explored and the principles of equity, access, and universality in the context of global health will be made.

### Program Objectives:

The program objectives are to equip students with knowledge, skills and attitudes needed to understand the principles and practice of Public Health through the development, integration and application of:



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- knowledge and understanding in the main disciplines of Public Health, including biostatistics, epidemiology, social sciences, informatics, management, health promotion, health economics; environmental health, communicable disease control, policy development, ethics, health services organisations;
- Skills which are required for the practice of Public Health, including the use of critical appraisal and reasoning, information technology, quantitative and qualitative research methods, analysis and interpretation of data and information, strategic management, creative problem solving, multidisciplinary team working, effective written and oral communication;
- The competencies necessary to cope with the changing demands of Public Health, such as emergency preparedness and response, diseases outbreaks and epidemics.

### Learning outcomes:

The Graduates of the Master of Public Health program, upon completion will demonstrate high level of competency and skills in Public Health & Health Care Systems, Evidencebased approaches to Public Health, Planning & Management to Promote Health, Policy in Public Health, Leadership, Communication, and Inter-professional Practice. Upon completion, the Public Health Practitioners will be able to:

- Apply critical thinking skills and knowledge to the research and practice of public health.
- Identify and apply appropriate statistical methods to analyze and describe a public health problem.
- Differentiate between the use of qualitative and quantitative research methods in epidemiology to analyze patterns of disease and injury and discuss application to control problems.
- Analyze trends and patterns of disease in diverse populations using biostatistical and epidemiological methods.
- Develop communication approaches to advocate and educate diverse populations on factors that impact health outcomes such as Environmental Factors, Occupational Factors and Community Health.
- Assess the social determinants of health to develop policies and programs that address health disparities, health inequities, and health inequalities in diverse populations in society.
- Address behavioral, social and cultural factors that impact individual and population health and health disparities over the life course.



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 Demonstrate the ability to apply principles of leadership, policy development, budgeting and program management in the planning, implementation and evaluation of health programs for individuals and populations.

### Who is the MPH Program for?

The MPH is designed to build on the existing experience of professionals working in health, environmental and related fields, providing them with the knowledge and skills required for the wide and increasing variety of opportunities for public health practice. Therefore, the MPH program may be of interest to the following professionals who are, or intend to be, Public Health practitioners, including:

- Environmental Health Officers
- Health Service Managers
- General Medical Practitioners
- Community Health Doctors and Dentists
- Community Development Workers
- > Community Nurses, Health Visitors, Midwives
- > Allied healthcare professionals such as Medical Laboratory, Pharmacists, etc
- > Nutritionists
- Social Workers
- > Town Planners
- > Workers in Voluntary Organisations and Non-Governmental Agencies

### ADMISSION/ENTRY REQUIREMENTS

The MPH program is available to any University graduate in a health or health-related profession, and also to non-health graduates and others approved by AIUWA. This includes:

- > Graduates in medicine of an approved university
- > Other health-related graduates of an approved university or other institution
- Non-health-related graduates, and others who have satisfied the requirements of approved Exam Boards or have satisfied the University that they are suitably qualified to undertake a postgraduate course.
- In addition, applicants require a GCSE Grade C or GCE O Level pass in Mathematics and English, or an equivalent qualification.

### DURATION OF PROGRAM

The duration of the Master of Public Health program is two (2) years full-time equivalent to four (4) semesters per the course.



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### **GRADING SYSTEM**

The Grading system is as follows:

Cumulative Grade Point Average for Award of MPH is: The highest possible score – cGPA 4.0 Lowest possible pass mark – cGPA 2.0

Percentage	Grade	GPA	Classification
80% - 100%	A	3.4 - 4.0	Distinction
65% - 79%	В	2.7 – 3.3	Merit
50% - 64%	С	2.0 – 2.6	Pass
Below 49%	F	Below 1.9	Fail

### TEACHING METHODOLOGY

Faculties are expected to adopt the integrative approach of combining theory, practical demonstration and return demonstration, and industrial/institutional experience for students to maximize their learning during training. Integrative teaching allows students to learn how to approach and address real life problems from different perspectives. In this wise, integrated teaching fosters the skills necessary to turn students of AIUWA into productive and critical thinkers in their chosen careers.

The teaching/learning methods therefore include the following:

- Lecture
- Discussion
- Case Studies
- Research Projects (Individual and Group)
- Seminars/workshops
- Conferences
- Brainstorming



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- Study groups
- Tutorials
- Role Play
- Field Trips/work
- Reflective practice
- Demonstrations
- Simulations
- Computed Assisted Learning
- Field Visits
- Presentations
- Problem Based Learning
- Virtual
- Realia

This list is not exhaustive. Other teaching methods/technologies may also be employed

### TEACHING AND LEARNING MATERIALS

The following categories of teaching and learning aids are suggested:

- Printed (e.g., Flow charts, Sketches, Drawings, Graphics, Books and Handouts)
- Non-projected (e.g., Chalk board, White board, Flipcharts and Transparencies)
- Still-projected (e.g., Photographs, LCD projectors and Accessories)
- Audio (e.g., Radios, Recorded messages without text/video)
- Audio linked with still visuals (e.g. recorded messages with text)
- Film and video (e.g., Open and close circuit televisions)
- Computer-based (Computers/Internet/ e-learning systems)
- "Realia" (e.g., Specimens, Models and Dummies)

### ASSESSMENT OF STUDENT LEARNING Mode of Assessment

Assessment of students is both Formative and Summative. The major learning outcomes to be assessed must be performance based on the cognitive, affective and psychomotor domains. In addition, the major student outcomes must be identified using the course objectives as the basis for assessing student learning. Emphasis must be placed on the following student outcomes:



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- Critical Thinking (instead of limiting items to those that elicit rote memorization of materials)
- Practical competence (by using contextual items/items based on practical/field scenarios)

### Assessment procedures and grading:

The assessment procedures include:

- Class tests, group presentations, in-house practical assessment, assignments, attendance, class participation and end-of semester examinations.
- Each of these must be developed using a sample of the key objectives covered within a specified period.
- Each of the formative assessments (i.e., class tests, group presentations, in-house practical assessment and any others to be conducted in each semester) should be aligned with the assessment policies of the institutional affiliations (Continuous Assessment).
- It is recommended that the final grade of students in each semester must be the aggregate of scores/marks on the continuous assessment and summative assessments/end of semester examinations.

### Course Registration and Student workload

Students are required to register for courses as follows: General Education Requirements courses GER Departmental Requirement courses (DR) Students must register for the requisite courses each semester.

### **Examination Regulations:**

Besides individual University examination regulations, the following regulations shall apply to the MPH program:

1. A student shall be allowed to sit for an examination only when he/she as attended at least 75% of lectures, all clinical experiences and completed all required assignments. No student will be allowed to sit for an examination in a course that was not registered.



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- 2. Before a student graduates, he/she should have taken and passed all the courses and fulfilled all other requirements for graduation by the respective institutions.
- 3. For all other courses, the pass mark shall be according to the university regulations
- 4. Students' progression will depend on the respective course and the examination regulations.

### **Graduation Requirements**

To qualify for the award of Master of Public Health, a student must meet the entire stipulated credit load, submit a dissertation and must pass the required examinations.

### PROGRAM EVALUATION

The relevance of the Curriculum for AIUWA's MPH program is maintained through:

- Teachers' evaluation by students and peers
- Course evaluation by students
- Feedback from graduates of the program and their employers
- Feedback from Academic and Professional Regulatory Bodies
- Incorporation of research findings and innovations in curriculum designs, and implementation
- Full review of the curriculum every 5 years and partial review every 2.5 years.

### **Program Structure**

- The program shall operate the semester system. A semester ranges from 15-16 weeks including revision and semester examinations.
- A program of course credit system shall be used. Units shall be assigned to courses based on contact hours per week per semester as follows:
  - 2 hours lecture per week per semester = 2 units
  - 3 hours lecture per week per semester = 3 units
  - 3 hours laboratory or industrial/institutional practical per week per semester =
    1 unit



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• Each course shall have a course registration number prefixed by the month and year of the semester.

### **READING MATERIALS**

Reading materials for the different courses will be constantly undergoing review. The recommended reading lists given at the end of each course may therefore change. At the beginning of each course the student will be provided with an up to date reading lists.

### PROGRAM RULES AND REGULATIONS

### • ACADEMIC HONESTY STATEMENT:

The Department is committed to academic integrity in all its practices. The faculty value intellectual integrity and a high standard of academic conduct. Activities that violate academic integrity undermine the quality and diminish the value of educational achievement. Cheating on papers, tests, or other academic works is a violation of this course's rules. No student shall engage in behavior that, in the judgment of the instructor of the class, may be construed as cheating. This may include, but is not limited to, plagiarism or other forms of academic dishonesty such as the acquisition without permission of tests or other academic materials and/or distribution of these materials and other academic work. This includes students who aid and abet as well as those who attempt such behavior.

### PUNCTUALITY

Absenteeism and lateness is not acceptable in this course. Student will not be allowed in class 15 minutes after the commencement of lessons and three (3) times absence without acceptable reason (s) will lead to failing the course. The faculty has the power to accept or reject students' excuses of being absent or late.



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The Master of Public Health Program Structure

Total Minimum Credit Units for the program: 60 with an overall cumulative GPA of 2.0 or above. The corresponding credit hours are 900 overall.

### TRIMESTER 1 (Total Credit Units: 11)

	Course Code	Course Title	Credit Units	Credit Hours
1.	PH601	Introduction to Public Health	3	45
2.	PH602	Epidemiology and Quantitative Research Methods I	3	45
3.	PH603	Health Information and Health Informatics	3	45
4.	PH604	Practical Epidemiology and Statistics I	2	30
		Total	11	165

### TRIMESTER 2 (Total Credit Units: 11)

	Course Code	Course Title	Credit Units	Credit Hours
5.	PH610	International Public Health	3	45
6.	PH611	Epidemiology and Quantitative Research Methods 2	3	45
7.	PH612	Qualitative Research Methods	3	45
8.	PH613	Practical Epidemiology and Statistics 2	2	30
		Total	11	165

### TRIMESTER 3 (Total Credit Units: 11)

	Course Code	Course Title	Credit Units	Credit Hours
9.	PH701	Epidemiology and Quantitative Research Methods 3	3	45
10.	PH702	Health Protection	3	45
11.	PH703	Health Promotion	3	45
12.	PH704	Practical Epidemiology and Statistics 3	2	30
		Total Credits	11	165

### TRIMESTER 4 (Total Credit Units: 10)



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	Course Code	Course Title	Credit Units	Credit Hours
13.	PH711	Sociology & Social Policy	2	30
14.	PH712	Policy and Politics in Public Health	2	30
15.	PH713	Health Economics	3	45
16.	PH714	Leadership Management in Health	3	45
XX	PH900	Dissertation (start)	-	-
		Total Credits	10	150

### **TRIMESTER 5 (Total Credit Units: 7)**

	Course Code	Course Title	Credit Units	Credit Hours
17.	PH801	Health Technology Assessment	2	30
18.	PH802	Management of Health Systems	2	30
19.	PH803	Systematic Reviews & Evidence Synthesis	3	45
XX	PH900	Dissertation (continue)	-	-
		Total Credits	7	105

### **TRIMESTER 6 (Total Credit Units: 10)**

	Course Code	Course Title	Credit Units	Credit Hours
20.	PH811	Environmental Health and Climate Change	2	30
21.	PH812	Emergency Preparedness and Response in Public Health	2	30
22.	PH900	Dissertation (finish)	6	90
		Total Credits	10	150



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#### PROGRAMME DETAILS

### 1. Introduction to Public Health (PH601), 3 Credits (45 Credit Hours)

### **Course Contents:**

The following areas will be covered during the course:

- Definition of public health in a historical perspective
- Recent developments in public health and future directions of public health
- Problem-solving methodology applied to public health
- Research in public health and importance of evidence-based decision making
- Overview of public health programs in The Gambia

#### AIMS:

The aim of this course is to introduce the MPH students to the various facets of public health concepts, the problem-solving paradigm and prepare them for the multi-disciplinary approach of public health.

#### Learning outcomes:

By the end of the Course the student should be able to:

- **1.** Examine public health through its historical context and use this information in the evaluation of current public health issues
- **2.** Analyze a public health problem and evaluate interventions and policy alternatives using the problem-solving methodology

### 2. INTERNATIONAL PUBLIC HEALTH

### 2. EPIDEMIOLOGY AND QUANTITATIVE RESEARCH METHODS I (PH602), 3 Credits (45 Credit Hours)

### Course content:

- Scientific method and introductory concepts
- Routine data sources and descriptive epidemiology
- Surveys



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- Cohort study design
- Case control studies
- Randomized controlled trials
- Critical appraisal or published research
- Microsoft office, WWW, e-mail, Access, Excel, SPSS, PowerPoint

#### Aims:

- 1. To introduce students to the purpose and context of research, and the basis for selecting appropriate research designs.
- 2. To provide a thorough grounding in the uses and methods of epidemiology.
- 3. To introduce students to the key statistical concepts and techniques needed for the basic analysis of data.
- 4. To develop students' abilities in the critical evaluation of statistical and epidemiological techniques.
- 5. To develop basic information handling skills for use in health research.
- 6. To develop information handling and computer skills for use within the course.

### Learning outcomes:

By the end of the Course the student should be able to:

- 1. Briefly describe the traditions and philosophy of scientific research.
- 2. Formulate a good research question, with appropriate aims and objectives.
- 3. Demonstrate the skills required to manipulate routine epidemiological data.
- 4. Discuss the application, and strengths and weaknesses of different types of epidemiological design.
- 5. Apply key statistical techniques including hypothesis testing, and interpretation of 'p' values and confidence intervals to data analysis.
- 6. Explain the statistical concepts of probability, estimation and variability.
- 7. Demonstrate basic Information and Communication skills including report writing and data presentation.
- 8. Critically appraise published reports of simple epidemiological studies.

### 3. EPIDEMIOLOGY AND QUANTITATIVE RESEARCH METHODS II (PH701) 3 Credits (45 Credit Hours)

#### Course content:

- Revision and introduction to Epidemiology and Quantitative Research Methods II
- Observational studies : Cohort
- Observational studies : Case-control



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- > Interpretation of results from observational studies
- Intervention studies
- Survival analysis
- What statistical test? A review of parametric tests and an introduction to nonparametric tests.
- Prevention strategies and the evaluation of screening programmes
- Systematic reviews and meta-analysis
- Critical appraisal
- > Research protocols, sources of funding and ethics
- ➢ GIS, SPSS and PowerPoint

### Aims:

- 1. To provide students with the context of epidemiological research in practice and in the development of health and Public Health policy.
- 2. To enable students to develop further knowledge and skills in the use of statistical techniques in health research.
- 3. To develop more advanced computer skills for use (within the course), and in Public Health practice.
- 4. To familiarise students with the major informatics tools available with which to address issues relating to Public Health research.

### Learning outcomes:

By the end of the Course the student should be able to:

- 1. Explain the place of epidemiological research and thinking in the development of Public Health policy, including prevention strategies and screening programmes.
- 2. Discuss the application of different epidemiological study designs to answer various research questions.
- 3. Be aware of the importance of sample size and be able to calculate with appropriate support.
- 4. Explain the purpose, and interpret the results, of parametric and non-parametric hypothesis testing and multivariate analysis.
- 5. Explain the purpose, and interpret the results, of survival data and life table analysis.
- 6. Discuss the principles and uses of systematic reviews and meta-analyses and critically appraise the former.
- 7. Demonstrate appropriate ICT skills involved in statistical appraisal of data, report writing and graphical presentation of data.



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### 4. QUALITATIVE RESEARCH METHODS (PH603) 3 Credits (45 Credit Hours)

### Outline content:

- Qualitative research: its nature, scope and development
- Designing qualitative research projects
- Qualitative methods: ethnography and participant observation
- Qualitative methods: interviews
- Qualitative methods: texts and documents
- Qualitative methods: audio and video
- Doing qualitative research: participatory and action research
- Data management and analysis methods
- Analyzing qualitative data: coding, analysis, interpretation
- Analyzing qualitative data: issues of reliability and validity
- Software in qualitative research
- Critical appraisal and writing up qualitative research

#### Aims:

- 1. To introduce the nature and types of qualitative research methods and their uses in health research.
- 2. To provide students with a basic understanding of, and skills in qualitative methods, data collection and analysis.

### Learning Outcomes:

By the end of this Course students will be able to:

- 1. Describe different theoretical traditions and approaches in qualitative research.
- 2. Design a robust qualitative research proposal.
- 3. Critically analyze qualitative data and studies.
- 4. Describe the principles of using software in qualitative analysis.

# 5. HEALTH INFORMATION AND HEALTH INFORMATICS (PH604) 3 Credits (45 Credit Hours)

### Course outline:

The Course introduces students to population level health information and to principles of health informatics. The aim of the Course is to provide students with an understanding of:



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why health information is important; how to identify valid sources of health information; health information system in The Gambia and how they are integrated; the governance structure behind health information; the role of computerized decision support systems; and emerging information related technologies in delivering health care.

The course enables students to: appreciate the vast amount of accessible health information available; value the impact of high-quality health intelligence in shaping public health policies and interventions and understand the role of health informatics in delivering health care in an efficient way.

### Learning Outcomes:

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

- 1. Identify, collate and appraise suitable health information data to describe given health conditions
- 2. Understand and interpret current trends and future developments in population health data collection and storage
- 3. Understand the role of digital technologies and computerized decision support tools in the management of health conditions at a population level
- 4. Critically analyze governance structures in handling health information related data

# 6. PRACTICAL EPIDEMIOLOGY AND STATISTICS I (PH605) 3 Credits (45 Credit Hours)

### Course outline:

The Course builds on concepts introduced in Epidemiology Statistics and Research Methods to reinforce the ideas and enable students to focus on their critical application to novel practical situations.

Students will develop skills in critical appraisal of published work in health care related areas, and build on material introduced in Epidemiology, Statistics and Research Methods to develop more practical understanding of epidemiological and statistical methods used to assess patterns and causes of death and ill-health at the population level.

### Learning outcomes:

- 1. Formulate specific and appropriate questions regarding health at the population level
- 2. Design appropriate epidemiological studies to address population health questions



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- 3. Summarize, analyze and present basic epidemiological data appropriately
- 4. Interpret and critically appraise epidemiological and statistical information that they have collected/ produced themselves, or have been presented by others
- 5. Critically appraise published papers dealing with epidemiological studies and clinical trials

### 7. Health Protection (PH702) 3 Credits (45 Credit Hours)

### Course outline:

The Course provides an introduction to basic concepts in health protection for health protection and public health practitioners including, environmental health officers, nurses and public health trainees. Students will develop an understanding of the principles of health protection including partnership working to deliver the prevention, management and control of communicable diseases and non- communicable environmental hazards.

Communicable disease subjects covered will include: basic microbiology; basic immunology and immunization; principles of surveillance; outbreak investigation; and nature and scope of communicable diseases of public health significance, including, transmission and control. Environmental health subjects covered will include: air quality; drinking water quality; food hygiene and safety; housing climate change and contaminated land.

Students will be introduced to the key concepts of risk assessment and management including chemical incidents and be able to describe the interventions available to public health agencies in responding to environmental health hazards and risks. The Course will also cover health protection structures; and introduce basic concepts of emergency planning, risk assessment and communication.

### Learning outcomes:

- 1. Describe the distribution, extent and public health impact of key non-communicable environmental hazards including climate change
- 2. Critically apply interventions in response to major environmental health hazards and also the key concepts of risk assessment and management. Be able to describe the basic concepts of communicable diseases including the epidemiology, prevention and generic control measures for infectious diseases
- 3. Be able to describe the organizational structures involved in health protection in The Gambia and the current surveillance systems for communicable diseases in The Gambia
- 4. Understand key principles of immunization and management of immunization programmes



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- 5. Critically apply the principles and steps involved in the management of outbreak investigation
- 6. Critically apply the basic concepts of infection control for Health Protection
- Critically apply the principles of emergency planning, the networks involved in the emergency planning process and the principles involved in emergency preparedness
- 8. Understand the role of legislation and Public Health law in The Gambian Health Protection
- 9. Critically apply the basic principles in the prevention of travel associated diseases

### 8. Health Promotion (PH703) 3 Credits (45 Credit Hours)

### Course content:

- > Health promotion in the context of Public Health
- The sociology of health promotion
- > The psychology of health promotion
- > Theories and models of health promotion
- > Health promotion strategy and policy formation
- Equity and health promotion
- Qualitative needs assessment and participatory research
- Community and organizational development
- Health promotion in action
- > Health promotion planning, research and evaluation
- > The role of health impact assessment in health promotion
- Evaluation and skills inventory

### Aims:

- 1. To provide an understanding of the concepts of health and the principles and practices of health promotion.
- 2. To trace the development of health promotion
- 3. To develop health promotion skills in relation to students' own practices, for example:
  - a. consolidating communication skills;
  - b. appreciating a range of views and values and their contribution to the overall health picture;
  - c. using appropriate evaluation methods;
  - d. understanding how policy is formed and structured and how to influence it;
- 4. Developing a critical awareness of a range of health promotion issues.



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### Learning outcomes:

By the end of the Course the student should be able to:

- 1. Describe the history and evolution of health promotion, including the relationships between health education, health promotion and the new Public Health;
- 2. Discuss and evaluate the various concepts and models of health and health promotion;
- 3. Illustrate the contribution of the social sciences to health promotion theory and practice;
- 4. Analyze health problems in their social context;
- 5. Identify the range of factors influencing Public Health policy in The Gambian context;
- 6. Access and interpret health promotion and evaluation literature;
- 7. Critically evaluate health promotion strategies;
- 8. Outline the principles and practice of health impact assessment.

### 9. Leadership & Management in Healthcare (PH704) 3 Credits (45 Credit Hours)

### **Course Description:**

This course provides an introduction to Leadership and Management in Healthcare delivery systems for students in a range of health-related sciences. The successful delivery of healthcare services relies on strong leadership and effective management. Its aim is to examine the main components of management in a way that is accessible to students. It will help you to develop the necessary knowledge and analytical skills, as well as providing an overview of the organizational, legal, and policy contexts within which managers operate, focusing on the challenges and opportunities faced in the health sector.

### **Course Contents:**

- Introduction to Good Management
- > Leadership and management skills relevant to healthcare delivery
- Basic concepts of Managers and Leaders
- What are the attributes of a good leader?
- Conditions for Good Management
- > Attributes required for a manager to be effective. How to Learn as a Manager?
- Mid-Semester Examination
- > Overview of a Manager's Role and Tasks
- > The structure of Healthcare delivery systems
- How to Manage Relations with the District Team/Supervisor?



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- > How to Manage Patients' Relations and achieve Patients' Satisfaction?
- Patients' Rights
- ➢ How to Manage Finances?
- ➢ How to Manage Hardware?
- How to Design Management Schedules?
- Seminar Presentation
- End of Semester Examination

### Learning Outcomes:

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

- 1. Evidence-based Leadership; Practice evidence-based leadership to ensure excellent health services outcomes.
- 2. Management; Leverage sound business principles and technology to guide day-today operational, strategic, and clinical decisions that ensure delivery of value-based healthcare.
- 3. Communication and Collaboration; Communicate and collaborate within and among disciplines, health services, and communities to transform patients' care, improve health and add value.
- 4. Strategic and Business Planning; Formulate business plans to achieve organizational goals within the market it operates and aligned with health policy, governance, and regulatory/legal entities.
- 5. Innovation; Combine system and design thinking to deliver innovative and integrative health services.

### 10. Practical Epidemiology and Statistics II (PH705) 3 Credits (45 Credit Hours)

### Course outline:

The course is a continuation from the Practical Epidemiology and Statistics I which builds on concepts introduced in Epidemiology Statistics and Research Methods to reinforce the ideas and enable students to focus on their critical application to novel practical situations.

Students will develop skills in critical appraisal of published work in health care related areas, and build on material introduced in Epidemiology, Statistics and Research Methods to develop more practical understanding of epidemiological and statistical methods used to assess patterns and causes of death and ill-health at the population level.



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### Learning outcomes:

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

- 1. Formulate specific and appropriate questions regarding health at the population level
- 2. Design appropriate epidemiological studies to address population health questions
- 3. Summarize, analyze and present basic epidemiological data appropriately
- 4. Interpret and critically appraise epidemiological and statistical information that they have collected/ produced themselves, or have been presented by others
- 5. Critically appraise published papers dealing with epidemiological studies and clinical trials

### 11. Health Technology Assessment (PH801) 3 Credits (45 Credit Hours)

### Course outline:

The Course introduces students to the principles of health technology assessment (HTA) and its place in healthcare decision making. The aim of the Course is to provide students with an understanding of: what technologies are; the rationale underpinning the need for HTA; the history of the development of HTA; organisations, systems and approaches to HTA; and the differing perspectives of the role and use of HTA. The Course takes students on a journey from the regulation of technologies, through the mechanisms underpinning the evidence-based approach to their adoption by healthcare systems on clinical and cost-effectiveness grounds to the influence of HTA on the continued development of new technologies. It is illustrated throughout by reference to real world examples.

### Learning outcomes:

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

- Describe the different types of health technologies and demonstrate the different evidence requirements for regulation
- Recognize and describe the different stages of the HTA cycle (horizon scanning, prioritization, evidence assessment, policy making, dissemination and implementation)
- Demonstrate an understanding of the information and evidence requirements for healthcare policy making in the context of new and existing health technologies
- Understand the rationale underpinning the need for HTA from a healthcare, economic and societal perspective



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• Describe the origins, development, and current status of HTA in global context

### 12. Sociology & Social Policy (PH802) 3 Credits (45 Credit Hours)

### **Outline content:**

- > Sociological approaches to health and illness What is meant by health and illness?
- > The experience of being ill
- Medicalization thesis
- Deviance and Stigma
- > Doctor-patient communication and models of care delivery Gender and Health
- Ethnicity and Health
- Social Class and Health
- Sociological perspective on health care

### Aims:

- 1. To introduce and explore sociological approaches for understanding the relationships between health, illness, healthcare and society.
- 2. To introduce concepts in medical sociology to facilitate understanding Public Health problems.

### Learning outcomes:

By the end of the Course the student should be able to:

- 1. Describe the nature and scope of sociological perspectives of health and illness.
- 2. Discuss the social implications of being ill and how this impacts on individual responses to illness.
- 3. Outline how social class, gender and ethnicity impact on patterns of illness.
- 4. Critically appraise sociological views on the nature and delivery of healthcare in The Gambia.

### 13 Policy and Politics in Public Health (PH803) 3 Credits (45 Credit Hours)

### **Course Contents:**

- Introduction to Health Policy and Planning, what and why?
- Policy Perspectives: A comparison between Macro and Micro Level Policies
- Impact of other National Policies on Health System
- Policy versus Planning
- Role of International Commitments on Health Policies (MDGs, SDGs)



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- Research and Policy
- Evidence-based Policy Making
- Policy and Politics
- Leadership and Policy

#### AIMS:

The overall goal of the course is to provide the participants a basis on how to critically analyze, develop and improve health policies.

### Learning outcomes:

By the end of the Course the student should be able to:

- 1. Describe concepts and tools used in health policy.
- 2. Conduct a stakeholder analysis in the process of policy development.
- 3. Comprehend the inter-relationship between policy, plan, program and project as well as planning at macro and macro levels.
- 4. Understand methods and importance of monitoring, evaluation and research for health policies.
- 5. Advocate health sector reform agenda effectively.

### 14. Health Economics (PH804) 3 Credits (45 Credit Hours)

#### **Course content:**

- Introduction to economics
- > Methods of economic evaluation in health care
- Interpreting health economics evidence
- Quality of life issues
- Priority setting issues in health care

#### Aims:

The course aims to develop a knowledge and understanding of the principles and practice of economics as applied to health and health care. In addition, to promote an understanding of the context, relevance, uses and limitations of health economics.

### Learning outcomes:



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By the end of the Course the student should be able to:

- 1. Develop an understanding of the principles of economic analysis and health economics
- 2. Develop knowledge and skills in undertaking economic analysis
- 3. Describe the concepts of efficiency, equity and market forces in health care.
- 4. Describe different methods of economic evaluation of health care and explain how each may be applied in practice.
- 5. Interpret and critically evaluate evidence in health economics
- 6. Describe current issues in priority setting in health care.
- 7. Understand the ethical issues surrounding health economics

### 15. XXXXXXX (PH805) 3 Credits (45 Credit Hours)

### 16. Management of Health Systems (PH901) 3 Credits (45 Credit Hours)

### AIMS:

This course aims to give students an in-dept understanding of health systems management. Basic management variables such as financial management, human resource management, physical management etc, are discussed. It is hoped that the knowledge would equip students with the conceptual issues of health, health care and health systems management.

### Learning outcomes:

By the end of the Course the student should be able to:

- 1. Define health and health care
- 2. Illustrate levels of health care
- 3. Identify health care providers and specialty care
- 4. Explain health care system and associated variables
- 5. Explain the historical development of health care systems
- 6. Describe The Gambian health care system
- 7. Define management and management theories



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- 8. Identify the functions of health management Illustrate health management collaborations
- 9. Explain human resources management in the health system
- 10. Explain physical resource management in the health system
- 11. Explain financial management in the health system
- 12. Identify the role of community in health care management
- 13. Identify the need for health system reform

# 17. Systematic Reviews & Evidence Synthesis (PH902) 3 Credits (45 Credit Hours)

### Course outline:

A systematic review is a review of literature that adopts explicit and standardized methods for the narrative and quantitative synthesis of evidence to minimize potential biases and improve the trustworthiness of its findings. The methodology has been widely adopted, e.g., by the Cochrane Collaboration, for summarizing best available evidence to support health care decision-making (including health technology assessment) and to guide future research.

The main aims of the Course are to provide students with an understanding of contemporaneous methods used in systematic reviewing and evidence synthesis and the rationale behind these methods, and to equip students with the fundamental skills required to carry out a systematic review relating to a range of health care related questions (for example, effectiveness, diagnostic accuracy and qualitative research questions).

This Course covers the key methodological stages of undertaking a systematic review, namely how to (I) formulate a structured review question, (ii) search for the most relevant and reliable literature, (iii) critically appraise and assess the risk of bias of different types of studies (e.g., randomized controlled trials, observational studies), (iv) synthesize the identified evidence either qualitatively or by meta-analysis, and (vi) present the findings. Through a combination of lectures, practical exercises and hands-on computer sessions, this Course takes students through the journey of planning and conducting a systematic review.

There will also be opportunities to undertake work in small groups throughout the Course, culminating in an assessed group presentation on the last day of the Course. This is an opportunity to apply concepts learned and will enable students to revise and extend their knowledge and skills.

#### Learning outcomes:



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

- 1. Describe the key steps in undertaking a systematic review and evidence synthesis
- 2. Demonstrate an understanding of the rationale behind the steps and methods for undertaking a systematic review
- 3. Formulate a clear research question and systematically search relevant repositories of evidence
- 4. Understand the similarities and differences in the approaches to synthesizing different types of evidence (e.g., clinical effectiveness, diagnostic test accuracy, qualitative evidence)
- 5. Critically appraise different types of evidence using suitable tools
- 6. Use appropriate software to carry out meta-analysis and interpret the results
- 7. Understand the importance and the process of developing a plan (protocol) for carrying out a systematic review

# 19. Environmental Health and Climate Change (PH903) 3 Credits (45 Credit Hours)

**Course Objectives:** The objective of this course is to provide a wide-ranging understanding on climate change, understanding climate system, being aware of the impacts of climate change on society, understanding of adaptation and mitigation options in relation to climate change and the environment.

### Course Outline:

- Definitions of Climate, Weather, Climate system: Components; controls on climate; Latitude, Earth-sun relationships, Revolution, Rotation, Axial tilt and their combined effect, Distance to large bodies of water
- Basic principles: about convergence of ecology with economic and sociology to evolve as environmental science, its nature, history, scope and the contribution to society.
- Environmental aspects: physic-chemical, biological, socio-economic, socio-cultural, moral and ethical, and philosophical thinking.
- Environmental problems: local, regional and global level.
- Environmental challenges: Sustainability of resources for development: efficiency of energy and water resources, current and future trends in growth and resultant environmental pollution, poverty and resource depletion, development in industry, agriculture and urbanization.
- Climate change processes, Green House Gases' emission, Drivers and Indicators of Climate Change, Cause & Effect of Climate Change
- Climate Change Policies (International and National)



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- Impacts of Climate Change in The Gambia, West Africa and the Sub-region
- Green Economy, Carbon Footprint, Technological Development and Changing climate, Climate Change matters
- Present rapid warming, Projection of future climate change, Uncertainty in climate change projections
- Climate change impacts-reasons for concern, Impacts on natural systems, societal systems, human health and comforts
- Reactions and attitudes to climate change: Adaptation
- Mitigation options: increased energy efficiency, fuel substitution, nuclear power, hydropower, solar energy, wind power
- Mitigation options: biomass energy, tidal, wave and geothermal energy, hydrogen economy, changes in infrastructure and behavior

# 20. Emergency Preparedness and Response in Public Health (PH904) 3 Credits (45 Credit Hours)

### **Course Description**

The course aims to provide a wide-ranging introduction to the fields related to the discipline of public health emergency preparedness, response, and recovery core competencies. The course provides training and resources for a basic understanding of the Incident Command System (ICS) and National Incident Management System (NIMS). Also included is disaster preparedness training to support animal owners, livestock farmers, and care providers as well as guidance for emergency management personnel in preparing community disaster plans that include animals. Assignments will serve as a basis for learner participation and problem- solving. The course will look at the purpose, history, organization, functions, tools, and activities used in the field.

This course is designed to contribute to the development of professional competency, at an awareness level, in preparing for and responding to all-hazard events both natural and manmade. Describe genetic, physiological, and psychosocial factors that affect susceptibility to adverse health outcomes following exposure to environmental hazards. Specify approaches for assessing, preventing and controlling environmental hazards that pose risks to human health and the environment.

### **Course Contents:**

1. Introduction to Disaster Preparedness and Emergency Response



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- 2. Types of Disasters and Their Consequences, Role and Responsibility of Public Health
- 3. National Incident Management System (NIMS) and Incident Command System (ICS) Leadership and Decision Making
- 4. National Response Framework
- 5. Crisis and Risk Communication
- 6. Surveillance and Investigation
- 7. Hazard, Vulnerability, and Risk Assessment
- 8. Vulnerable Populations
- 9. Psychological Aspects of Emergencies and Disasters
- 10. Legal Issues during a Disaster

### Learning Outcomes:

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

- Define public health emergency preparedness and response
- Describe the purpose of the National Response Framework
- Describe Incident Command Station (ICS) and the concept of chain-of-command
- List the actions that support a national response
- Describe the importance of effective communication in preparing for, responding to, and recovering from emergencies and disasters
- Use of specific case studies for the application preparedness, response, and recovery concepts in Public Health

### 21. Dissertation (PH900) 8 Credits (120 Credit Hours)

### Aim:

To demonstrate application of health and epidemiology knowledge and skills.

### **Course Description:**

It is mandatory requirement that all students taking the Masters programme to undertake a dissertation. The aim of the dissertation is to allow students to explore an area of interest in greater depth, and display the knowledge, skills and understanding acquired from the taught element of the course.



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The dissertation contributes the 8 credits towards the MPH programme. Any subject that falls within any area of public health can be chosen. Dissertations related to current or previous employment/interests are encouraged.

Full guidance on dissertations is provided in the separate handbook. This includes advice on topic selection, interaction with advisors, available resources and the typical structure/format of dissertations on a variety of topics. Furthermore, it contains information on the assessment of dissertations and the criteria against which dissertations are marked.

The dissertation course is to be done in the second year (last two semesters) of the course and must be completed in one academic year.

### For more information, please consult the separate dissertation handbook

### Objectives

- Plan an investigation in a related field
- Review and critically analyze previous work in this area to determine / refine and inform the focus and nature of the investigation
- Determine appropriate methods of investigation for the current task; justifying the approach selected and recognizing its limitations
- Collect or review and critically analyze data or information in the relevant field
- Interpret data or information collected and explain its significance
- Present the work in appropriate formats to a variety of reviewers