SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
MASTER OF PUBLIC HEALTH (MPH) PROGRAMME

BACKGROUND

The School of Public Health (SPH) for the past 19 years of its existence has pursued its mandate to produce health professionals for Ghana and Africa as a whole. The programme has churned out graduates who are currently in senior management positions in the Ghana Health Service/Ministry of Health and other auxiliary health organizations across Africa. The MPH programme was originally designed to train District Directors for the health sector. The goal was to meet the leadership needs of the newly created 110 districts. This mandate has largely been fulfilled since establishment. The emerging trends in public health and the corresponding strategies and interventions rolled out to address public health concerns have significantly changed. It is therefore imperative to run programmes that will be relevant in addressing emerging public health issues.

The new Master of Public Health programme will be run as a regular programme. Students will be required to do coursework and dissertation. The programme will offer core courses in both semesters. In addition are elective courses to be run only in the second semester. The elective courses are grouped under five broad areas for students to choose from based on their career interests and paths.

OBJECTIVES

The programme aims at producing graduates who will be equipped with knowledge, competencies and skills to address public health challenges; undertake research in the discipline; promote healthy behavior and provide effective leadership.

ADMISSION REQUIREMENTS

The MPH is available to health professionals and other graduates with a good first degree (a minimum of second class lower), with at least three (3) years working experience in a relevant Public Health area.

DURATION

The programme is full time of one year (12 calendar months) duration.

GRADUATION REQUIREMENTS

<table>
<thead>
<tr>
<th>Course Work</th>
<th>24-36 (12-18 credits per semester)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminar</td>
<td>3 credits</td>
</tr>
<tr>
<td>Dissertation</td>
<td>12 credits</td>
</tr>
<tr>
<td>Total</td>
<td>45-51 credits</td>
</tr>
</tbody>
</table>
STRUCTURE OF PROGRAMME

FIRST SEMESTER

Core courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEOH 601*</td>
<td>Essentials of Environment and Occupations on Human Health</td>
<td>2</td>
</tr>
<tr>
<td>BSTT 601</td>
<td>Methods in Biostatistics</td>
<td>4</td>
</tr>
<tr>
<td>BSTT 603</td>
<td>Research Methods in Public Health</td>
<td>4</td>
</tr>
<tr>
<td>EPDC 621</td>
<td>Principles of Epidemiology</td>
<td>2</td>
</tr>
<tr>
<td>HPPM 611*</td>
<td>Introduction to Health Systems</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 611*</td>
<td>Introduction to Population Studies and Reproductive Health</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 611</td>
<td>Behavioural Science</td>
<td>2</td>
</tr>
</tbody>
</table>

Total 18

SECOND SEMESTER

Core

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPDC 648*</td>
<td>Essentials of Public Health</td>
<td>2</td>
</tr>
</tbody>
</table>

Elective Courses (10-16 credits)

Each student will take 10-16 credits of elective courses. Students are required to choose one elective course from a department other than the one in which they are taking their concentration.

Department of Biological, Environmental and Occupational Health Sciences (BEOH)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEOH 602</td>
<td>Environmental Health</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 622</td>
<td>Occupational Health</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 624</td>
<td>Environmental Impact on Human Health</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 626</td>
<td>Global Health Issues</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 628</td>
<td>Infections and Immunity</td>
<td>2</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>BEOH 664</td>
<td>Water Supply and Sanitation</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 668</td>
<td>Principles of Environmental and Health Impact Assessment</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 672</td>
<td>Climate Change and Disaster Risk Reduction</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 674</td>
<td>Vaccinology in Public Health Intervention</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 676</td>
<td>Emergency Preparedness and Health in Complex Emergencies</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 630</td>
<td>Public Health Practice in BEOH</td>
<td>2</td>
</tr>
</tbody>
</table>

**Department of Epidemiology and Disease Control (EPDC)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPDC 604</td>
<td>Disease Control</td>
<td>2</td>
</tr>
<tr>
<td>EPDC 606</td>
<td>Disease Outbreak Investigation and Response</td>
<td>2</td>
</tr>
<tr>
<td>EPDC 622</td>
<td>Scientific Communication</td>
<td>2</td>
</tr>
<tr>
<td>EPDC 626</td>
<td>Introduction to Non Communicable Disease Epidemiology</td>
<td>2</td>
</tr>
<tr>
<td>EPDC 632</td>
<td>Epidemiology of Malaria and Planning its Control</td>
<td>2</td>
</tr>
<tr>
<td>EPDC 634</td>
<td>Epidemiological Methods for Evaluating Health Programmes and</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Services</td>
<td></td>
</tr>
<tr>
<td>EPDC 636</td>
<td>Selected Topics in Epidemiology</td>
<td>2</td>
</tr>
<tr>
<td>EPDC 642</td>
<td>Pharmacoepidemiology and Pharmacovigilance</td>
<td>2</td>
</tr>
<tr>
<td>EPDC 602</td>
<td>Advanced Epidemiology</td>
<td>2</td>
</tr>
<tr>
<td>EPDC 630</td>
<td>Public Health Practice in EPDC</td>
<td>2</td>
</tr>
</tbody>
</table>

**Department of Biostatistics (BSTT)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSTT 602</td>
<td>Advanced Biostatistics</td>
<td>2</td>
</tr>
<tr>
<td>BSTT 604</td>
<td>Analysis of Complex Survey Data</td>
<td>2</td>
</tr>
<tr>
<td>BSTT 666</td>
<td>Health Data Management</td>
<td>2</td>
</tr>
<tr>
<td>BSTT 608</td>
<td>Health Information Technology</td>
<td>2</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>BSTT 630</td>
<td>Public Health Practice in BSTT</td>
<td>2</td>
</tr>
</tbody>
</table>

Department of Health Policy, Planning and Management (HPPM)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPPM 608</td>
<td>Introduction to Management of Health Services</td>
<td>2</td>
</tr>
<tr>
<td>HPPM 642</td>
<td>Advanced Health Systems Development and Management</td>
<td>2</td>
</tr>
<tr>
<td>HPPM 644</td>
<td>Health Policy Analysis and Research</td>
<td>3</td>
</tr>
<tr>
<td>HPPM 646</td>
<td>Advanced Health Policy</td>
<td>2</td>
</tr>
<tr>
<td>HPPM 648</td>
<td>Advanced Health Planning</td>
<td>2</td>
</tr>
<tr>
<td>HPPM 652</td>
<td>Health Legislation</td>
<td>2</td>
</tr>
<tr>
<td>HPPM 656</td>
<td>Applied Economics for Health Policy</td>
<td>2</td>
</tr>
<tr>
<td>HPPM 612</td>
<td>Project Management</td>
<td>2</td>
</tr>
<tr>
<td>HPPM 614</td>
<td>Strategic Planning and Marketing for Health Services</td>
<td>2</td>
</tr>
<tr>
<td>HPPM 630</td>
<td>Public Health Practice in HPPM</td>
<td>2</td>
</tr>
</tbody>
</table>

Department of Population, Family and Reproductive Health (PFRH)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>PFRH 602</td>
<td>Introduction to Family Health</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 608</td>
<td>Child Health in Public Health</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 614</td>
<td>Public Health Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 616</td>
<td>Motherhood Issues, Maternal Morbidity And Mortality</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 618</td>
<td>Pregnancy Outcomes, Newborn and Infant Health</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 624</td>
<td>The Adolescent in Health and Illness</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 626</td>
<td>Adolescent Health Policies and Programmes</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 632</td>
<td>Fertility and Family Planning</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 634</td>
<td>Population Health and Survival</td>
<td>2</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credit</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>PFRH 646</td>
<td>Clinical and Organizational Practice of Reproductive Health Service</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 674</td>
<td>Public Health Approaches to HIV and AIDS</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 678</td>
<td>Risk and Resilience in Adolescent Development</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 682</td>
<td>Critical Issues in Reproductive Health</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 684</td>
<td>Men’s Reproductive Health</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 686</td>
<td>Current and Emerging Issues in Nutrition</td>
<td>2</td>
</tr>
<tr>
<td>PFRH 630</td>
<td>Public Health Practice in PFRH</td>
<td>2</td>
</tr>
</tbody>
</table>

**Department of Social and Behavioral Science (SOBS)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOBS 602</td>
<td>Implementation Research</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 604</td>
<td>Social Science Data Management and Analysis</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 606</td>
<td>Applied Medical Anthropology</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 608</td>
<td>Gender and Health</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 614</td>
<td>Evidence-Based Approach to Health Communication</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 624</td>
<td>Ageing and Health</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 632</td>
<td>Health Psychology</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 634</td>
<td>Health and Development in the Third World</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 636</td>
<td>Plural Medical Systems in the Third World</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 638</td>
<td>Complementary Medicine</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 642</td>
<td>Culture and Sexuality</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 644</td>
<td>Social Protection for Child Development</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 646</td>
<td>Systems of Health Provision in Ghana</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 648</td>
<td>Community Mental Health</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 650</td>
<td>Health Promotion and Practice</td>
<td>2</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Credits</td>
</tr>
<tr>
<td>------------</td>
<td>---------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>SOBS 652</td>
<td>Social Aspects of Adolescent Health</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 668</td>
<td>Mental Health and Wellbeing</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 672</td>
<td>Mental Health Issues in Public Health</td>
<td>2</td>
</tr>
<tr>
<td>SOBS 630</td>
<td>Public Health Practice in SOBS</td>
<td>2</td>
</tr>
</tbody>
</table>

**Dissertation and Seminar**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEOH 610</td>
<td>Seminar in BEOH</td>
<td>3</td>
</tr>
<tr>
<td>BSTT 610</td>
<td>Seminar in BSTT</td>
<td>3</td>
</tr>
<tr>
<td>EPDC 610</td>
<td>Seminar in EPDC</td>
<td>3</td>
</tr>
<tr>
<td>HPPM 610</td>
<td>Seminar in HPPM</td>
<td>3</td>
</tr>
<tr>
<td>PFRH 610</td>
<td>Seminar in PFRH</td>
<td>3</td>
</tr>
<tr>
<td>SOBS 610</td>
<td>Seminar in SOBS</td>
<td>3</td>
</tr>
<tr>
<td>BEOH 640</td>
<td>Dissertation in BEOH</td>
<td>12</td>
</tr>
<tr>
<td>BSTT 640</td>
<td>Dissertation in BSTT</td>
<td>12</td>
</tr>
<tr>
<td>EPDC 640</td>
<td>Dissertation in EPDC</td>
<td>12</td>
</tr>
<tr>
<td>HPPM 640</td>
<td>Dissertation in HPPM</td>
<td>12</td>
</tr>
<tr>
<td>PFRH 640</td>
<td>Dissertation in PFRH</td>
<td>12</td>
</tr>
<tr>
<td>SOBS 640</td>
<td>Dissertation in SOBS</td>
<td>12</td>
</tr>
</tbody>
</table>
DESCRIPTIONS OF COURSES

Department of Biological, Environmental and Occupational Health Sciences

BEOH 601  ESSENTIALS OF ENVIRONMENT AND OCCUPATIONS ON HUMAN HEALTH

This course will introduce students to advanced level theories in environmental and occupational health. It will cover environmental components, environmental impact on human health and disease, water supply and sanitation, water quality standards as well as the burden of communicable and non-communicable diseases. Ecological considerations, including urban/rural ecology, human activities and impact on ecosystem, green house effects, environmental degradation and ozone depletion will be stressed. It will also lay emphasis on environmental health policy, environmental protection and management.

BEOH 602  ENVIRONMENTAL HEALTH

This course prepares the student to participate in the planning and administration of environmental health programs and to develop policies and regulations relevant to the protection and improvement of the physical environment. The course includes topics on basic principles of environmental health, identifying the environmental hazards to which humans are exposed, modes of transmission of the hazards to men and the corresponding measures for protection against or prevention of transmission. It also touches on the basic principles in designing of environmental health programs including water supply and disposal, vector/pest control, housing environment as well as food hygiene and hygiene education.

BEOH 622  OCCUPATIONAL HEALTH

This course will examine Occupational Medicine and Hygiene in relation to agriculture and industrialisation. Discussions will focus on research in any aspect of hazards and pathophysiology encountered in the working environment, particularly in the area of respiratory physiology and related population predicted values. Advanced studies in Occupational Epidemiology, Ergonomics, Occupational Toxicology and Psychology will be emphasized. Legal and administrative aspects of occupational safety and workplace exposures, workplace injuries health and workman compensation issues will be explored. Integrated assessment of extractive industries, including large and small scale gold mining activities, oil and gas exploration and commercial drilling would be stressed.

BEOH 624  ENVIRONMENTAL IMPACT ON HUMAN HEALTH

The course looks at how health is affected by environmental factors. It is organized under four subheadings: Ecology and health (e.g. ecological Systems and Interactions, man’s Impact on Ecological Systems, climatic changes and effects on Health, health Considerations of Ecology, etc.); microbes and parasites (e.g. classification of biological organisms of health importance, introduction to cell biology, introduction to immunology, modes of transmission of pathogens, new concepts in biology and their applications in public health, etc.) and physico-chemical
agents (e.g. particulate matter such as dust, ultra-fine particles, oxides of organic and inorganic compounds, noise, etc.)

**BEOH 626 GLOBAL HEALTH ISSUES**

The course includes presentations on topics such as global overview of health, challenges faced in the areas of global health including medical, cultural, historical, economic, and political Influences. The course will also address the adequacy of the scientific base to support improvements in health and health care. It will include Assessment of Biomedical Knowledge and Research for the reduction of Behavioural, Socio-economic and Environmental Risks to Public Health, Ethical Issues on Public Health, Availability of Trained Health Personnel, Institutional Capacity Building for Health Research and Establishment of Supportive Partnership and Collaboration.

**BEOH 628 INFECTION AND IMMUNITY**

The course focuses on Health Challenges of Infections and Parasitic Diseases, Concepts and Reality. The programme emphasises on Training for Public Health Practitioners who will use their training in Immunology, Epidemiology, Laboratory and Statistics to improve the protection of Populations from vaccine-preventable diseases. Topics will include Epidemiology, Pathogenesis and Immunity of Infectious Diseases, Principles of Immunisation, Vaccinology and will establish a forum on microbial threats.

**BEOH 664 WATER SUPPLY AND SANITATION**

This course brings basic health issues to the public health practitioner and covers, water access, treatment, quality standards, water related diseases in relation to sanitation. Current issues on water supply, shortages, storage and loss. Use of water in sanitary practice and sanitation inspections. It will address issues relating to improving water supply and sanitation.

**BEOHS 668 PRINCIPLES OF ENVIRONMENTAL AND HEALTH IMPACT ASSESSMENT**

This course introduces students to the need for impact assessments of various development activities spanning deforestation, construction of new roads, buildings, new estates, markets, shopping centres to gold mining or petroleum drilling. Not to mention the effects of industry and industrial by-products and wastes on the resident communities which will be exposed to the detrimental effects from the environmental, physical, social and mental changes to the health and community networks. It equips students in leadership positions to use the principles to ensure that the interests of the communities they lead are served by applying the systematic principles for impact assessment.

**BEOH 672 CLIMATE CHANGE AND DISASTER RISK REDUCTION**

The contents of this course include definition of terms used in climate change, the theory and science of climate change including green house gases, their emissions and contribution to warming of the earth’s atmosphere. It also touches on impact of climate change on different sectors such as agriculture and food security, water resources and management, biodiversity and
health. The course will explain direct and indirect impacts of climate change on populations and concepts of mitigation and adaptation to climate change and climate variability.

**BEOH 674 VACCINOLOGY IN PUBLIC HEALTH INTERVENTION**

The course provides an introduction to Vaccinology as applied to humans and its application in the health sector. A basic understanding of the immune system and immunology as it applies to vaccines and vaccination including knowledge of current and potential vaccine preventable diseases, causative organisms, etiology, epidemiology, herd immunity and implications and indications for vaccination. The course will provide a good understanding of the structure and function of vaccines, vaccine development and manufacture, and an understanding of how vaccine safety is established and monitored. It will ensure an understanding of Ghana’s policy, schedule and the rationale behind vaccines.

**BEOH 676 EMERGENCY PREPAREDNESS AND HEALTH IN COMPLEX EMERGENCIES**

This course will introduce students to the advanced level theories and practice in the delivery of humanitarian supplies and logistic support during disasters, complex emergencies and crisis situations. The course covers response to a threat of influenza or other pandemics, contingency plans to maintain delivery of services during times of significant health threat, establishing mechanisms to allow service provision services from home, establishment of partnerships, situation analysis, planning assumptions, concept of operations, patient triage, clinical evaluation/treatment of patients, human resources for patient care, physical resources for patient care, education and training, facility access, business continuity and infection control.
BSTT 601  METHODS IN BIOSTATISTICS

This course introduces basic statistical concepts and methods as applied to diverse problems in public health. It also introduced students to the basic data handling commands in Stata. Topics to be covered are: an introduction to classical inference including the distinctions between population and sample, and between statistics and population values, and types of data. It will also include analysis of continuous data, analysis of binary data, and analysis of count data within the concept of sampling distributions, estimation, confidence intervals, hypothesis tests, types I and II errors. The course will have a lab session on the use of Stata.

BSTT 602  ADVANCED BIOSTATISTICS

This course is primarily intended for the students who have attended the Semester 1 course in Methods in Biostatistics, and are familiar with Stata and who wish to acquire further skills in the analysis and interpretation of epidemiological studies. The emphasis is on the practical application of methods, with a brief introduction to likelihood theory, which provides the theoretical basis for most of the statistical methods covered in this module. Topics include: 1) Likelihood theory, 2) Logistic regression for the analysis of binary outcome data, 3) Poisson regression for analysis of count data, and 4) introduction to survival analysis.

BSTT 603  RESEARCH METHODS IN PUBLIC HEALTH

This course provides an overview of the major issues in research including key concepts in research methods appropriate to the investigation of problems in public health. It teaches students to formulate testable research hypotheses, utilize appropriate study designs, collect and analyze data, and interpret findings with an eye to their potential public health impact. It also considers designs and techniques appropriate for qualitative/text data analysis. It will cover both quantitative and qualitative methods. There will be a lab session on the use of computers in Public Health.

BSTT 604  ANALYSIS OF COMPLEX SURVEY DATA

The course covers sample size determination, and the sampling methods used to collect survey data and how they affect the estimation of totals, ratios, and regression coefficients as well as many survey variance estimators, including linearization, balanced and repeated replication (BRR), and jackknife. Strata with a single sampling unit, certainty sampling units, subpopulation estimation, and poststratification will also be covered. Teaching consists mostly of lectures followed by computer practical sessions. Students will be assessed by analysing population-based surveys including Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS).

BSTT 608  HEALTH INFORMATION TECHNOLOGY

This course begins with an overview of Health Information Technology (HIT) and the e-health strategy of Ghana. HIT applications are presented with a focus on the different clients of information systems including clinicians, pharmacists, nurses and hospitals. A special set of lectures focus on the how the Internet and technology are changing health care delivery. Experts
representing different health IT clients will present lectures on current and emerging trends in their environments including e-health, m-health, standards etc. The final portion of the course focuses on preparing students to champion the deployment of electronic health records systems.

**BSTT 666 HEALTH DATA MANAGEMENT**

This course prepares students to create and manage health data elements and data sets. It introduces health data components and systems, data structure, health data management life cycle, processing of health information, storage, and retrieval and archiving processes. It presents the process of transforming data into information and builds capacity in health data representation and coding. There will be discussions on the WHO family of International Classifications. There will be discussions on compliance with health care information laws and regulations.
EPDC 604  DISEASE CONTROL

This course introduces the student to the general concepts of communicable diseases prevention and control. It also seeks to acquaint the student with current issues in the prevention and control of various priority communicable diseases. Topics cover: Definitions of basic prevention and control terms such as control, elimination, eradication etc.. Reportable diseases. Quarantinable diseases. Factors influencing communicable diseases transmission process. Control of Oral-faecal transmitted diseases; Vector-borne diseases, Sexually transmitted diseases; Water related diseases; Contact diseases; Zoonotic diseases and Air borne diseases.

EPDC 606  DISEASE OUTBREAK INVESTIGATION AND RESPONSE

The course introduces students to the concept of disease and public health surveillance and explains the relationship between surveillance and disease outbreaks. The role of the laboratory in outbreak investigation is also emphasized. Students are also taught how to write outbreak response reports. Topics to be covered include Introduction to Integrated Disease Surveillance and Response, Introduction to public health surveillance, principles of outbreak investigation; investigating an outbreak; developing case definition; line listing; descriptive data analysis in relation to person, place and time; the role of the laboratory in outbreak investigation.

EPDC 621  PRINCIPLES OF EPIDEMIOLOGY

This course trains students in epidemiological principles, methods, and practices through constructive coursework and offers them the opportunity to acquire knowledge, skills and experiences for studying and measuring the distributions, characteristics, causes, and prevention of disease, disability and premature death in humans. The course emphasises measurement of morbidity and mortality and the significance of indices used and standardization of rates. It discusses models and inferences underlying observational studies, approaches for constructing measures of disease occurrence, identifying causes of confounding in epidemiologic studies, characterizing sources of bias in observational studies and how to link scientific questions with appropriate analytical methods.

EPDC 622  SCIENTIFIC COMMUNICATION

This course provides training in the preparation of scientific communication materials as well as honing presentation skills. To this end the course emphasizes the following - communicating scientific information, writing effectively, crafting persuasive presentations, writing scientific manuscripts for publication, conducting journal searches, writing abstracts and ancillary materials, designing effective visuals, delivering effective presentations. Students are also guided on how to critically read and evaluate articles.
EPDC 626  INTRODUCTION TO NON COMMUNICABLE DISEASE EPIDEMIOLOGY

This course is designed to enable students acquire knowledge and skills in the epidemiology of common non-communicable diseases including cardiovascular diseases, diabetes, cancers and mental disorders. The course discusses the epidemiology and prevention of cardiovascular disease, focusing on coronary heart disease, stroke, and end stage renal disease. It focuses on established major modifiable risk factors for cardiovascular diseases, genetic susceptibility and the social burden of disease and prevention strategies. The epidemiology and prevention of diabetes, obesity, and associated complications and the methodological issues associated with evaluating these in epidemiologic studies will be discussed.

EPDC 632  EPIDEMIOLOGY OF MALARIA AND PLANNING ITS CONTROL

The course strengthens students’ capacity in critical synthesis of malaria epidemiology for the planning, re-planning, implementation and evaluation of appropriately selected prevention and control options at the national, district and peripheral levels. The course topics will enable students to acquire competency in malaria policy development; malaria problem analysis and the examination of solutions. It will also cover stratification of the problem according to epidemiological and socio-economic characteristics; selection of appropriate control interventions for the different strata; the setting of priorities followed by decision-making.

EPDC 634  EPIDEMIOLOGICAL METHODS FOR EVALUATING HEALTH PROGRAMMES AND SERVICES

This course uses a public health program evaluation framework to explore several dimensions of evaluation. The course topics will enable students acquire the knowledge and skills to draw appropriate inferences from epidemiologic and monitoring and evaluation data, differentiate among goals, measurable objectives, related activities, and expected outputs, outcomes and impacts for a public health programme; ways program logic models are used to illustrate a program’s theory, goals, and objectives; to identify feasible and appropriate evaluation questions and performance metrics.

EPDC 636  SELECTED TOPICS IN EPIDEMIOLOGY

The Selected Topics in Epidemiology seeks to examine recent ideas and unresolved controversies regarding fundamental principles of epidemiologic measures and study design. The topics will include causality, epidemiologic measures, the basis for improving the validity and precision of epidemiologic research, techniques of epidemiologic modeling, standardization, interaction between causes, matching, reporting and reviewing of epidemiologic studies, strength of evidence and on methodological issues, common mistakes in reporting results from the epidemiologic research.
EPDC 642 PHARMACOEPIDEMIOLOGY AND PHARMACOVIGILANCE

The course emphasises the history and need for pharmacovigilance. It discusses pharmacoepidemiological methods, principles of pharmacovigilance, pharmacovigilance reporting systems, tools for management of reports, global initiatives in pharmacovigilance, regulatory pharmacovigilance, signal detection in pharmacovigilance, causality assessment principles & analysis. The course will enable students use the knowledge and skills gained in collecting, monitoring, researching, assessing and evaluating information on the adverse effects of medicines from different stakeholders with a view to preventing harm to patients.

EPDC 646 ADVANCED EPIDEMIOLOGY

This course provides students the opportunity to acquire skills in data analysis, interpretation and hypothesis generation. Topics covered include: Causation – Koch’s postulate and modern causality structure, Study design specifics – Case-Control studies, case and control selection, Cohort studies – prospective, retrospective, Analytical; Cross-sectional studies, Experimental studies – randomized trial, Measures of association and impact – 2 by 2 tables, absolute risk, relative risks and odds ratios, attributable risk, confounding and effect modification – random error and systematic error, types of bias, control of confounding.

EPDC 648 ESSENTIALS OF PUBLIC HEALTH

This course examines the history, values, contexts, principles, frameworks, organization of delivery systems that are a foundation for public health administration and practice. It focuses also on administrative processes and strategies that drive and support achieving results efficiently, effectively, and responsively; explores policy and programming challenges and opportunities in strategic public health issues. The topics the course covers include introduction and definition of Public Health’s Mission and Values, review of public health and essential public health services, social change and health status, Policy, Politics, and Public Health, environmental and occupational health, health screening program.
Department of Health Policy Planning and Management

HPPM 608  INTRODUCTION TO MANAGEMENT OF HEALTH SERVICES

The course will focus on Health sector in Ghana, managerial functions and roles; Health Sector Reforms, District Health Services, leadership, motivation, ethics and Strategic Management. Other areas of focus are: Macro-contexts of Health Care reforms, Decentralization and Health Systems Management; Roles of the private sector in health systems, Agents in Health Care financing: consumers, producers & purchasers; Strategies for achieving Health Systems Goals; The Changing Paradigm of Management. It will also focus on leadership, team building, conflict resolution, negotiation skills, coaching and mentorship and introduction to project management.

HPPM 611  INTRODUCTION TO HEALTH SYSTEMS

This course provides a foundation to the components, actors and inter-relationships of the health system; core principles of systems thinking and analysis as a platform for health systems analysis. It will explain the context of health system, the components, the characteristics of a functioning health system and their principles. It also covers health systems framework, complexity of health system and the fact that people are at the heart of their complexity. The context of health system in Africa and the organizational arrangements [centralized, decentralized and organizational levels] will be explained.

HPPM 642 ADVANCED HEALTH SYSTEMS DEVELOPMENT AND MANAGEMENT

This course will focus on work processes, i.e. sequence of tasks and activities that unfold over time. Others will include effective decision making, and knowledge of the interrelationship of the functions of management process. Some of these management processes to be addressed are organizing, directing, leading, controlling, staffing and, planning. It will also highlight knowledge of managerial roles, management levels, managerial skills, technical skills, conceptual skills, human relation skills. Other areas to be taught are health care delivery and management of resources (human, financial, raw materials, technological and information), health care services and stewardship.

HPPM 644  HEALTH POLICY, ANALYSIS AND RESEARCH

This course provides students with an understanding and appreciation of health policy analysis within the context of Health Policy and Systems Research, its relevance to the field of public health and some frameworks, theories, knowledge paradigms, concepts and methods in designing and conducting health policy analysis. It further focuses on methodological issues in conceptualizing, designing and conducting health policy research and analysis. The students are guided to appropriately ask health policy and systems research questions given the multidisciplinary perspective and methodology it embrace and applies.
HPPM 646 ADVANCED HEALTH POLICY

This course introduces students to the concepts and issues in health policy development and analysis for public health practitioners and policy makers. It examines the interaction of context, actors, processes and the content in public policy development related to health in developing countries. It also emphasises how to use this understanding to improve the process of public policy and program development for health so that policies and programs developed can lead to the desired health systems goals. Concepts and issues in influencing and managing policy change are also introduced.

HPPM 648 ADVANCED HEALTH PLANNING

The course introduces students to the concepts of planning and the application of these concepts to the delivery of health care. Emphasis is placed on practical decision making and health planning as a prelude to determining sources of data collection, analysing and interpreting data in assessing the health care needs of a community and in determining the alternative means of meeting those needs. These concepts would be discussed: systems analysis, health system, health needs assessment, forecasting, problem definition, goal setting, alternative interventions, cost-benefit analysis, plan / programme implementation and monitoring and evaluation.

HPPM 652 HEALTH LEGISLATION

Health Legislation is designed to cover the basic principles of some laws which are pertinent to health delivery and frequently used terminology in the practice of health care. It will also address the importance of Ethics in Health. Other topics are the laws, ordinances, directives, regulations and other similar legislative instruments that deal with all aspects of health protection and promotion, disease prevention, and delivery of health care. This course will also cover aspects of health legislation, environmental health and protection of public from injury and understanding health care politics, health policy and related subjects.

HPPM 656 APPLIED ECONOMICS FOR HEALTH POLICY

The Applied Economics for Health Policy course is designed to provide students with an understanding of the basic principles of economics applied to health. The course content will include basic economics concepts such as scarcity, opportunity cost, choice, scale of preference; concepts of consumer behavior such as demand, utility; behavior of firms (production and cost); markets and market failures in health economics; principles of microeconomics; costing and cost measurements; economic evaluation of health care programmes; elements of health care financing; provider payment mechanisms.

HPPM 612 Project Management

This course aims to offer students the opportunity to learn the basic concepts and approaches that support the planning, scheduling, resource allocation, controlling and performance measurement/management of activities that are needed to ensure successful implementation and completion of a project. These will enable them to plan, organise, implement, and control tasks that will enable them to attain an organisation's plan/objective, including budgeting and
performance goals. Topics will include: basic concepts of project and project management, project selection, project definition, project organisation structure, team building, communication and conflict management, project planning methods and techniques, resource allocation, project monitoring and control.

**HPPM 614 STRATEGIC PLANNING AND MARKETING FOR HEALTH SERVICES**
This course discusses and applies the concepts and methods of healthcare planning, strategic planning and marketing to healthcare delivery. It will also introduce students to the role that marketing plays in health care organisations. It will examine the marketing environment in the health care field, including strategy and market planning. It will also explore how to use market information systems and market research, including market segmentation, products and services. Students will also be introduced to how to design and manage marketing channels, design and manage marketing communications, and implement relationship marketing strategy.
PFRH 602  INTRODUCTION TO FAMILY HEALTH

This course explores the basic demographic and family health issues in public health. It introduces students to family and household dynamics and their implications for the health of members. Students will critically review scientific literature in the field of family health, and then apply them to family health concerns and matters in developing countries. Topics include: definitions and concepts used in family health; the structures and functions of family health; conceptualization of family health and wellness, family health models and their application to research and practice. Issues unique to women’s health, child health, men’s health will be discussed.

PFRH 608  CHILD HEALTH IN PUBLIC HEALTH

This course acquaints students with the determinants, scope and levels of child health care in Public Health. It discusses a broad spectrum of issues affecting child growth and development. Topics to be covered include embryonic development and factors affecting it, infant and under-five mortality rates, determinants and relevance; nutrition and its effects on growth and development performance; child nutrition including breastfeeding; preventive health care from birth to adolescence; the MGDs, gender and child Health; HIV/AIDS and Child Health; childhood injuries and their prevention; effects of environment on child growth and development; child abuse and neglect; child labour and child trafficking.

PFRH 611  INTRODUCTION TO POPULATION AND REPRODUCTIVE HEALTH

The course introduces students to basic concepts of demography and population studies to help them understand the relationship between demographic variables and health/social processes. In addition, issues of reproductive health, particularly family planning, maternal health and issues related to HIV/AIDS and STIs will be discussed. The course will examine sources of demographic and health data, errors and sources of errors in demographic data. It also examines population structure and composition. Students will be introduced to rates, ratios and probabilities. Students will be introduced to the life table, its construction and applications and to specific substantive topics such fertility and mortality.

PFRH 614  PUBLIC HEALTH NUTRITION

This course will cover the following topics: introduction to the dimensions of nutrition, nutritional assessment and surveillance in various risk groups. Malnutrition will be discussed as observed across the life-cycle with special focus on childhood undernutrition, micronutrient deficiencies and disorders, and over-nutrition, as well as the links between nutrition transition and the double burden of malnutrition. Key topics such as Infant and young child feeding, nutrition policies, dietary and physical activity guidelines, and other intervention strategies will
be discussed in the context of emerging trends in nutrition situation and the global response.

**PFRH 616 MOTHERHOOD ISSUES, MATERNAL MORBIDITY AND MORTALITY**

This course will provide students with an overview of the health problems faced by women in their quest to become mothers. The course will also address the causes of maternal morbidity and mortality in Ghana as well as in other countries of the world. The status of women’s general reproductive health and maternal health in Ghana will be discussed. Interventions to improve maternal health in particular and women’s health in general will also be addressed. Students will also be taught how to access information on women’s reproductive health from different existing sources.

**PFRH 618 PREGNANCY OUTCOMES, NEWBORN AND INFANT HEALTH**

This course focuses on women’s lives and childbearing families in contemporary Ghanaian context. It offers an examination of concepts related to maternal infant health. The course offers opportunities to upgrade knowledge on current best practices, which promote optimal pregnancy outcomes, neonatal, and infant health. To be explored and discussed are the causes of neonatal and infant mortality and morbidity locally, nationally and globally. Students identify current best clinical practices that ensure favorable pregnancy outcomes and promote infant health. Students will be exposed to the essential elements for ensuring favorable pregnancy outcomes and good infant health.

**PFRH 624 THE ADOLESCENT IN HEALTH AND ILLNESS**

This course provides students with comprehensive knowledge of adolescence as a life stage and its associated health issues in both domestic and international domains. It examines physiologic, economic and nutritional factors as well as socio-cultural practices that may enhance or impede adolescent health and well-being. Some conceptual frameworks that highlight risk and protective factors needed for successful transition to adulthood are also discussed. The course also discusses areas such as adolescent pregnancy, HIV, obesity and mental health and their impact on the individual’s health later in life.

**PFRH 626 ADOLESCENT HEALTH POLICIES AND PROGRAMMES**

This course examines adolescent health policies and evidence-based programmes that improve the general health and wellbeing of adolescents. It is designed to enable students familiarize themselves with the contents of various national and international youth policies and programmes. Students will discuss and critique various adolescent policy documents and evaluate adolescent health programmes using evidence-based research. Topics to be covered include epidemiology of adolescent health, adolescent risk behaviours, theoretical and empirical approaches to exploring adolescent health problems. This course provides an opportunity for students to link theory, research, practice and adolescent health policies/programmes to determine gaps and devise intervention strategies.
**PFRH 632  FERTILITY AND FAMILY PLANNING**

This course is about the provision of family planning services and the range of services employed to provide family planning services in developing country settings. It discusses the evolution of the international family planning movement and country level fertility reduction programmes. It assesses the effectiveness and health consequences of specific contraceptive methods and women's reproductive health. It discusses issues and programmatic strategies related to the development, implementation and management of family planning programmes in developing countries with emphasis on social, cultural, political and ethical barriers to family planning programmes.

**PFRH 634  POPULATION HEALTH AND SURVIVAL**

This course is about the health of populations. The course helps students gain an understanding of the principles of a population health approach and its role in improving health and reducing health inequities among population groups by addressing a broad range of factors including individual, social, economic and environmental factors known to influence and contribute to health at a population level. The course outlines social structures and processes that determine health differentials. The course also traces the historical patterns of health dynamics. We also explore contemporary issues in globalization and health.

**PFRH 646  CLINICAL AND ORGANIZATIONAL PRACTICE OF REPRODUCTIVE HEALTH SERVICE**

This course addresses the clinical and organizational requirements for effective reproductive health service delivery. It will introduce students to Reproductive health service components, gender and socio-cultural influences on RH service delivery. Students will be equipped with the needed skills for organizing, high quality clinical RH services. The course will capacitate students to understanding of gender influences on service delivery. The course offers opportunities to upgrade knowledge on current best practices, which promote optimal RH outcomes.

**PFRH 674  PUBLIC HEALTH APPROACHES TO HIV AND AIDS**

This course explores the history, epidemiology and biology of HIV. It will discuss the global or local response to the epidemic. In presenting the epidemiology of AIDS and HIV infection, the course will explore the social, medical, and political correlates and consequences of the HIV epidemic. It will discuss HIV prevention and treatment issues, the theoretical bases of prevention programs, as well as the programmatic and policy issues. Emphasis will be placed on the translation of scientific findings into primary and secondary prevention practices. Issues unique to HIV-infected females such as childbearing, breastfeeding, and domestic violence will also be explored.

**PFRH 678  RISK AND RESILIENCE IN ADOLESCENT DEVELOPMENT**

This course explores how adolescents in developing country settings could successfully adapt in the face of risk and adversity to ensure positive developmental outcomes. The course discusses risk and protective factors as well as how adolescent can develop resistance to environmental and individual level factors during the developmental processes. It will also examine the socio-
cultural and institutional contexts that promote or inhibit positive/healthy outcomes for youth development. Various resilience theories will be explored. A comparative analysis of successful adolescent reproductive health interventions from various cultural settings will be made to equip students with new knowledge from research and practice.

**PFRH 682  CRITICAL ISSUES IN REPRODUCTIVE HEALTH**

This course introduce students to critical and emerging issues in reproductive health (RH) in a variety of settings and across cultures. Students will be equipped with competencies needed to identify and initiate interesting debates about critical issues that affect both males’ and females’ RH and that of special populations and their gender dimensions. Students will be prepared to appraise past and present perspectives on critical RH issues with an eye to the future regarding the development of reproductive technologies, industry, disaster and emergency situations.

**PFRH 684  MEN’S REPRODUCTIVE HEALTH**

This course will expand current knowledge on general reproductive health by mainstreaming men as a population with reproductive health (RH) need. The course critically explores a broad array of men's health concerns, particularly reproductive health issues during adolescence and adulthood from biological, social and behavioural perspectives, such as male infertility; erectile dysfunction, testicular tumours, sexually transmitted infections and prostate cancer. Student will discuss a variety of topics including, men’s sexual health, HIV/AIDS, culture and health, male involvement, the role of men in fertility and family planning, and sexually transmitted infections.

**PFRH 686 CURRENT AND EMERGING ISSUES IN NUTRITION**

This course will cover the following issues: chronic under nutrition, obesity and nutrition transition, fetal origins of disease hypothesis, food environment, food system vulnerabilities, nutritional genomics, Bioactive Foods, Food Ethics, Food Politics and Security, genetically modified organisms, public-Private partnerships in Nutrition, Nutrition-sensitive and Nutrition-specific interventions, nutrition policy and governance, Nutritional surveillance. At the end of the course, students should be able to: Link concepts in health, nutrition and development; develop a mental map of existing and emerging determinants of population nutritional status; review key evidence of determinants of Nutrition towards policy development in Nutrition and health.
SOBS 602 IMPLEMENTATION RESEARCH

Students will be exposed to the three cycles of implementation research: pre-intervention, intervention and post-intervention. Pre-intervention includes community entry techniques, the various groups of stakeholders, stakeholder consultations, cultural and social relations in the community, who is at risk and why, appropriate targeting of limited resources, practice and policy factors, baseline information on the population, understanding the community and appropriate targeting of limited resources. Intervention includes skills in testing iterative, participatory and action research techniques appropriate to interventions. It involves testing new interventions and methods. Post-intervention seeks to explain monitoring and evaluation with emphasis on behaviour change and compliance.

SOBS 604 SOCIAL SCIENCE DATA MANAGEMENT AND ANALYSIS

This course introduces students to theories about the processes of interpreting and analyzing data. Students will be introduced to the concept of narrative, phenomenology, grounded theory and ethnography as the basis for qualitative data analysis. The course will emphasise how to transcribe recorded interviews; code and produce matrix; develop themes for analysis and write up, check for consistency and inconsistencies in the responses and interpret the information using all sources of information. It will expose students to data sorting, quality control checks, data entry and processing; verification and analysis of data and the triangulation of the qualitative and quantitative data.

SOBS 606 APPLIED MEDICAL ANTHROPOLOGY

This course focuses on the complex aspects of health, biology, the environment, culture, and human social relationships and actions. The course will adopt both applied theoretical research and explicit theoretical frameworks to study the social production of health and illness. The production of knowledge and the notion that the community can become an arena in which social and behavioural matters concerning health and illness are played out will be stressed. Emphasis will be placed on the contribution of applied medical anthropology in the arena of health and development with particular attention on reproductive health, malaria control, TB and HIV/AIDS.

SOBS 608 GENDER AND HEALTH

The course examines the interrelationship between gender and health with a focus on the socio-cultural, socio-political, and socio-economic constructs of gender and how these constructs affect women and men’s health in the developing world. It moves beyond a description of specific health problems to critically analyze how women and men’s health problems develop, are perceived, and responded to both medically and socially in the contemporary society. In this context, an important theoretical aspect of the course is the development of a socio-medical perspective on health.
SOBS 611  BEHAVIOURAL SCIENCE

This course will expose students to how health and development workers from different professional backgrounds can collaborate to address problems in the field. Also, students will be allowed to examine the bio-psychosocial approach to health and illness, which practically requires translational collaboration and teamwork. The course will demonstrate to students how physicians, social scientists and other professionals who have stakes in health needs to collaborate to solve health related issues. The course will enable students to appreciate public health problems more holistically and to assess the impact of socio-cultural dynamics on health seeking behavior.

SOBS 613  COMMUNITY MOBILISATION IN HEALTH AND DEVELOPMENT

This course is designed to introduce students to commonly used communication approaches at the periphery and help them develop community mobilisation plans. It will demonstrate to students all the necessary steps needed to achieve a successful community mobilization. The course will also introduce students to how to get people and organisations involved in a particular health activity, assume ownership of the activity, develop plans, support the plan, and be engaged in implementing the plan. The course will expose students to the various techniques communities can use to monitor and evaluate activities they implement.

SOBS 614  EVIDENCE-BASED APPROACH TO HEALTH COMMUNICATION

The course is designed to walk the students through the steps of a communication plan, which has to be based on good research. Students will expose students to the importance of having a plan in place before developing communication activities. Topics to be addressed include the planning steps, problem identification, the target population as well as behaviours that need to change. In addition students will be introduced to the formative assessment conducted to help identify the communication objective.

SOBS 624  AGEING AND HEALTH

The course introduces students to the issues of global ageing in general with reference to Africa in particular. This course also examines the impact of ageing on the structure and composition of society and its implications for the economy, health, and development. In addition, the course will explain the magnitude of health and development issues as they relate to ageing and enables students to do a gender analysis of these issues. It will also examine the contemporary social transformation taking place in Africa and how this affects aging and health.

SOBS 632  HEALTH PSYCHOLOGY

This course will be devoted to furthering an understanding of scientific relationships between behavioural principles on the one hand and physical health and illness on the other. The course seeks to explore the relationship between the mind and the body through the spectacle of the fast developing field of Health Psychology. The course will also explore how our thoughts, feelings, motives and behaviours interact and influence our physical health. Topics to be examined
include health behaviour, stress and the various coping mechanism, pain and pain behaviour, social support systems, the relationship between patients and practitioners and chronic and terminal illness.

**SOBS 634 HEALTH AND DEVELOPMENT IN THE THIRD WORLD**

This course will allow students to examine the various social, economic, and political changes that have taken place in the developing world and analyze the impact such changes have had on the health status of populations. The course will define development and explain the diverse relationships between health and development. It will then review some social and economic development theories as well as the demographic and health transition theories in relation to the developing world. The course will critically examine the social, economic, political and cultural aspects of development and how these developmental issues impact on survival.

**SOBS 636 PLURAL MEDICAL SYSTEMS IN THE THIRD WORLD**

This course seeks to examine the various regimes individual, groups and communities adopt to maintain and prevent illness. The course will allow students to learn the local and contemporary understanding of disease causation, recognition, treatment patterns and prevention. The course will also deal with indigenous/traditional medical system and biomedical system and the various stakeholders involved in the practice of these systems. The course will examine the rationale for the existence of several medical systems in the developing world and how these health resources are utilised at the individual, community and national level.

**SOBS 638 COMPLEMENTARY MEDICINE**

This course seeks to examine the increased use of complementary medicine such as homoeopathy, acupuncture, reflexology in several developing countries. The course will introduce students to the following: the historical dimension of the development of complementary medicine; review medical pluralism in the developing world and decision making process of the use of alternative medicine in developing countries; the institutional arrangement under which orthodox and alternative medicine are practiced; the relationship between patient-practitioners in the practice of complementary medicine; the practice of different forms of complementary medicine, and the prospects of incorporating complementary medicine into the public health system.

**SOBS 642 CULTURE AND SEXUALITY**

The course will introduce students to the histories, theories and principles of human sexuality and carefully consider the changing notions of sexuality, masculinity, femininity, and personhood. It will examine how different societies in the past established sexual norms and defined deviance; the scientific understandings of human bodies, the role of sex, and how sexuality has changed over time. Attention will be paid to the theories of "the body" in relation to religion, culture and health. It will also examine the feminist political economy perspective on debates over current women's and men's health issues of concern.
SOBS 644 SOCIAL PROTECTION FOR CHILD DEVELOPMENT

The course seeks to expose students to social mechanisms that ensure the protection of children from vulnerability – diseases, hunger, poverty, child trafficking and child labour, sexual exploitation, child prostitution and natural disasters. It will stress the importance of children as the future of every society, which places them in a special position in every society for their protection and care. The course will demonstrate the importance of social protection as an element in social policy strategies for eradicating poverty and reducing multidimensional deprivation of vulnerable groups including children.

SOBS 646 SYSTEMS OF HEALTH PROVISION IN GHANA

The course will present an overview of comparative health systems in developing countries with emphasis on the management of health programmes. It will examine the theoretical perspectives of health care provision with particular attention on the political economy, internationalism and social constructionism. It will also critically analyse social inequalities identifying key barriers to delivering health care. In addition, students will examine the association between health, lifestyle, culture and social structure; medical science and technology as a social construct, social construction of disease, and the discourse of identity and disability; professionalism and health care occupation and the medicalization of life thesis.

SOBS 648 COMMUNITY MENTAL HEALTH

The course will introduce students to beliefs, values, and ethics relative to mental health and illness and how this shapes the thinking of the general population. The course covers the balanced understanding of mental health and the development social services for supporting community mental health. This includes the fundamentals of community mental health, approaches to working with people who have mental health problems and their families. It will examine mental health as a comprehensive concept that is more than the absence of mental illness.

SOBS 650 HEALTH PROMOTION AND PRACTICE

The course is designed to enhance the student’s knowledge of the basic concepts, principles and strategies of health promotion. It will provide opportunities for appropriate application of health promotion interventions in both changing and uncertain environments. Special focus will be on key players charged with preventing diseases and promoting public health. Emphasis will also be placed on behaviour change theories, strategies and methods for responding to emerging and pertinent public health issues. Students will be exposed to the importance of research in health promotion and practice and also encouraged to appreciate the role of health promotion in public health practice.

SOBS 652 SOCIAL ASPECTS OF ADOLESCENT HEALTH

The course will critically examine adolescents as a special group of people in transition from childhood into adulthood. It will also explore their unique level of independence, which makes
them likely to take decisions that could have adverse health implications. This course seeks to provide students with knowledge on social issues that have health implications for adolescents. The course will also expose students to specific adolescents’ health concerns and problems resulting from their behaviour. Students will be exposed to the role adolescent peer pressure plays in influencing adolescent behavior. Social behaviour and the choices they make regarding their health.

**SOBS 668 MENTAL HEALTH AND WELLBEING**

This course will introduce students to the processes of early diagnosis and treatment of mental health problems and how this can significantly improve prognosis. It will also introduce students to how public health agencies can incorporate mental health promotion into chronic disease prevention efforts. Conduct surveillance and research to improve the evidence base mental health care in Ghana, and collaborate with partners to develop comprehensive mental health plans to enhance coordination of care.

**SOBS 672 MENTAL HEALTH ISSUES IN PUBLIC HEALTH**

This course will seek to provide an understanding of mental health care from a historical perspective, current management issues, government policy and legislation as they influence mental health care, mental health care reform initiatives, and impacts reform on patients and families and providers of mental health services. This course will also enable the students to identify risk factors; increase awareness about mental health disorders and the effectiveness of treatment; remove the stigma associated with receiving treatment; eliminate health disparities; and to improve access to mental health services for all persons, particularly among populations that are disproportionately affected.

**BEOH 610, EPDC 610, HPPM 610, PFRH 610, SOBS 610, BSTT 610 SEMINARS**

All students in a Department or Programme are expected to attend all seminars specified and be made to give at least one seminar on a pre-selected article which, may or may not be in their area of intended research. A student should make a presentation on his/her dissertation proposal and also attend all seminars at the Department. Both presentations shall be graded using a common format and should earn each student a total of 3 credits.

**BEOH 630, EPDC 630, HPPM 630, PFRH 630, SOBS 630, BSTT 630 PUBLIC HEALTH PRACTICE**

Public Health Practice comprises field visits during the first and second semesters and a 3-month field residency during the second semester. During Public Health Practice, students work as part of the health team to acquire competencies needed for managing systems and programmes. The competencies include Community Assessment and Design of Health Survey; Investigation and Control of Disease Outbreaks; Community Mobilisation for Health Action Education, and Effective Communication.
The objective of the dissertation is to test the students’ skills in defining a problem and designing appropriate research into the problem. It will also test skills in writing, literature search and analytical thinking. The dissertation should not be more than 80 pages.
A) OCCUPATIONAL HYGIENE: The science of Occupational Hygiene is dedicated to the recognition, evaluation and control of workplace hazards. These include all environmental factors or stresses arising in or from the workplace which may cause illness, impaired health and well-being or significant discomfort and inefficiency among workers or among citizens of the community.

DURATION

The duration will be 12 months full-time made up of two semesters and 8-12 week field practical period for Master of Science in Occupational Hygiene.

ENTRY REQUIREMENTS

A good first degree (preferably a Second Class lower or better) or its equivalent from any recognized institution. Applicants must have a first degree in any of the following disciplines: biological, physical, chemical and engineering sciences and related sciences

PROGRAMME STRUCTURE

The duration of the programme is 12 months. Students will spend eight (8) to twelve (12) weeks of the third term in the field attached to a health, manufacturing, mining, agricultural or other relevant work establishment. This attachment is intended to offer them the opportunity to apply knowledge gained in the classroom and to acquire the necessary skills and competencies for effective occupational health practice. During this period they would undertake studies into relevant areas of practice and present a report. Field Supervisors will be appointed by the host institution, with approval from the School of Public Health (SPH), to provide guidance and supervision of the student.

COURSE CREDITS

A candidate is expected to obtain a minimum of 39 credits and a maximum of 51 credits of studies. This will consist of

a) Course Work 24 – 36 credits
b) Seminar 3 credits
c) Dissertation 12 credits
Total 36 – 51 credits

COURSE ASSESSMENT

Continuous assessment during the programme will take the form of students’ reports, seminars, written assignments, tutorial assignments, quizzes and assessments of field work through supervisors’ evaluation. Students will be examined at the end of each semester and credits awarded. The final grading consists of an assessment of various outputs during the programme.

Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEOH 601</td>
<td>History, Laws and Ethics in Occupational Health</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 603</td>
<td>Principles of Occupational Epidemiology</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 605</td>
<td>Statistical Methods in Occupational Health</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 607</td>
<td>Research Methods in Occupational Health</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 609</td>
<td>Principles of Occupational Toxicology</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 611</td>
<td>Principles of Ergonomics</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 613</td>
<td>Basics of Health Hazards</td>
<td>2</td>
</tr>
</tbody>
</table>

Semester 2:

Core Courses

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEOH 615</td>
<td>Occupational Psychology</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 617</td>
<td>Monitoring the Occupational Environment</td>
<td>2</td>
</tr>
</tbody>
</table>

Occupational Hygiene Electives

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEOH 608</td>
<td>Principles of Occupational Hygiene</td>
<td>2</td>
</tr>
<tr>
<td>BEOH 612</td>
<td>Safety and Health Hazards in the Petroleum Industry</td>
<td>2</td>
</tr>
</tbody>
</table>
BEOH 614  Occupational Safety Practice  2
BEOH 616  Principles of Environmental Health  2
BEOH 618  Fire Prevention and Protection  2
BEOH 632  Process Safety Management  2
BEOH 654  Safety and Health Issues of Road Transportation  2

BEOH 670  Special Seminars in Occupational Hygiene  3
BEOH 680  Field visits/practice/dissertation  12

COURSE DESCRIPTIONS

BEOH 601  HISTORY, LAWS AND ETHICS IN OCCUPATIONAL HEALTH
This course is designed to make students conversant with the history of Occupational Health in Ghana and internationally. Current occupational health laws and regulations, including Employment Laws that deal with accidents and injuries with their resultant compensations. The International Code of Ethics for Occupational Health Professionals will also be treated in this course. The course will also introduce students to the understanding of the duties and obligations expected of occupational health practitioners.

BEOH 603  PRINCIPLES OF OCCUPATIONAL EPIDEMIOLOGY
The aim of this course is to enable students to understand the role and application of occupational epidemiology and to develop skills for handling occupational health and safety issues. The course will address such issues as the causes and determinants of occupational ill-health, their recognition and quantification and the determination of occupational exposure limits. The module will discuss general principles of epidemiology; epidemiological methods; descriptive, analytic, experimental. Application of epidemiology to investigations of epidemics and screening methods. The burden of disease – DALY’s and special groups at risk.

BEOH 605  STATISTICAL METHODS IN OCCUPATIONAL HEALTH
This course introduces the basic statistical concepts and methods as applied to diverse problems in occupational medicine and hygiene, public health and clinical trials. It demonstrates methods
of exploring, organizing, and presenting data, and introduces fundamentals of probability, including probability distributions and conditional probability with applications to case-control and cohort studies, and diagnostic testing. It presents the foundations of statistical inference, including concepts of population parameter, sampling and sampling distribution of estimates, and approaches to inferences using confidence intervals and hypothesis tests for normal and non-normal data, sample size estimation, contingency tables and chi-square tests, 1-way analysis of variance, simple linear regression and correlation. Statistical software packages, STATA and SPSS are employed to manipulate data and for data analysis.

**BEOH 606 MONITORING THE OCCUPATIONAL ENVIRONMENT**

This course addresses the principles and practices of the working environment and the monitoring of hazards. Familiarization with instrumentation and calibration procedures would be undertaken. Students will learn to identify workplace health hazards, develop effective sampling strategies, use occupational hygiene equipment and interpret results of exposure measurements.

**BEOH 607 RESEARCH METHODS IN OCCUPATIONAL HEALTH**

The course focuses on the steps involved in planning and implementing an occupational health research. It includes an exposition of the theoretical approaches to and practical applications of research. An introduction to empirical methods, including qualitative and quantitative methods, the design of surveys and experiments (including Clinical Trials) and analysis of the resulting data, sampling, questionnaire design, data collection and data processing. The course also discusses ethical issues involved in occupational medical research, the occupational health professionals’ independence of management and worker-patient consent and confidentiality.

**BEOH 608 PRINCIPLES OF OCCUPATIONAL HYGIENE**

This course introduces the principles and practices of occupational hygiene, and is designed to provide students with the knowledge required to identify, evaluate and control of workplace health hazards. It also introduces students to the design and implementation of projects and programmes designed to control these workplace hazards. It makes use of the application of basic scientific principles in the design of appropriate control measures.

**BEOH 609 PRINCIPLES OF OCCUPATIONAL TOXICOLOGY**

The course explores the concepts of animal and human toxicology. A critical approach will be used to discuss the process of establishing permissible human exposure levels and threshold limit values to toxic substances. The role of chemical exposures in the etiology of specific diseases such as cancer, birth defects and neurological disorders will be described. The course also
teaches students to identify, recognize and evaluate occupational toxic health hazards in the environment.

**BEOH 611 PRINCIPLES OF ERGONOMICS**

The course will introduce students to the principles, concepts and procedures concerned with worker performance, health and safety. Topics will include: biomechanics, work physiology, musculoskeletal disorders, work stations, tools, work procedures, work standards and design of work.

**BEOH 612 SAFETY AND HEALTH HAZARDS IN THE PETROLEUM INDUSTRY**

This course would outline the occupational health and safety risks in upstream and downstream oil and gas industry. Students would become conversant with current occupational health and safety issues and developments in the petroleum industry, including exploration and drilling, conventional oil and gas production, extraction and processing of crude and pipeline operations.

**BEOH 613 BASICS OF HEALTH HAZARDS**

This course entails the study of physical, chemical, biological, mechanical/ergonomic and psychosocial hazards.

Physical hazards include the basics of the various types of physical energy and their effects on health; their properties, mechanisms of action, engineering control methods, exposure standards and safety measures will be studied.

Biological hazards, including diseases that workers may be susceptible to at the workplace; vector borne infections, fungi and other microbiological agents, bacterial contamination and mycotoxins, defects in food handling, sanitation and removal of industrial waste and sewage; the control measures needed would be treated in this section.

Chemical health hazards would explore the relationship between chemical exposures and adverse health consequences. Factors that determine toxicity, such as chemical dose and structure, metabolism, age and genetic make-up of the individual would be discussed.
Mechanical/Ergonomic hazards commonly affecting lower back and upper limbs; poor ergonomic design of work stations and tools, inadequate work environment and inappropriate work systems.

Psychosocial Stress (Stress at Work): it is any factor that may cause distress or psychological harm. This will assess the types of demand that can cause stress responses in workers, such as demands that outweigh their ability (fatigue) or underutilization (boredom).

**BEOH 614 OCCUPATIONAL SAFETY PRACTICE**
Students will acquire in-depth knowledge of the principles of workplace safety and loss prevention, hazard-related incidents investigation and analyses; occupational safety management tools, loss recognition, safety standards and guidelines. Students will also be taught how to develop and implement workplace policies on occupation-related hazards and how to manage hazards at the workplace.

**BEOH 615 OCCUPATIONAL PSYCHOLOGY**
This course is designed to make students conversant with risk assessment and risk communication. It would focus also on risk identification, investigation and interventions, as well as look at causes and agents of risks including workplace violence, gender equity, modalities for the introduction of Health and Safety Measures. Students would consider the relationship between management and the rank and file, and determine the association between risk and job assignments.

**BEOH 616 PRINCIPLES OF ENVIRONMENTAL HEALTH**
The Environmental Health course is designed to give students a wide range of knowledge on the basic principles of Environmental Health. It focuses on pathways of exposure from the work area to non-working populations, measurements of exposure and observation of effects, modeling and prediction of effects. Identifying, assessing and adapting existing data to predict effects, given new exposures, is a major theme. Spatial analysis, risk communication and disaster response are also covered. Methods are derived from toxicology and epidemiology.

**BEOH 618 FIRE PREVENTION AND PROTECTION**
This course will focus on the general mechanisms of fire hazards and the principles of preventing and controlling fires to either eliminate or mitigate its effects. It would also cover regulatory
issues, applied science and engineering, cost analysis and budgeting, benchmarking, performance
criteria and best practices in fire containment.

BEOH 632  PROCESS SAFETY MANAGEMENT
This course describes regulations and activities designed to protect employees, the public and the
environment from the consequences of major chemical accidents involving highly hazardous
materials. It includes the importance of community involvement and relations in accident
prevention.

BEOH 654  SAFETY AND HEALTH ISSUES OF ROAD TRANSPORTATION
This course is designed to equip students with knowledge in methods and strategies for aiding
organizations in preventing road traffic accidents and avoiding traffic accidents, injuries and
disability.

The course will teach the skills to enable the students to undertake the surveillance and survey of
all aspects of road crash outcome; research the causes of road traffic accidents, to designing,
implementing and monitoring appropriate interventions for prevention and reduction of road
traffic accidents and to equip students with the skills needed to assist policy makers, through
advocacy, to make the prevention of road traffic accidents and the resultant injuries an issue of
national priority.

BEOH 670  SPECIAL SEMINARS IN OCCUPATIONAL HEALTH

Students in the Occupational Health programme will be expected to attend all Departmental
seminars organized whenever visiting lecturers including clinicians, managers and consultants
present subjects of topical interest in occupational hygiene, safety and the environment. Students
themselves would be made to give at least one presentation on a review article which may be in
their area of intended research. Students will also be required to make a presentation of their
dissertation or research proposal.
FIELD VISITS

Students will be taken on short field visits to institutions and workplaces where managers and supervisors would discuss the administration, management principles and institutional culture. In addition students will learn about occupational hygiene programs with respect to the identification, evaluation and control of health hazards encountered by the industry.

Below are some of the institutions to be visited:

1. Agro-Industries and Research Institutions (Cocoa Research Institute, Cocoa plantations, Oil-palm plantations etc.)
2. Mining and Quarrying Industries
3. Oil, gas and petro-chemical industries
4. Power generation works (hydro-, thermal-, etc.)
5. Water Supplies, Sewage and Industrial Waste Management Organizations
6. Construction Industries
7. Manufacturing Industries (factories, mills etc.)
8. Informal Sector (small-scale industries)

FIELD PRACTICE

Students would be attached to workplaces or institutions, companies and sectors where they will undertake research projects that would enable them write their dissertations. A minimum of eight weeks and a maximum of ten weeks will be spent to enable students gain out-of-classroom experience and begin to write out their dissertations.

DISSERTATION

The objective of the dissertation is to test the student’s skills in defining a problem and designing appropriate research. It will test writing skills, literature search and analytical thinking. The assessment of the dissertation may include an oral examination.
**B) OCCUPATIONAL MEDICINE:** Medicine applied to people at work, entailing the study of their health in relation to their occupation. It is concerned with the effects jobs and the working environment on health and the effect of the individual’s health on his/her ability to do the job.

**DURATION**

The duration will be 12 months full-time made up of two semesters and 8-12 week field practical period for Master of Science in Occupational Medicine.

**ENTRY REQUIREMENTS**

Applicants must possess an MB, ChB or its equivalent from a recognized institution.

**PROGRAMME STRUCTURE**

The duration of the programme is 12 months. Students will spend eight (8) to twelve (12) weeks in the second semester in the field attached to a health, manufacturing, mining or quarrying, agricultural or other relevant work establishment. This attachment is intended to offer them the opportunity to apply knowledge gained in the classroom and to acquire the necessary skills and competencies for effective occupational medical practice. During this period they would undertake studies into relevant areas of practice and present a report. Field Supervisors will be appointed by the host institution, with approval from the School of Public Health (SPH), to provide guidance and supervision of the student.

**COURSE CREDITS**

A candidate is expected to obtain a minimum of 39 credits and a maximum of 45 credits of studies. This will consist of

- d) Course Work 24 – 30 credits
- e) Seminar 3 credits
- f) Dissertation 12 credits
COURSE ASSESSMENT

Continuous assessment during the programme will take the form of students’ reports, seminars, written assignments, tutorial assignments, quizzes and assessments of field work through supervisors’ evaluation. Students will be examined at the end of each semester and credits awarded. The final grading consists of an assessment of various outputs during the programme.

Core Courses

<table>
<thead>
<tr>
<th>Semester 1:</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BEOH 601</td>
<td>History, Laws and Ethics in Occupational Health</td>
</tr>
<tr>
<td>BEOH 603</td>
<td>Principles of Occupational Epidemiology</td>
</tr>
<tr>
<td>BEOH 605</td>
<td>Statistical Methods in Occupational Health</td>
</tr>
<tr>
<td>BEOH 607</td>
<td>Research Methods in Occupational Health</td>
</tr>
<tr>
<td>BEOH 609</td>
<td>Principles of Occupational Toxicology</td>
</tr>
<tr>
<td>BEOH 611</td>
<td>Principles of Ergonomics</td>
</tr>
<tr>
<td>BEOH 613</td>
<td>Basics of Health Hazards</td>
</tr>
<tr>
<td>BEOH 615</td>
<td>Occupational Psychology</td>
</tr>
<tr>
<td>BEOH 617</td>
<td>Monitoring the Occupational Environment</td>
</tr>
<tr>
<td>BEOH 619</td>
<td>Principles of Occupational Hygiene</td>
</tr>
</tbody>
</table>

Semester 2:

Occupational Medicine Electives

| BEOH 612 | Safety and Health Hazards in the Petroleum Industry | 2 |
BEOH 636  Occupational Respiratory Disorders  2
BEOH 638  Non- Respiratory Occupational Diseases  2
BEOH 642  Health and Safety Issues in Agriculture  2
BEOH 644  Port Health  2
BEOH 646  Sports Medicine  3
BEOH 648  Aviation Medicine  3
BEOH 652  Surveillance and Disease Prevention  2
BEOH 654  Safety and Health Issues of Road Transportation  2
BEOH 656  Management and Planning in Occupational Health Practice  2

BEOH 670  Special Seminars in Occupational Health  3
BEOH 680  Field visits/practice/dissertation  12

COURSE DESCRIPTIONS

BEOH 601  HISTORY, LAWS AND ETHICS IN OCCUPATIONAL HEALTH

This course is designed to make students conversant with the history of Occupational Health in Ghana and internationally. Current occupational health laws and regulations, including Employment Laws that deal with accidents and injuries with their resultant compensations. The International Code of Ethics for Occupational Health Professionals will also be treated in this course. The course will also introduce students to the understanding of the duties and obligations expected of occupational health practitioners.

BEOH 603  PRINCIPLES OF OCCUPATIONAL EPIDEMIOLOGY

The aim of this course is to enable students to understand the role and application of occupational epidemiology and to develop skills for handling occupational health and safety issues. The course will address such issues as the causes and determinants of occupational ill-health, their recognition and quantification and the determination of occupational exposure limits. The module will discuss general principles of epidemiology; epidemiological methods; descriptive, analytic, experimental. Application of epidemiology to investigation of epidemics and screening methods. The burden of disease- DALYs and special groups at risk.
BEOH 605  STATISTICAL METHODS IN OCCUPATIONAL HEALTH

This course introduces the basic statistical concepts and methods as applied to diverse problems in occupational medicine and hygiene, public health and clinical trials. It demonstrates methods of exploring, organizing, and presenting data, and introduces fundamentals of probability, including probability distributions and conditional probability with applications to case-control and cohort studies, and diagnostic testing. It presents the foundations of statistical inference, including concepts of population parameter, sampling and sampling distribution of estimates, and approaches to inferences using confidence intervals and hypothesis tests for normal and non-normal data, sample size estimation, contingency tables and chi-square tests, 1-way analysis of variance, simple linear regression and correlation. Statistical software packages, STATA and SPSS are employed to manipulate data and for data analysis.

BEOH 607  RESEARCH METHODS IN OCCUPATIONAL HEALTH

The course focuses on the steps involved in planning and implementing an occupational health research. It includes an exposition of the theoretical approaches to and practical applications of research. An introduction to empirical methods, including qualitative and quantitative methods, the design of surveys and experiments (including Clinical Trials) and analysis of the resulting data, sampling, questionnaire design, data collection and data processing. The course also discusses ethical issues involved in occupational medical research, the occupational health professionals’ independence of management and worker-patient consent and confidentiality.

BEOH 609  PRINCIPLES OF OCCUPATIONAL TOXICOLOGY

The course explores the concepts of animal and human toxicology. A critical approach will be used to discuss the process of establishing permissible human exposure levels and threshold limit values to toxic substances. The role of chemical exposures in the etiology of specific diseases such as cancer, birth defects and neurological disorders will be described. The course also teaches students to identify, recognize and evaluate occupational toxic health hazards in the environment.

BEOH 611  PRINCIPLES OF ERGONOMICS

The course will introduce students to the principles, concepts and procedures concerned with worker performance, health and safety. Topics will include: biomechanics, work physiology, musculoskeletal disorders, work stations, tools, work procedures, work standards and design of work.
BEOH 612  SAFETY AND HEALTH HAZARDS IN THE PETROLEUM INDUSTRY

This course would outline the occupational health and safety risks in upstream and downstream oil and gas industry. Students would become conversant with current occupational health and safety issues and developments in the petroleum industry, including exploration and drilling, conventional oil and gas production, extraction and processing of crude and pipeline operations.

BEOH 613  BASICS OF HEALTH HAZARDS

This course entails the study of physical, chemical, biological, mechanical/ergonomic and psychosocial hazards.

Physical hazards include the basics of the various types of physical energy and their effects on health; their properties, mechanisms of action, engineering control methods, exposure standards and safety measures will be studied.

Biological hazards, including diseases that workers may be susceptible to at the workplace; vector borne infections, fungi and other microbiological agents, bacterial contamination and mycotoxins, defects in food handling, sanitation and removal of industrial waste and sewage; the control measures needed would be treated in this section.

Chemical health hazards would explore the relationship between chemical exposures and adverse health consequences. Factors that determine toxicity, such as chemical dose and structure, metabolism, age and genetic make-up of the individual would be discussed.

Mechanical/Ergonomic hazards commonly affecting lower back and upper limbs; poor ergonomic design of work stations and tools, inadequate work environment and inappropriate work systems.
Psychosocial Stress (Stress at Work): it is any factor that may cause distress or psychological harm. This will assess the types of demand that can cause stress responses in workers, such as demands that outweigh their ability (fatigue) or underutilization (boredom).

**BEOH 615  OCCUPATIONAL PSYCHOLOGY**
This course is designed to make students conversant with risk assessment and risk communication. It would focus also on risk identification, investigation and interventions, as well as look at causes and agents of risks including workplace violence, gender equity, modalities for the introduction of Health and Safety Measures. Students would consider the relationship between management and the rank and file, and determine the association between risk and job assignments.

**BEOH 616  PRINCIPLES OF ENVIRONMENTAL HEALTH**
The Environmental Health course is designed to give students a wide range of knowledge on the basic principles of Environmental Health. It focuses on pathways of exposure from the work area to non-working populations, measurements of exposure and observation of effects, modeling and prediction of effects. Identifying, assessing and adapting existing data to predict effects, given new exposures, is a major theme. Spatial analysis, risk communication and disaster response are also covered. Methods are derived from toxicology and epidemiology.

**BEOH 617  MONITORING THE OCCUPATIONAL ENVIRONMENT**
This course addresses the principles and practices of the working environment and the monitoring of hazards. Familiarization with instrumentation and calibration procedures would be undertaken. Students will learn to identify workplace health hazards, develop effective sampling strategies, use occupational hygiene equipment and interpret results of exposure measurements.

**BEOH 619  PRINCIPLES OF OCCUPATIONAL HYGIENE**
This course introduces the principles and practices of occupational hygiene, and is designed to provide students with the knowledge required to identify, evaluate and control of workplace health hazards. It also introduces students to the design and implementation of projects and
programmes designed to control these workplace hazards. It makes use of the application of basic scientific principles in the design of appropriate control measures.

**BEOH 636 OCCUPATIONAL RESPIRATORY DISORDERS**
The course explains the anatomy, physiology and pathology of the respiratory system and the impact of occupational exposures on the lungs. It entails the study and evaluation of Respiratory Diseases in respect of the Pneumoconioses, Occupational Asthma, Hypersensitivity Pneumonitis, Chronic Obstructive Pulmonary Disorders and the effects of inhaled carcinogenic agents.

**BEOH 638 NON-RESPIRATORY OCCUPATIONAL DISEASES**
This course will comprise non-respiratory occupational diseases, including vector borne diseases, affecting specific target organs of the body other than the Lungs. The course will discuss non-respiratory diseases which are of occupational health relevance on account of their being responsible for losses to the economy through worker absenteeism.

**BEOH 642 HEALTH AND SAFETY ISSUES IN AGRICULTURE**
This course explores the occupational health and safety issues in Agriculture, particularly in the Cocoa Industry and selected agricultural endeavors. The course will emphasize the relationship between farming, the environment and disease and farming practices that might cause risk to the health of farm workers. The course will also identify toxicological hazards and their effects on farmers’ health.

**BEOH 644 PORT HEALTH**
This will be a special elective for physicians who may opt to work in the Maritime industry or with the Ports and Harbours Authority. It is intended to introduce students to medical and public health issues related to Port Health. It involves the detection of the arrival of infected or diseased persons and the seizing and destruction of infected goods and pests carried on board ships that seek to enter the national ports and harbours.

**BEOH 646 SPORTS MEDICINE**
This course offers the basics of sports and exercise medicine; student will learn about sports injuries; exercise physiology, metabolism and nutrition; immediate and pre-hospital care of the injured athlete and physical activity in health and disease. Students will also have the opportunity
to develop basic physiotherapy skills such as the assessment and treatment of muscle imbalances, soft tissue and joint manual therapy and exercise rehabilitation.

**BEOH 648 AVIATION MEDICINE**
This course encompasses a study of the aviation environment and the effects of that environment on human physiology. This module covers aspects of occupational medicine and human factors that are associated with airline operations. It considers the occupational health and safety aspects which are peculiar to the industry as well as issues which relate to the aerial transport of sick and injured patients.

**BEOH 652 SURVEILLANCE AND DISEASE PREVENTION**
This course will teach the skills to enable students to develop, evaluate and manage medical surveillance programs for the workplace as well as for the public. It will also enable students acquire knowledge and skills for primary, secondary and tertiary preventive methods. It will also enable students to learn case definitions and draw up surveillance methods in disease control.

**BEOH 654 SAFETY AND HEALTH ISSUES OF ROAD TRANSPORTATION**
This course is designed to equip students with knowledge in methods and strategies for aiding organizations in preventing road traffic accidents and avoiding traffic accidents, injuries and disability.

The course will teach the skills to enable the students to undertake the surveillance and survey of all aspects of road crash outcome; research the causes of road traffic accidents, to designing, implementing and monitoring appropriate interventions for prevention and reduction of road traffic accidents and to equip students with the skills needed to assist policy makers, through advocacy, to make the prevention of road traffic accidents and the resultant injuries an issue of national priority.

**BEOH 656 MANAGEMENT AND PLANNING IN OCCUPATIONAL HEALTH PRACTICE**
This course introduces students to the administrative knowledge and management skills that would enable them to plan, design, implement, manage and evaluate occupational health programs and projects that enhance the health, safety and productivity of workers at the workplace.
BEOH 670    SPECIAL SEMINARS IN OCCUPATIONAL HEALTH

Students in the Occupational Health programme will be expected to attend all Departmental seminars organized whenever visiting lecturers including clinicians, managers and consultants present subjects of topical interest in occupational health and safety. Students themselves would be made to give at least one presentation on a review article which may be in their area of intended research. Students will also be required to make a presentation of their dissertation or research proposal.

BEOH 680    FIELD VISITS, FIELD PRACTICE AND DISSERTATION

FIELD VISITS

Students will be taken on short field visits to institutions and workplaces where managers and supervisors would discuss the administration, management principles and institutional culture. In addition students will learn about occupational health programs with respect to the identification, evaluation and control of health hazards encountered by the industry.

Below are some of the institutions to be visited:

1. Agro-Industries and Research Institutions (Cocoa Research Institute, Cocoa plantations, Oil-palm plantations etc.)
2. Mining and Quarrying Industries
3. Oil, gas and petro-chemical industries
4. Power generation works (hydro-, thermal-, etc.)
5. Water Supplies, Sewage and Industrial Waste Management Organization
6. Construction Industries
7. Manufacturing Industries (factories, mills etc.)
8. Hospitals and Rehabilitation Services
9. Informal Sector (small-scale industries)

FIELD PRACTICE

Students would be attached to workplaces or institutions, companies and sectors where they will undertake research projects that would enable them write their dissertations. A minimum of eight weeks and a maximum of ten weeks will be spent to enable students gain out-of-classroom experience and begin to write out their dissertations.
DISSERTATION
The objective of the dissertation is to test the student’s skills in defining a problem and designing appropriate research. It will test writing skills, literature search and analytical thinking. The assessment of the dissertation may include an oral examination.