Master of Science

Public Health - MPH

SPRINGFIELD RESEARCH UNIVERSITY

Master of Science – Public Health (MPH)

MISSION STATEMENT

*The Springfield Research University **Master of Science in Public Health** program's mission's to build a high-quality and diverse public health workforce through excellence and inclusivity in interprofessional education, professional development, research, and community engagement. We are committed to promoting health equity by addressing disparities, advocating for vulnerable populations, and ensuring that all individuals have equal access to health resources and opportunities. Furthermore, we equip our students with robust epidemiological techniques and biostatistical skills, empowering them to analyze health data, assess population health, and contribute evidence-based solutions to public health challenges.*

At Springfield Research University (SRU), our MPH program is designed to deepen public health knowledge and enhance professional skills. Here are the key pillars of our mission:

1. **Academic Excellence and Critical Thinking**:
    - In the MPH, academic excellence involves rigorous study of public health principles, epidemiology, biostatistics, and health policy.
    - Critical thinking is essential for analyzing complex health issues, interpreting research findings, and designing evidence-based interventions.
2. **Cutting-Edge Research and Innovation**:
    - Like legal research, public health research aims to address societal challenges.
    - MPH students engage in research on topics such as disease prevention, health disparities, and environmental health.
    - Innovations in public health include data science, health informatics, and novel interventions.
3. **Ethical Leadership and Societal Impact**:
    - MPH graduates also play a crucial role in ethical leadership.
    - They advocate for health equity, social justice, and community well-being.
    - Their impact extends beyond legal boundaries to promote health and well-being globally.

The aim of the programme is to offer students the opportunity to demonstrate a systematic understanding of fundamental public health concepts and to critically approach a broad range of public health theories, concepts and frameworks that are fundamental to public health policy and practice in national and international contexts. The Master of Public Health course has been specifically designed for those who wish to develop their career within public health, in addition to those looking to promote the health of the public as part of their current professional role. Upon successful graduation you will possess in-depth research and enquiry skills, and a critical understanding of their application in a public health employment context. The practical application of these academic skills will equip you with the knowledge and approaches necessary to implement a broad range of interventions to improve public health outcomes in different employment contexts. For example, dealing with pandemic flu epidemics, increasing accessibility to health care services, reducing obesity or malaria rates and community development to enable disadvantaged communities.

RATIONALE FOR THE MPH PROGRAM AT SPRINGFIELD RESEARCH UNIVERSITY

The Master of Science in Public Health (MPH) program at Springfield Research University is purposefully designed to address critical health challenges at both national and regional levels. Rooted in academic excellence, it equips students with essential public health knowledge and ethical foundations. By emphasizing cutting-edge research and societal impact, our graduates become competent public health professionals who contribute meaningfully to Eswatini and the broader Southern African Development Community (SADC).

1. National Health Needs (Eswatini):

- **Health Capacity Building:** Eswatini requires a skilled public health workforce to tackle evolving health issues. The MPH program aims to equip students with the necessary knowledge, skills, and ethical grounding to contribute effectively to the nation's health system.
- **Equitable Health Access:** By producing competent public health professionals, the MPH program enhances citizens' access to health services. Graduates can advocate for health equity, uphold evidence-based practices, and ensure fair health distribution.
- **Policy and Health Governance:** The MPH program fosters critical thinking, enabling graduates to engage in health research, policy formulation, and governance. Their expertise contributes to informed decision-making at national levels.

2. Regional Health Needs (SADC):

- **Harmonization of Health Systems:** SADC member states face common health challenges. The MPH program aligns with SADC's goal of harmonizing health frameworks across borders, promoting regional health cooperation, and addressing cross-border health threats.
- **Human Capital Development:** Public health professionals play a pivotal role in regional health integration. The MPH program contributes to building a skilled public health workforce that can navigate complex regional health issues.
- **Health Equity and Rule of Law:** SADC's stability relies on adherence to health regulations. MPH graduates contribute to maintaining health order, resolving health disparities, and promoting regional well-being.

3. Purpose of the MPH Program:

- **Educating Ethical Leaders:** The MPH program instills ethical values, emphasizing justice, fairness, and integrity in public health practice. Graduates become not only practitioners but also advocates for community health.
- **Research and Innovation:** MPH students engage in health research, addressing contemporary health challenges. Their findings contribute to evidence-based health policies, interventions, and practical solutions.
- **Community Impact:** The MPH program prepares graduates to positively impact communities. Whether through public health practice, advocacy, or service, they drive meaningful change in health outcomes.

LEARNING OBJECTIVES FOR THE MPH PROGRAM

1. **Understanding Public Health Issues:**
    - Describe public health issues considering person, place, and time from social, environmental, population, and individual perspectives.

- Analyze health challenges using an epidemiological lens, identifying patterns and risk factors.

2. **Epidemiologic Knowledge and Research:**
   - Identify and utilize reliable sources of epidemiologic information for evidence-based decision-making.
   - Construct appropriate study designs for investigating health phenomena.
3. **Effective Communication and Interpretation:**
   - Interpret and effectively communicate research findings to inform public health practice.
   - Ensure ethical handling of data throughout the research process.
4. **Leadership and Diversity:**
   - Critique leadership theories and integrate them into a personal philosophy of public health leadership.
   - Integrate principles of diversity and inclusivity into organizational goals.
5. **Policy Recommendations and Risk Mitigation:**
   - Make policy recommendations at various levels (organizational, local, state, national) to enhance population and community health.
   - Demonstrate leadership in identifying health risks and developing mitigation strategies within public health plans.
6. **Quality and Leadership Concepts:**
   - Apply quality improvement and leadership concepts to address organizational practices in public health settings.
7. **Maternal and Child Health Focus:**
   - Understand the unique lifecourse, biological, sociocultural, and behavioral aspects related to women, children, and families in public health practice.
   - Critically evaluate existing interventions and policies for their impact on maternal and child health.
8. **Historical Context and Advocacy:**
   - Describe historical landmark policies that have shaped maternal and child health practices.
   - Develop advocacy plans that engage communities in improving maternal and child health outcomes.
9. **Analyzing Maternal and Child Issues:**
   - Describe maternal and child health issues in terms of their temporal aspects, severity, scope, geographic distribution, and co-occurrence with other health conditions.

PROGRAM LEARNING OUTCOMES FOR THE **MASTER OF SCIENCE IN PUBLIC HEALTH (MPH)**

1. **Understanding Public Health Issues:**
   - Describe public health issues considering person, place, and time from social, environmental, population, and individual perspectives.
   - Analyze health challenges using an epidemiological lens, identifying patterns and risk factors.
2. **Epidemiologic Knowledge and Research:**
   - Identify and utilize reliable sources of epidemiologic information for evidence-based decision-making.
   - Construct appropriate study designs for investigating health phenomena.
3. **Effective Communication and Interpretation:**
   - Interpret and effectively communicate research findings to inform public health practice.

    - Ensure ethical handling of data throughout the research process.
4. **Leadership and Diversity:**
    - Critique leadership theories and integrate them into a personal philosophy of public health leadership.
    - Integrate principles of diversity and inclusivity into organizational goals.
5. **Policy Recommendations and Risk Mitigation:**
    - Make policy recommendations at various levels (organizational, local, state, national) to enhance population and community health.
    - Demonstrate leadership in identifying health risks and developing mitigation strategies within public health plans.
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    - Understand the unique lifecourse, biological, sociocultural, and behavioral aspects related to women, children, and families in public health practice.
    - Critically evaluate existing interventions and policies for their impact on maternal and child health.
8. **Historical Context and Advocacy:**
    - Describe historical landmark policies that have shaped maternal and child health practices.
    - Develop advocacy plans that engage communities in improving maternal and child health outcomes.

Standard Entry

Applicants should normally have:

A minimum of a 2:2 honours degree in a subject related to health or health sciences, or work experience at a senior level in public health/healthcare and evidence of a clear commitment to a career in public health. Other subject qualifications, equivalent professional qualifications and/or relevant work experience will be considered on an individual basis.

Duration of the MPH Programme

At Springfield Research University, we recognize the diverse needs of our students. Our Master of Science in Public Health program offers flexible timelines to accommodate different learning paces. For full-time students, the average duration is 2 years, allowing for intensive research and engagement. However, we understand that life circumstances vary, and some students may choose a part-time route. Part-time MPH students typically complete their program in 3 years, providing a more gradual and manageable pace. We ensure that both full-time and part-time students have the necessary support and resources to successfully complete their MPH within realistic timeframes. Our commitment to excellence remains unwavering, regardless of the chosen pathway.

Career Opportunities

1. **Clinical Research Coordinator**: Oversee clinical trials, collect and analyze data, and adhere to regulatory standards.

2. **Nutritionist**: Counsel patients on nutrition, develop meal plans, and promote better nutrition.

3. **Medical Writer**: Analyze scientific and medical data, communicate complex ideas, and maintain industry requirements.
4. **Healthcare Administrator**: Oversee public health programs and manage healthcare facilities.
5. **Health Policy Analyst**: Shape government policies for better health outcomes.
6. **Environmental Health Specialist**: Address environmental factors affecting health.
7. **Global Health Specialist**: Work on international health initiatives and programs.
8. **Health Educator**: Develop health education programs and promote wellness.
9. **Infection Control Specialist**: Prevent and manage infections in healthcare settings.
10. **Health Communications Specialist**: Create health-related content and campaigns.
11. **Public Health Consultant**: Advise organizations on public health strategies.
12. **Research Analyst**: Conduct research on health-related topics.

The Master's Degree shall:

The Master's degree program in Public Health at Springfield Research University is designed to equip students with the skills and knowledge necessary for a successful career in this dynamic field. Here are the key features of our program:

1. **Duration**:
    - The program spans **two years** for full-time students or **four years** for part-time students.
2. **Semester Structure**:
    - Each academic year consists of **two semesters**.
    - **Semester Duration**: Each semester runs for **20 weeks**.
        - **Orientation Week**: One week dedicated to orientation.
        - **Teaching Weeks**: A minimum of **14 weeks** for instruction.
        - **Mid-Semester Break**: A one-week break for students.
        - **Examination Period**: Two weeks for final exams.
        - **Results Processing**: Two weeks allocated for marking and result processing.

Our program ensures a rigorous academic experience while allowing flexibility for part-time students. Students engage in hands-on learning, theoretical coursework, and practical projects, preparing them for the exciting challenges of the Education industry.

Special Departmental Regulations

1. **Course Completion Requirements**:

- All **Core**, **Prerequisite**, **Required**, **General**, and **Elective** courses within the degree program are compulsory. Students must pass these courses with a minimum grade of **50%** to graduate.
- However, during the third and fourth semesters, all courses must be passed with a minimum grade of **60%** (equivalent to a CGPA of **3.00**) to qualify for graduation.

2. **Optional Courses**:
    - Optional courses do not contribute to the final grade. Their marks are excluded from the computation of the overall grade.
3. **Externalization of Courses**:
    - All courses within the degree programs must be completed internally. Externalization is not permitted.
4. **Quality Control and Evaluation**:
    - Regular academic audits and reviews occur every two years, overseen by external moderators. Internal program evaluation is ongoing.
5. **Competence and Preparation**:
    - The courses offered in the Master of Science in Public Healthprogram provide adequate competences, preparing students for professional practice at the required academic level.
6. **Core and Prerequisite Courses**:
    - Students must pass all Core and Prerequisite courses with a minimum grade of **50%** before progressing to the next level or enrolling in additional courses.

Degree Award and Classification

- Upon successful completion of all **Core**, **Required**, and **Education** courses, as well as meeting the program requirements, a student will be awarded the degree of **Master of Science in Public Health** at the end of the final year.
- The **normal classification** of a Master of Science in Public Health Degree is determined based on the academic performance during the third and fourth years of study.

Rationale to Course Numbering

At Springfield Research University, we meticulously design our Master of Science in Public Health curriculum to empower students with the knowledge and skills needed to thrive in this dynamic field. Our course numbering system serves as a roadmap, guiding students through their academic journey - ****600-level courses**** introduce foundational concepts and build on those foundations. - ****700-level courses**** explore more specialized topics and are advanced and often include research or project components. Let’s delve into the reasons behind our thoughtful approach:

1. **Logical Progression**: Our course numbers reflect a logical progression. Foundational concepts and deeper explorations in with the “600” series, followed by “700” levels covering advanced topics and research opportunities.
2. **Prerequisites and Coherence**: Clear numbering helps students understand prerequisites and co-requisites. For instance, a 600-level course assumes knowledge ensuring a coherent learning experience.
3. **Specialization and Depth**: As students advance, higher-level courses delve into specialized areas such as epidemiology and biostatistics, and health management. The numbering system communicates this depth of study.
4. **Alignment with Program Goals**: Each course number aligns with our program’s learning outcomes. Whether it’s mastering epidemiology or diving into biostatistics, students can track their progress.
5. **Transferability**: Consistent numbering facilitates credit transfer between institutions, supporting seamless academic mobility.

In summary, our course numbering isn’t just a sequence—it’s a deliberate framework that enhances learning, fosters curiosity, and prepares our students for impactful careers in Public Health. Master of Science in Public Health simplifies the course numbering system.

1. **600-Level Courses (Public Health Leadership and Management):**
    - **MPH 601:** Health Policy and Advocacy
    - **MPH 610:** Epidemiology and Biostatistics
    - **MPH 620:** Healthcare Administration and Ethics
2. **700-Level Courses (Public Health Strategy and Innovation):**
    - **MPH 701:** Global Health Challenges and Solutions
    - **MPH 710:** Environmental Health and Sustainability
    - **MPH 720:** Health Informatics and Digital Health

The Master of Science in Public Health is a two (2) program. The student is expected to accumulate 192 credit points to be considered to have met the requirements of the Master of Science in Public Health and must pass each module by at least 50%.

- Level 1 = minimum of credits 96 (960 notional hours of study)
- Level 2 = minimum of credits 96 (960 notional hours of study)

TOTAL credit points 1920 (1920 notional hours of study)

Credit Transfer and Accumulation

1. Credits are derived from engagement of students in learning activities during lectures, seminars, tutorials, micro or macro field trips, directed and self-directed learning and writing examination tests and assignments.

2. Modules from the health and medical faculty are worth 8 credit. Lecture attendance is compulsory. Students who attend less than 80% of lessons will not be allowed to sit for their sessional examinations.

Weighting

The degree class shall be based on weighting the results from part 1 and 2, the Degree weighting shall be as follows:

Level 1 50%

Level 2 50%

Distribution of Notional Hours

Module	Lecture Hrs	Tutorials/ Seminars	Self-Directed Study	Assignment Tests/Exams	Notional Hrs	Credits
MPH700	36	10	17	17	80	8
PROJECT	0	0	40	40	80	8

Teaching Methods

At Springfield Research University (SRU), we are committed to employing a diverse array of teaching methods to ensure a comprehensive and engaging learning experience for our students. Our teaching methods are carefully selected to align with the programme's objectives and to meet the needs of our diverse student body. The following are the key teaching methods utilized across all SRU programmes:

1. Lectures:

- Lectures are used to introduce and explain key concepts, theories, and principles. They provide a structured and systematic approach to delivering content, allowing students to gain a solid foundation in their respective fields. Lectures are often supplemented with visual aids, multimedia presentations, and interactive elements to enhance understanding and engagement.

2. Seminars:

- Seminars are interactive sessions that promote critical thinking and in-depth discussion on specific topics. Students are encouraged to actively participate, share their perspectives, and engage in debates. Seminars provide an opportunity for students to develop their analytical and communication skills.

3. Workshops:

- Workshops are hands-on sessions that focus on practical skills and applications. These sessions allow students to engage in experiential learning, apply theoretical knowledge to real-world scenarios, and collaborate with peers on projects and activities. Workshops are designed to foster creativity, problem-solving, and teamwork.

4. Problem-Based Learning (PBL):

- Problem-Based Learning is a student-centered approach that involves presenting students with complex, real-world problems to solve. Students work in small groups to research, discuss, and propose solutions, developing critical thinking and collaborative skills in the process. PBL encourages independent learning and active engagement.

5. Case Studies:

- Case studies are used to analyze real-life situations and decision-making processes. Students examine and discuss case studies to understand the context, identify key issues, and evaluate possible solutions. This method helps students develop their analytical and problem-solving abilities while relating theoretical concepts to practical situations.

6. Clinical Practice:

- For programmes that include a clinical component, such as Health and Medical Sciences, clinical practice is an integral part of the curriculum. Students gain hands-on experience in clinical settings, working under the supervision of qualified professionals. This method provides valuable opportunities for students to apply their knowledge, develop clinical skills, and gain insights into professional practice.

7. Research Projects:

- Research projects are designed to cultivate a culture of inquiry and innovation. Students engage in independent or group research projects, exploring topics of interest and contributing to the body of knowledge in their field. Research projects develop students' research skills, critical thinking, and ability to communicate findings effectively.

8. Online Learning:

- Online learning is incorporated to provide flexible and accessible education. SRU utilizes online platforms to deliver lectures, conduct discussions, and facilitate collaborative projects. Online learning allows students to access course materials, participate in virtual classrooms, and engage with peers and instructors remotely.

9. Continuous Assessment:

- Continuous assessment methods, such as quizzes, assignments, and presentations, are used to monitor students' progress and provide ongoing feedback. These assessments help identify areas for improvement and ensure that students are meeting learning objectives throughout the course.

10. Peer Learning:

- Peer learning encourages students to collaborate and learn from each other. Group projects, study groups, and peer review sessions provide opportunities for students to share knowledge, offer feedback, and support each other's learning journey.

At SRU, our commitment to employing diverse and effective teaching methods ensures that our students receive a well-rounded education that prepares them for success in their chosen fields. We continuously review and enhance our teaching practices to provide the best possible learning experience for our students.

Delivery Methods

At Springfield Research University (SRU), we utilize a variety of delivery methods to ensure that our educational programmes are accessible, engaging, and effective. Our delivery methods are designed to cater to the diverse needs of our students and to provide flexible learning opportunities. The following are the key delivery methods employed across all SRU programmes:

1. In-Person Delivery:

- **Classroom Lectures:** Traditional classroom lectures provide a structured and interactive environment where students can engage with instructors and peers. These sessions often include discussions, presentations, and multimedia resources to enhance learning.
- **Laboratory Sessions:** For programmes that require practical and experimental learning, laboratory sessions are conducted in specialized labs equipped with the necessary tools and equipment. These hands-on sessions allow students to apply theoretical knowledge in a controlled environment.
- **Clinical Placements:** Health and Medical Sciences programmes include clinical placements in hospitals, clinics, and healthcare facilities. These placements provide students with real-world experience under the supervision of qualified professionals.

2. Online Delivery:

- **Virtual Classrooms:** Online platforms are used to deliver lectures, conduct discussions, and facilitate collaborative projects. Virtual classrooms enable students to access course materials, participate in live sessions, and engage with peers and instructors from remote locations.
- **Recorded Lectures:** Recorded lectures are made available for students to access at their convenience. This flexible approach allows students to review and revisit course content as needed.
- **Online Assessments:** Online assessments, including quizzes, assignments, and exams, are conducted through secure online platforms. These assessments provide timely feedback and help monitor students' progress.

3. Blended Learning:

- **Hybrid Courses:** Blended learning combines in-person and online delivery methods to provide a flexible and comprehensive learning experience. Hybrid courses may involve alternating between classroom sessions and online activities.
- **Flipped Classroom:** In the flipped classroom model, students access instructional content online before class and use in-person sessions for interactive, application-based activities. This approach encourages active learning and deeper engagement with the material.

4. Independent Study:

- **Self-Paced Learning:** Self-paced learning allows students to progress through course materials at their own speed. This method is ideal for students who prefer to learn independently and manage their own schedules.
- **Research Projects:** Independent research projects provide students with the opportunity to explore topics of interest, develop research skills, and contribute to the

body of knowledge in their field. Faculty advisors provide guidance and support throughout the research process.

5. Collaborative Learning:

- **Group Projects:** Group projects foster teamwork and collaboration among students. These projects often involve problem-solving, research, and presentations, allowing students to learn from each other and develop interpersonal skills.
- **Peer Review:** Peer review sessions encourage students to provide and receive constructive feedback on each other's work. This method promotes critical thinking, reflection, and improvement.

6. Experiential Learning:

- **Internships and Work Placements:** Internships and work placements provide students with practical experience in their chosen field. These opportunities allow students to apply their knowledge in real-world settings, develop professional skills, and build industry connections.
- **Field Trips and Excursions:** Field trips and excursions offer experiential learning opportunities outside the classroom. These activities provide students with firsthand exposure to relevant sites, industries, and practices.

7. Continuous Assessment:

- **Formative Assessments:** Formative assessments, such as quizzes, assignments, and in-class activities, provide ongoing feedback to students and help track their progress. These assessments are designed to support learning and identify areas for improvement.
- **Summative Assessments:** Summative assessments, including final exams, projects, and presentations, evaluate students' overall performance and mastery of course content.

At SRU, our diverse delivery methods ensure that students receive a well-rounded and flexible education that caters to their individual learning preferences. We are committed to continuously enhancing our delivery methods to provide the best possible learning experience for our students.

Curriculum for Public Health, ESQF Level 9 MPH degree, typical course sequence

Year 1 Semester 1

Code	Course	Lectures	Practical	Credits
MPH800	Principles and Methods of Epidemiology	80	0	8
MPH801	Research Methods: Approaches and Skills	80	0	8
MPH802	Public Health Fundamentals: Conceptual Frameworks	80	0	8
MPH803	Academic Language Skills in Healthcare	80	0	8
MPH804	Leadership and Collaborative Working in Public Health and Healthcare	80	0	8
MPH805	Introduction to Statistics	80	0	8
	Total			48

Year 1 Semester 2

Code	Course	Lectures	Practical	Credits
MPH806	Environmental and Occupational Health	80	0	8
MPH807	Managing Health Improvement through Social Marketing	80	0	8
MPH808	Health Systems and Policy	80	0	8
MPH809	Population Health Approaches	80	0	8
MPH810	Telehealth and Machine Learning	80	0	8
MPH811	Non-Communicable Diseases	80	0	8
	Total			48

Year 2 Semester 3

Code	Course	Lectures	Practical	Credits
MPH812	Rural Health	80	0	8
MPH813	Health Economics	80	0	8
MPH814	Maternal and Child Health	80	0	8
MPH815	Global Health	80	0	8
MPH816	Biostatistics	80	0	8
MPH817	Health Equity and Advocacy	80	0	8
	Total			48

Year 2 Semester 4

Code	Course	Lectures	Practical	Credits
MPH818	Behavioral Health	80	0	8
MPH819	Health Informatics and Data Analytics	80	0	8
MPH820	Dissertation Project	0	200	20
	Total			36

COURSE DESCRIPTIONS AND SYNOPSIS

PRINCIPLES AND METHODS OF EPIDEMIOLOGY

This module introduces students to the core concepts of epidemiology. By the end of the module, students would have acquired the skills necessary to describe, analyse, interpret, and appraise epidemiological studies. This basic understanding is essential for subsequent coursework and the dissertation project.

RESEARCH: APPROACHES, METHODS AND SKILLS

On this module you will appreciate the knowledge and skills needed to undertake research. You will learn about research philosophy, methodology and the different methods associated with a range of research traditions. You will explore the value of research evidence in informing public health and healthcare management practices and be able to apply the principles of research to critically appraise research quality. Specifically on this module you will learn about:

• Locating and organising literature

• Philosophical assumptions and foundations of enquiry

• Qualitative, quantitative and mixed methodological approaches

• Data collection, data analysis and interpretation

• Research governance and ethical issues

• Analysis and interpretation

By the end of the module you will be able to prepare a research proposal on a topic of interest to yourself and of value to public health / healthcare management.

PUBLIC HEALTH FUNDAMENTALS: CONCEPTS, THEORIES AND FRAMEWORKS

This module will offer you the opportunity to demonstrate a systematic understanding of fundamental public health concepts and to begin the process of critically evaluating them at a deeper level. You will learn how to critically analyse a broad range of public health theories, concepts and frameworks that are fundamental to public health policy and practice. You will also evaluate the complex interconnecting links between political, social, economic, biological, technological and environmental determinants of public health and explore underpinning discourses. You will also be encouraged to reflect on your communication skills when working with peers from a variety of ethnic and cultural contexts as well as your developing self-awareness of new knowledge gained from both national and global public health contexts.

DISSERTATION PROJECT

This research rich module will enable you to bring together the knowledge, understanding and skills that you have accrued from other modules on your programme. Prior to undertaking this module, you will have completed the appropriate level of study that prepares you for engagement with a Masters dissertation process. The module provides you with a vehicle for developing, refining and applying your research skills in an independent project. You will identify a topic with which you are familiar, and which you believe has scope for development or change that will be the focus of your independent study. You can chose one of three methods to structure your dissertation.
- Systematic Review : A structured analysis of evidence
- Empirical research: Based on primary data analysis or secondary sources
- Feasibility study: Planning a future project.

In the module, you will revisit and deepen your understandings of a range of key topic areas linked to the research process within your chosen method. This may include discussion of worldviews and research paradigms, research design, working with literature and theory, developing ethical codes, collecting robust research evidence, ensuring quality assurance within your research work, critically assessing the feasibility of a virtual project and writing and disseminating the research dissertation work. There will be a series of research seminars during the module and you will have access to a named supervisor for one to one supervision work. Both the seminars and supervision will enable you to critically examine how the research process will work best for your dissertation goals and design.

MANAGING HEALTH IMPROVEMENT THROUGH SOCIAL MARKETING

In this module you will learn how to critically consider managing health improvement through the use of social marketing techniques and approaches. You will explore understanding what social marketing consists of and how it can be used in managing health improvement practice . The module will enable you to identify the main theoretical principles underlying the practice of health related social marketing and critically apply these to improving health and reducing health inequalities. You will examine how marketing techniques can be used to influence behaviour change, health promotion and positive social change. You will learn how to effectively solve real-world problems and develop skills to enable you to plan implement and

evaluate appropriate social marketing health interventions. Key topics you will study include:-

ENVIRONMENTAL AND OCCUPATIONAL HEALTH

The Environmental and Occupational Health module provides a comprehensive understanding of workplace and environmental health. Topics include risk assessment, occupational hazards, and strategies for promoting health and safety. Students gain practical skills to address real-world challenges in diverse settings. Whether you're interested in policy development, research, or practice, this module equips you to make a positive impact on public health.

LEADERSHIP AND COLLABORATIVE WORKING IN PUBLIC HEALTH AND HEALTHCARE

Through studying this module you will learn about the theories and models of leadership and management relevant to public health and / or healthcare management. You will explore models of partnership working and the importance of working collaboratively to improve the health of the public. You will explore the application of leadership and management within contexts responsible for the provision of public health and / or healthcare management. You will gain an increased understanding of the importance of working in collaboration with partners to maximise resources and lead on health activities that aim to improve the health of the public and develop health services. You will critically evaluate a range of core concepts, theories and frameworks which are fundamental to understanding leadership and management theories and models of partnership working. You will have the opportunity to reflect on your own skill base and identify developmental needs in becoming an effective leader who is responsive and adaptive to change.

ACADEMIC LANGUAGE SKILLS IN HEALTHCARE

The purpose of this module is to develop the participant's ability in study skills and English language skills for academic purposes. The module is designed to develop the participants as independent learners. The module is supported by a teaching and learning plan which outlines the formal sessions, together with the tutor-directed study and independent reading. An interactive approach to seminars will draw upon the directed learning undertaken and participants' own experience of study skills. Directed learning will centre upon a range of activities including pre-reading, preparation for interactive activities and use of the discussion board on the e-learning platform. Independent learning will focus upon the participants identifying those skills which they need to develop and understand through a range of learning activities that might include extended reading, and reflection.

HEALTH SYSTEMS AND POLICY

Health Systems and Policy provides training and skills primarily to middle and senior managers working in the public and non-governmental sectors and prepares them to deal with the changing policy dynamics and health system challenges in Africa and the rest of the world. The content includes a range of themes in health systems and policy including analysis of policy development and implementation, health care financing, health system approaches to planning, implementation and monitoring and evaluation of HIV/AIDS programmes and health systems evaluation and research.

RURAL HEALTH

Rural Health aims to address the critical need for health care professionals in rural areas to take leadership in supporting and developing the health service in these areas, in designing appropriate health systems and in researching and advocating around the health needs of rural people. The course provides students with the necessary skills to enhance their public health knowledge to manage not only existing conditions, but also to promote health and prevent diseases within the communities in which they practice. The content includes a range of core modules in rural health which enables graduates to be effective leaders in the health service, manage their resources, develop appropriate programmes, work with communities and advocate on behalf of rural people. The research component will enable graduates to monitor the effectiveness of their interventions and provide evidence for other rural health care practitioners.

HEALTH ECONOMICS

Health Economics aims to build a critical mass of health economists equipped with skills in applying economic principles to support health policy decision-making in Africa and the continent. This field covers two main areas: economic evaluation and micro-economics as applied to health. Students Health Economics programme will be trained to undertake health economic evaluation applicable to the African context; apply economic approaches to inform policy decisions on the efficient allocation of scarce resources; and provide technical advice to policymakers on the use of economic policy levers to modify health behaviours.

MATERNAL AND CHILD HEALTH

Maternal and Child Health is designed to prepare professionals working in government departments, NGOs, the private sector or academic institutions for leadership positions in the field of Maternal and Child Health. The four modules include Child Health I and II, Maternal and Reproductive Health and Perinatal and Paediatric HIV. The course focuses on developing student's competencies in areas such as critical and analytic thinking, management and communication, policy and advocacy, working with others (including community) and ethics and values. The course is designed to integrate the achievement of these diverse skills into the coursework and assignments. Although the course includes clinical issues (such as diarrhoeal disease, child disability or maternal mortality), the emphasis is on the programmatic dimensions of the critical issues affecting women and children, particularly in resource constrained settings.

POPULATION HEALTH APPROACHES

This module provides an overview of the conceptualization of population health and approaches to addressing public health challenges. Students will be introduced to the underlying principles of health promotion, levels of prevention and the role of health systems, governance and regulation in understanding and addressing health issues at the population level. This is a core module for the MPH because it introduces the critical link between population health and health systems.

COURSE OUTLINES

Course Title: Principles and Methods of Epidemiology

Course Description:

This course provides an introduction to epidemiology for students studying any aspect of health sciences. It covers the principles and methods of epidemiological investigation, including both communicable and non-communicable diseases. The purpose of this course is to explain the role of epidemiology in general health thinking.

Learning Objectives:

1. **Basic Terminology and Definitions:**
    - Understand fundamental epidemiological concepts.
    - Describe a public health problem in terms of person, place, and time.
2. **Epidemiology Measures:**
    - Calculate basic epidemiology measures (e.g., incidence, prevalence).
    - Identify key data sources for epidemiologic purposes.
3. **Critical Evaluation:**
    - Evaluate the strengths and limitations of epidemiologic reports.
    - Draw appropriate inferences from epidemiologic data.
4. **Communication Skills:**
    - Communicate epidemiologic information to both lay and professional audiences.
    - Engage in public health-specific communication and social marketing.

Topics Covered:

1. **Disease Surveillance and Outbreak Investigations:**
    - Monitoring and detecting health trends.
    - Investigating disease clusters.
2. **Biostatistics and Research Methods:**
    - Data analysis and interpretation.
    - Conducting epidemiological studies.
3. **Role of Epidemiology in Public Health:**
    - Applying findings to improve population health.

Assessment:

- **Assignments and Quizzes:** Apply epidemiological concepts.
- **Research Paper or Project:** Investigate a relevant health issue.
- **Oral Presentations:** Communicate research findings.
- **Peer Review and Discussion:** Engage with peers in critical evaluation.

Recommended Reading:

1. “Epidemiology: Beyond the Basics” by Moyses Szklo and F. Javier Nieto.
2. Research articles from reputable journals in epidemiology.

Course Title: Research Methods: Approaches and Skills

Course Description:

The **Research Methods: Approaches and Skills** course equips students with essential tools for conducting rigorous research in public health. Participants will explore various research methodologies, both quantitative and qualitative, and develop critical skills necessary for planning, data collection, and dissemination in health-related research.

Learning Objectives:

1. **Methodological Understanding:**
    - Gain proficiency in quantitative and qualitative research approaches.
    - Understand the principles behind research design.
2. **Data Gathering Techniques:**
    - Learn methods for collecting relevant data.
    - Explore survey design, interviews, and observational research.
3. **Evidence Critique:**
    - Develop the ability to critically evaluate research findings.
    - Apply evidence-based decision-making in policy and practice.

Topics Covered:

1. **Research Design:**
    - Types of study designs (cross-sectional, cohort, case-control).
    - Sampling techniques and sample size determination.
2. **Quantitative Methods:**
    - Descriptive statistics, hypothesis testing, and regression analysis.
    - Epidemiological measures and data visualization.
3. **Qualitative Approaches:**
    - In-depth interviews, focus groups, and content analysis.
    - Ethnography and grounded theory.
4. **Ethical Considerations:**
    - Research ethics and informed consent.
    - Protecting human subjects.

Assessment:

- **Research Proposal:** Develop a research plan.
- **Data Collection Exercise:** Apply chosen research methods.
- **Critical Review:** Evaluate existing research literature.
- **Class Participation:** Engage in discussions and workshops.

Recommended Reading:

1. “Research Methods in Public Health” by Ann Bowling.
2. Research articles from reputable journals in public health research.

Course Title: Public Health Fundamentals: Conceptual Frameworks

Course Description:

This course provides a conceptual foundation for critically thinking about public health. It positions health as a fundamental prerequisite for building strong societies and emphasizes its relevance to development, security, foreign policy, and human rights. As future leaders in public health, you'll explore key frameworks and theories that underpin effective public health practice.

Learning Objectives:

1. **Conceptual Understanding:**
    - Develop a systematic grasp of fundamental public health concepts.
    - Critically evaluate these concepts at a deeper level.
2. **Health Equity and Social Determinants:**
    - Explore the complex interconnections between political, social, economic, biological, technological, and environmental factors.
    - Understand how health disparities arise and persist.
3. **Frameworks for Public Health Action:**
    - Analyze models and theories guiding public health policies and interventions.
    - Apply these frameworks to real-world challenges.

Topics Covered:

1. **History of Public Health:**
    - Evolution of public health practices and policies.
    - Milestones and influential figures.
2. **Health Equity and Human Rights:**
    - Addressing disparities and promoting social justice.
    - The role of human rights in public health.
3. **Frameworks for Health Promotion:**
    - Social ecological model, health behavior theories.
    - Community-based approaches.
4. **Global Health Perspectives:**
    - Cross-cultural considerations.
    - Health diplomacy and international cooperation.

Assessment:

- **Critical Analysis:** Evaluate public health theories and frameworks.
- **Case Studies:** Apply concepts to practical scenarios.
- **Group Discussions:** Engage in collaborative learning.

Recommended Reading:

1. "Concepts of Epidemiology" by Raj S. Bhopal.
2. "The Social Determinants of Health: Developing an Evidence Base for Political Action" by Michael Marmot.

Course Title: Academic Language Skills for Healthcare

Course Description:

The **Academic Language Skills for Healthcare** course aims to enhance students' language proficiency and communication abilities in the context of healthcare and public health. It focuses on academic writing, verbal expression, and effective communication across diverse audiences. Students will develop the skills necessary for clear, concise, and evidence-based communication in their professional and academic endeavors.

Learning Objectives:

1. **Effective Academic Writing:**
    - Develop skills in writing research papers, reports, and literature reviews.
    - Understand citation styles (e.g., APA, Harvard) and referencing.
2. **Verbal Communication:**
    - Practice presenting research findings and discussing complex health topics.
    - Enhance public speaking and presentation skills.
3. **Critical Reading and Analysis:**
    - Evaluate scientific literature and extract relevant information.
    - Synthesize information from multiple sources.

Topics Covered:

1. **Academic Writing Techniques:**
    - Structuring essays, abstracts, and academic papers.
    - Grammar, syntax, and vocabulary for scholarly writing.
2. **Oral Communication Strategies:**
    - Effective slide design for presentations.
    - Handling questions during seminars and conferences.
3. **Literature Review and Referencing:**
    - Conducting literature searches.
    - Properly citing sources and avoiding plagiarism.

Assessment:

- **Written Assignments:** Research papers, literature reviews, and reflective essays.
- **Oral Presentations:** Delivering concise and engaging talks.
- **Peer Feedback:** Providing constructive criticism to peers.

Recommended Reading:

1. "Writing for Academic Success" by Gail Craswell and Megan Poore.
2. University-specific resources on academic writing and language skills.

Course Title: Leadership and Collaborative Working in Public Health and Healthcare

Course Description:

This module aims to enhance student knowledge and understanding of theories and models related to leadership and management in public health and healthcare settings. Students will explore collaboration, partnership, and their implications for health improvement. The course covers various contexts, including community development, health promotion projects, working with health services, and emergency planning.

Learning Objectives:

1. **Leadership Theories and Models:**
    - Understand different leadership approaches.
    - Apply leadership concepts to public health challenges.
2. **Collaboration and Partnership:**
    - Explore working with stakeholders (service users, community groups, policymakers).
    - Understand the benefits and challenges of collaborative leadership.
3. **Models for Public Health Implementation:**
    - Learn frameworks for planning, implementing, leading, and evaluating public health projects.

Topics Covered:

1. **Theories and Models of Leadership and Management:**
    - Leadership styles, negotiation, and influencing skills.
    - Professional boundaries and inter-professional working.
2. **Contexts within Public Health Leadership:**
    - Community development, health promotion projects, and emergency planning.
    - Working with health services and other agencies.
3. **Stakeholder Engagement:**
    - Effective collaboration with diverse stakeholders.
    - Balancing competing interests.

Assessment:

- **Reflective Assignments:** Apply leadership concepts to real-world scenarios.
- **Case Studies:** Analyze collaborative efforts in public health.
- **Group Discussions:** Engage in collaborative learning.

Recommended Reading:

1. “Leadership in Organizations” by Gary Yukl.
2. Research articles on collaborative leadership and public health management.

Course Title: Introduction to Statistics

Course Description:

This course is a foundational introduction to statistical analysis in the context of public health research and practice. You’ll learn how statistics play a critical role in modern public health, enabling evidence-based decision-making. The course focuses on practical skills using the popular and flexible software R. You’ll explore data sets, descriptive statistics, hypothesis testing, and more.

Learning Objectives:

1. **Data Exploration and Description:**
    - Describe data sets from scratch, including data item features and quality issues.

    - Use descriptive statistics and graphical methods in R.
2. **Statistical Associations and Hypothesis Testing:**
    - Formulate and examine statistical associations between variables.
    - Interpret analysis output and assess the role of chance and bias.

Topics Covered:

1. **Types of Variables and Common Distributions:**
    - Understand variable types (categorical, continuous).
    - Explore common data distributions.
2. **Hypothesis Testing and Inference:**
    - Formulate testable hypotheses.
    - Apply statistical tests (means, proportions) in R.
3. **Hands-On Data Analysis:**
    - Work with realistic, messy data sets.
    - Learn to think critically and analyze public health data.

Assessment:

- **Quizzes:** Check your understanding throughout the course.
- **Hands-On Exercises:** Apply statistical concepts to real-world data.
- **Shareable Certificate:** Earn a career certificate upon completion.

Recommended Reading:

1. “Introduction to Statistical Learning” by Gareth James, Daniela Witten, Trevor Hastie, and Robert Tibshirani.

Course Title: Environmental and Occupational Health

Course Description:

The **Environmental and Occupational Health** module provides a thorough understanding of workplace and environmental health. Students will explore risk assessment, occupational hazards, and strategies for promoting health and safety. The course emphasizes the intersection of public health with environmental factors, preparing students to address real-world challenges in diverse settings.

Learning Objectives:

By the end of this module, students will be able to:

1. **Analyze** occupational health risks and environmental hazards.
2. **Evaluate** the impact of workplace conditions on health outcomes.
3. **Apply** evidence-based approaches to mitigate occupational and environmental health risks.

Topics of Research Covered:

1. **Occupational Health and Safety**: Legal frameworks, workplace inspections, and hazard identification.

2. **Environmental Risk Assessment**: Evaluating environmental pollutants and their effects.
3. **Health Promotion in Workplaces**: Strategies for employee well-being and preventive measures.
4. **Occupational Epidemiology**: Investigating health patterns in occupational settings.
5. **Case Studies**: Examining real-world scenarios related to environmental and workplace health.

Assessment:

- **Research Projects**: Students will conduct research on specific environmental or occupational health topics.
- **Case Studies**: Analyzing and presenting case studies relevant to the field.
- **Class Participation**: Active engagement in discussions, seminars, and workshops.

Recommended Reading:

1. LaDou, J., & Harrison, R. (Eds.). (2019). *Current Occupational & Environmental Medicine*. McGraw-Hill Education.
2. Levy, B. S., Wegman, D. H., & Baron, S. L. (Eds.). (2019). *Occupational and Environmental Health: Recognizing and Preventing Disease and Injury*. Oxford University Press.

Course Title: Managing Health Improvement through Social Marketing

Course Description:

The **Managing Health Improvement through Social Marketing** module focuses on applying social marketing principles to public health contexts. You'll explore how social marketing strategies can effectively promote health behaviors, influence policy, and address public health challenges. The course emphasizes evidence-based approaches and practical skills for designing, implementing, and evaluating health campaigns.

Learning Objectives:

1. **Understanding Social Marketing:**
   - Explore the key principles and concepts of social marketing.
   - Understand its role in health behavior change.
2. **Designing Effective Campaigns:**
   - Learn how to identify target audiences and segment populations.
   - Develop evidence-based strategies for health promotion.
3. **Evaluation and Impact Assessment:**
   - Assess the effectiveness of social marketing interventions.
   - Use data to refine and improve health campaigns.

Topics Covered:

1. **Introduction to Social Marketing:**

    - Definitions, history, and ethical considerations.
    - Differentiating social marketing from commercial marketing.
2. **Behavior Change Theories:**
    - Applying theories (e.g., Health Belief Model, Theory of Planned Behavior).
    - Tailoring interventions to individual and community needs.
3. **Campaign Planning and Implementation:**
    - Formative research, message development, and channel selection.
    - Budgeting, implementation, and monitoring.
4. **Case Studies and Best Practices:**
    - Analyzing successful health campaigns.
    - Learning from real-world examples.

Assessment:

- **Campaign Proposal:** Design a social marketing campaign.
- **Critical Analysis:** Evaluate existing health campaigns.
- **Group Discussions:** Engage in collaborative learning.

Recommended Reading:

1. "Social Marketing: Changing Behaviors for Good" by Nancy R. Lee and Philip Kotler.

Course Title: Health Systems and Policy

Course Description:

The **Health Systems and Policy** module explores the organization, management, and governance of health systems. It delves into the policies and strategies that shape healthcare delivery, financing, and access. Students will analyze health system performance, explore global health governance, and understand the role of stakeholders in shaping health policies.

Learning Objectives:

1. **Health System Understanding:**
    - Explore the components of health systems (financing, workforce, infrastructure).
    - Understand the interplay between health policies and system performance.
2. **Policy Analysis and Implementation:**
    - Evaluate health policies' impact on population health.
    - Learn about policy formulation, implementation, and evaluation.

Topics Covered:

1. **Health System Components:**
    - Financing mechanisms (public, private, insurance).
    - Health workforce planning and management.
2. **Health Policy Development:**

    - Stakeholder engagement and advocacy.
    - Evidence-based policy-making.
3. **Global Health Governance:**
    - International organizations and health agendas.
    - Health diplomacy and cooperation.

Assessment:

- **Policy Analysis Paper:** Evaluate a specific health policy.
- **Group Discussions:** Engage in policy debates.
- **Case Studies:** Analyze real-world health system challenges.

Recommended Reading:

1. "Understanding Health Policy: A Clinical Approach" by Thomas Bodenheimer and Kevin Grumbach.
2. Research articles on health systems and policy from reputable journals.

Course Title: Population Health Approaches

Course Description:

The **Population Health Approaches** module explores strategies and interventions aimed at improving the health and well-being of entire communities and populations. It focuses on understanding the social determinants of health, health inequalities, and evidence-based approaches to promote health and prevent disease. Students will analyze population-level data, explore health promotion initiatives, and learn about policy implications.

Learning Objectives:

1. **Understanding Population Health:**
    - Explore the impact of social, economic, and environmental factors on health outcomes.
    - Understand health disparities and their root causes.
2. **Health Promotion Strategies:**
    - Learn evidence-based approaches to promote health behaviors.
    - Analyze community-based interventions.

Topics Covered:

1. **Social Determinants of Health:**
    - Income, education, housing, and access to healthcare.
    - Health equity and social justice.
2. **Health Promotion Initiatives:**
    - Community engagement and empowerment.
    - Behavioral change campaigns.
3. **Policy Implications:**
    - Advocacy for population health.
    - Evaluating policy effectiveness.

Assessment:

- **Health Promotion Project:** Design a community-based health initiative.
- **Critical Analysis:** Evaluate population health interventions.
- **Group Discussions:** Engage in collaborative learning.

Recommended Reading:

1. “Population Health: Concepts and Methods” by T. Kue Young.
2. Research articles on population health and health promotion.

Course Title: Telehealth and Machine Learning

Course Description:

The **Telehealth and Machine Learning** module explores the intersection of digital health technologies, telemedicine, and machine learning. Students will learn how these technologies can enhance healthcare delivery, improve patient outcomes, and address public health challenges. The course emphasizes evidence-based practices and practical skills in implementing telehealth solutions.

Learning Objectives:

1. **Understanding Telehealth:**
    - Explore telemedicine applications, remote monitoring, and virtual care.
    - Understand the role of telehealth in improving access and patient engagement.
2. **Machine Learning in Healthcare:**
    - Learn about machine learning algorithms, data preprocessing, and model evaluation.
    - Apply machine learning techniques to health data for prediction and decision support.

Topics Covered:

1. **Telehealth Technologies:**
    - Teleconsultations, telemonitoring, and teletriage.
    - Legal and ethical considerations.
2. **Machine Learning Fundamentals:**
    - Supervised and unsupervised learning.
    - Feature engineering and model selection.
3. **Healthcare Use Cases:**
    - Predictive modeling for disease risk assessment.
    - Personalized treatment recommendations.

Assessment:

- **Project Implementation:** Design and implement a telehealth solution.
- **Machine Learning Exercises:** Apply ML algorithms to health datasets.
- **Case Studies:** Analyze real-world telehealth and ML applications.

Recommended Reading:

1. “Machine Learning in Healthcare: A Comprehensive Survey” by Mohammad M. Ghassemi et al.
2. Research articles on telehealth and ML applications in healthcare.

Course Title: Non-Communicable Diseases

Course Description:

Non-communicable diseases (NCDs) are the leading cause of death and disability globally. This module will address the burden of NCDs worldwide, examining their risk factors, challenges faced in studying the epidemiology of these conditions, and approaches to their prevention and control.

Learning Objectives:

1. **Global Burden of NCDs:**
    - Explore differences in NCD distribution and long-term trends across income settings.
    - Assess the impact of NCDs on morbidity and mortality.
2. **Risk Factors and Knowledge Gaps:**
    - Evaluate current understanding of NCD risk factors.
    - Discuss advanced epidemiological techniques and emerging technologies.
3. **Prevention and Control Strategies:**
    - Translate epidemiological evidence into effective NCD prevention strategies.
    - Consider approaches at both population and individual levels.

Topics Covered:

1. **Major Concepts in NCD Epidemiology:**
    - Understanding disease patterns and risk factors.
    - Molecular epidemiology insights.
2. **Specific NCDs:**
    - Cancer epidemiology and trends.
    - Cardiovascular diseases, stroke, and obesity.
3. **Musculoskeletal Disorders and Neurodegenerative Diseases:**
    - Impact, risk factors, and prevention.

Assessment:

- **Critical Analysis:** Evaluate NCD burden and risk factors.
- **Application of Techniques:** Apply advanced epidemiological methods.
- **Implementation Strategies:** Discuss prevention and control approaches.

Recommended Reading:

1. “Introduction to Epidemiology” by Leon Gordis.
2. Research articles on NCDs and evidence-based interventions.

Course Title: Rural Health

Course Description:

The **Rural Health** module examines health challenges specific to rural populations. It explores the impact of social determinants, access to care, and community-based interventions. Students will learn strategies for improving health outcomes in underserved rural areas.

Learning Objectives:

1. **Understanding Rural Health Contexts:**
    - Explore rural demographics, lifestyle factors, and health disparities.
    - Understand the unique challenges faced by rural communities.
2. **Health Promotion in Rural Areas:**
    - Learn evidence-based approaches to prevent diseases.
    - Address health behaviors and lifestyle choices.

Topics Covered:

1. **Access to Healthcare Services:**
    - Challenges related to healthcare infrastructure and distance.
    - Strategies for improving access, such as telehealth and mobile clinics.
2. **Social Determinants of Health:**
    - Impact of factors like education, income, and employment.
    - Understanding their influence on health outcomes.
3. **Health Disparities in Rural Areas:**
    - Analyzing disparities in preventive care and chronic disease management.
    - Addressing inequalities through policy and community-based interventions.
4. **Aging Population in Rural Communities:**
    - Health needs of older adults.
    - Long-term care options and support services.
5. **Environmental Health Challenges:**
    - Water quality, air pollution, and agricultural exposures.
    - Promoting environmental health awareness.
6. **Mental Health and Well-Being:**
    - Availability of mental health services.
    - Reducing stigma and promoting mental well-being.

Assessment:

- **Health Needs Assessment:** Analyze rural health data.
- **Community Project:** Develop a health intervention plan.
- **Group Discussions:** Explore rural health case studies.

Recommended Reading:

1. “Rural Public Health: Best Practices and Preventive Models” by Jacob C. Warren and K. Bryant Smalley.

Course Title: Health Economics

Course Description:

The **Health Economics** module provides students with a solid foundation in economic principles relevant to health and healthcare. It explores the efficient allocation of healthcare resources, cost-effectiveness analysis, and the evaluation of health interventions. Students will learn how to apply economic tools to inform healthcare policy and decision-making.

Learning Objectives:

1. **Economic Concepts for Health and Healthcare:**
    - Understand fundamental economic principles applicable to health systems.
    - Explore the functioning of health and healthcare markets.
2. **Health Economic Evaluation:**
    - Learn methods for assessing the efficiency and cost-effectiveness of healthcare interventions.
    - Apply economic evaluation techniques to real-world scenarios.

Topics Covered:

1. **Introduction to Health Economics:**
    - Role of economics in healthcare decision-making.
    - Key concepts (opportunity cost, efficiency, equity).
2. **Cost-Effectiveness Analysis:**
    - Measuring health outcomes relative to costs.
    - Discounting, sensitivity analysis, and decision trees.
3. **Health Technology Assessment (HTA):**
    - Evaluating new drugs, medical devices, and interventions.
    - Balancing clinical effectiveness and economic impact.
4. **Healthcare Financing and Insurance:**
    - Models of healthcare financing (public, private, social insurance).
    - Risk pooling and adverse selection.

Assessment:

- **Written Assignments:** Apply economic principles to health policy scenarios.
- **Case Studies:** Analyze cost-effectiveness of healthcare interventions.
- **Group Discussions:** Engage in policy debates and economic evaluations.

Recommended Reading:

1. “Applied Methods of Cost-effectiveness Analysis in Healthcare” by Alistair M. Gray, Philip M. Clarke, and Jane L. Wolstenholme.
2. Research articles on health economics from reputable journals.

Course Title: Maternal and Child Health

Course Description:

The **Maternal and Child Health** module focuses on the determinants, mechanisms, and systems that promote and maintain the health and safety of women, children, and their families. It aims to enhance the future health and welfare of society by addressing critical issues related to maternal and child well-being.

Learning Objectives:

1. **Global Burden of Maternal and Child Morbidity and Mortality:**
    - Understand the prevalence and impact of maternal and child health challenges worldwide.
    - Appreciate the major determinants and risk factors for maternal and child morbidity and mortality.
2. **Strategies for Prevention and Improvement:**
    - Examine the design, implementation, and evaluation of interventions to prevent maternal and child mortality.
    - Evaluate the specific challenges of epidemiological research in maternal and child health.

Topics Covered:

1. **Maternal Health:**
    - Maternal mortality and morbidity.
    - Reproductive health, family planning, and fertility.
2. **Child Health:**
    - Perinatal and child mortality and morbidity.
    - Safe childbirth from both midwifery and obstetric perspectives.
3. **Special Considerations:**
    - Perinatal mental health.
    - Care of sick newborns.
    - Breastfeeding and nutrition.

Assessment:

- **Critical Analysis:** Evaluate maternal and child health strategies.
- **Research Projects:** Conduct epidemiological research in maternal and child health.
- **Discussion Panels:** Engage in interdisciplinary discussions.

Recommended Reading:

1. “Maternal and Child Health: Programs, Problems, and Policy in Public Health” by Jonathan B. Kotch and Kristine M. Gebbie.
2. Research articles on maternal and child health from reputable journals.

Course Title: Global Health

Course Description:

The **Global Health** module explores health challenges and solutions on a global scale. It delves into the social determinants of health, health disparities, and the impact of globalization. Students will analyze health systems, policies, and interventions across diverse populations and contexts.

Learning Objectives:

1. **Understanding Global Health Contexts:**
    - Explore health issues beyond national borders.

    - Understand the influence of culture, politics, and economics on health outcomes.
2. **Health Equity and Social Justice:**
    - Analyze disparities in health access, quality, and outcomes.
    - Advocate for equitable health policies and interventions.

Topics Covered:

1. **Global Burden of Disease:**
    - Leading causes of morbidity and mortality worldwide.
    - Risk factors (infectious diseases, non-communicable diseases).
2. **Health Systems and Policies:**
    - Comparative analysis of healthcare systems.
    - Universal health coverage and financing mechanisms.
3. **Emerging Global Health Challenges:**
    - Climate change, migration, and urbanization.
    - Pandemics, humanitarian crises, and health security.

Assessment:

- **Policy Analysis:** Evaluate global health policies.
- **Case Studies:** Analyze real-world health challenges.
- **Group Projects:** Collaborate on global health interventions.

Recommended Reading:

1. “Global Health 101” by Richard Skolnik.
2. Research articles on global health from reputable journals.

Course Title: Biostatistics

Course Description:

The **Biostatistics** module equips students with essential statistical skills for analyzing health data, conducting research, and making evidence-based decisions in public health. Students will learn foundational concepts, methods, and applications of biostatistics in various health-related contexts.

Learning Objectives:

1. **Statistical Foundations:**
    - Understand probability theory, distribution theory, and statistical inference.
    - Apply statistical methods to health data.
2. **Study Design and Analysis:**
    - Learn about observational studies, clinical trials, and survey designs.
    - Perform statistical analyses using software tools (e.g., R, SAS).

Topics Covered:

1. **Descriptive Statistics:**
    - Measures of central tendency and variability.
    - Data visualization techniques.
2. **Inferential Statistics:**

    - Hypothesis testing and confidence intervals.
    - Linear regression and generalized linear models.
3. **Epidemiologic Applications:**
    - Analyzing disease rates and risk factors.
    - Survival analysis and time-to-event data.

Assessment:

- **Problem-Solving Exercises:** Apply statistical methods to real-world health scenarios.
- **Data Analysis Projects:** Conduct statistical analyses using health datasets.
- **Written Reports:** Communicate findings effectively.

Recommended Reading:

1. "Biostatistics: A Foundation for Analysis in the Health Sciences" by Wayne W. Daniel and Chad L. Cross.
2. Research articles on biostatistics from reputable journals.

Course Title: Health Equity and Advocacy

Course Description:

This course explores the critical intersection of health equity and advocacy within the context of public health. Students will examine the social determinants of health, health disparities, and the impact of systemic inequities on vulnerable populations. Through a multidisciplinary lens, we will delve into strategies for promoting health equity, addressing barriers, and advocating for policy changes.

Learning Objectives:

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

1. **Critically evaluate issues** related to health equity and social justice in the analysis of public health programs and policies.
2. **Apply theoretical frameworks** to identify social determinants of health that promote or compromise health equity in disadvantaged groups.
3. **Measure social determinants of health** and understand their impact on health outcomes for vulnerable and marginalized populations.
4. **Apply social justice principles** to inform strategies and policies aimed at promoting health equity within communities.
5. **Evaluate the implementation and sustainability** of health programs at various levels (interpersonal, intrapersonal, organizational, social/environmental, and political).

Topics Covered:

1. **Introduction to Health Equity and Social Justice:**
    - Definitions and concepts
    - Historical context
    - The role of advocacy
2. **Social Determinants of Health:**
    - Income, education, housing, and employment

    - Racism, discrimination, and bias
    - Access to healthcare
3. **Health Disparities and Vulnerable Populations:**
    - Disparities based on race, ethnicity, gender, and socioeconomic status
    - Intersectionality
4. **Policy Advocacy and Change:**
    - Strategies for promoting equity
    - Community engagement
    - Legislative advocacy
5. **Assessment and Evaluation:**
    - Measuring health outcomes
    - Impact assessment of interventions

Assessment Methods:

- **Class Participation:** Engaging in discussions, case studies, and group activities
- **Individual Assignments:** Research papers, policy briefs, or advocacy plans
- **Group Project:** Developing an advocacy campaign
- **Final Exam:** Assessing understanding of course content

Recommended Reading:

1. Braveman, P., & Gottlieb, L. (2014). **The Social Determinants of Health: It's Time to Consider the Causes of the Causes**.
2. Marmot, M. (2015). **The Health Gap: The Challenge of an Unequal World**. Bloomsbury Publishing.
3. Berkman, L. F., & Kawachi, I. (Eds.). (2000). **Social Epidemiology**. Oxford University Press.

Course Title: Behavioural Health

Course Description:

The "Behavioural Health" course focuses on understanding and addressing contemporary public health challenges through the lens of behaviour change. Students will explore theories, methods, and evidence related to behaviour change interventions. This multidisciplinary course equips emerging health professionals with the skills needed to promote positive health behaviours and improve population health.

Learning Objectives:

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

1. **Critically appraise theories and evidence** related to understanding behaviour and behaviour change.
2. **Design, implement, and evaluate behaviour change interventions** in various application areas.
3. **Apply behavioural insights** to address public health challenges effectively.

Topics Covered:

1. **Behaviour Change Theories:**
    - Social cognitive theory
    - Health belief model
    - Transtheoretical model
2. **Behavioural Interventions:**
    - Motivational interviewing
    - Cognitive-behavioural approaches
    - Social marketing
3. **Health Communication and Education:**
    - Effective communication strategies
    - Health literacy
4. **Ethical Considerations in Behavioural Health:**
    - Autonomy and informed consent
    - Balancing individual and societal interests

Assessment Methods:

- **Class Participation:** Engaging in discussions and case studies
- **Individual Assignments:** Designing behaviour change interventions
- **Group Project:** Developing a health communication campaign
- **Final Exam:** Assessing understanding of course content

Recommended Reading:

1. Prochaska, J. O., & Velicer, W. F. (1997). **The Transtheoretical Model of Health Behavior Change.** American Journal of Health Promotion, 12(1), 38–48
2. Michie, S., van Stralen, M. M., & West, R. (2011). **The Behaviour Change Wheel: A New Method for Characterising and Designing Behaviour Change Interventions.** Implementation Science, 6, 42
3. Kreuter, M. W., Farrell, D., Olevitch, L., & Brennan, L. (2000). **Tailoring Health Messages: Customizing Communication with Computer Technology.** Routledge.

Course Title: Health Informatics and Data Analytics

Course Description:

The “Health Informatics and Data Analytics” course bridges the gap between healthcare and technology, equipping students with the skills needed to harness data for evidence-based decision-making. In an era of digital health records and big data, professionals who understand health informatics and data analytics are in high demand. This course explores how data science techniques can be applied to improve healthcare delivery, enhance patient outcomes, and inform policy.

Learning Objectives:

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

1. **Understand the fundamentals of health informatics:**
    - Explore electronic health/medical records
    - Analyze public health data
    - Grasp the basics of health information systems
2. **Apply data analytics techniques to health data:**
    - Use statistical methods for health research
    - Explore machine learning approaches

    - Interpret results from complex health datasets
3. **Bridge technology and healthcare:**
    - Understand the role of informatics in healthcare delivery
    - Advocate for data-driven decision-making
    - Collaborate with interdisciplinary teams

Topics Covered:

1. **Introduction to Health Informatics:**
    - Definitions and scope
    - Health information exchange
    - Privacy and security considerations
2. **Data Analytics in Healthcare:**
    - Descriptive, inferential, and predictive analytics
    - Data visualization for healthcare professionals
    - Case studies in health data analysis
3. **Electronic Health Records (EHRs) and Interoperability:**
    - EHR systems and standards
    - Challenges in EHR implementation
    - Ensuring data quality and integrity
4. **Healthcare Data Management:**
    - Data governance and stewardship
    - Health data warehouses
    - Handling sensitive health information

Assessment Methods:

- **Individual Assignments:** Analyzing health datasets
- **Group Projects:** Designing health informatics solutions
- **Class Participation:** Engaging in discussions and case studies
- **Final Exam:** Assessing understanding of course content

Recommended Reading:

1. Shortliffe, E. H., & Cimino, J. J. (Eds.). (2014). **Biomedical Informatics: Computer Applications in Health Care and Biomedicine**. Springer.
2. Davenport, T. H., & Harris, J. G. (2007). **Competing on Analytics: The New Science of Winning**. Harvard Business Review Press.
3. Ohno-Machado, L. (Ed.). (2019). **Artificial Intelligence in Medicine**. Academic Press.

Course Title: Dissertation Project

Course Description:

The “Dissertation Project” is a capstone experience that allows students to apply their knowledge and research skills to a specific public health topic. Through independent inquiry, students will design, execute, and report on an original research project. This course emphasizes critical thinking, data analysis, and effective communication.

Learning Objectives:

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

1. **Formulate a research question:** Develop a clear and relevant research question related to public health.
2. **Design a research study:** Create a robust research design, including data collection methods and ethical considerations.
3. **Analyze data:** Apply appropriate statistical or qualitative techniques to analyze research data.
4. **Communicate findings:** Present research findings effectively through written reports and oral presentations.

Topics Covered:

1. **Research Proposal Development:**
    - Identifying a research topic
    - Literature review and theoretical framework
    - Research question formulation
2. **Research Methods:**
    - Quantitative research methods (surveys, experiments, observational studies)
    - Qualitative research methods (interviews, focus groups, content analysis)
    - Ethical considerations in research
3. **Data Collection and Analysis:**
    - Data collection tools (questionnaires, interviews, observations)
    - Descriptive and inferential statistics
    - Qualitative data coding and thematic analysis
4. **Writing and Presenting Research:**
    - Structuring a research report (abstract, introduction, methods, results, discussion)
    - Effective data visualization
    - Oral presentation skills

Assessment Methods:

- **Research Proposal:** Developing a well-defined research question and proposal
- **Data Collection and Analysis:** Conducting research and analyzing data
- **Final Dissertation:** Writing a comprehensive research report

Recommended Reading:

1. Creswell, J. W. (2014). **Research Design: Qualitative, Quantitative, and Mixed Methods Approaches**. Sage Publications.
2. Polit, D. F., & Beck, C. T. (2017). **Nursing Research: Generating and Assessing Evidence for Nursing Practice**. Wolters Kluwer.
3. Silverman, D. (2016). **Qualitative Research**. Sage Publications.

CAPITAL OPERATIONAL BUDGET FOR MASTER OF SCIENCE: PUBLIC HEALTH

The programme budget is shown in the table below:

Capital Operational Budget for the Master of Science: Public Health This budget projection calculation is based on thirty students per year, covering two semesters, at a cost of R70,000 per student.					
Description	**2023**	**2024**	**2025**	**2026**	**TOTAL**
Equity Financing	7554354	-	-	-	7554354
Master of Science: Public Health	2008890	12953250	14407650	19861650	49231440
Other	152712	192708	254520	363600	963 540
TOTAL	**9715956**	**13145958**	**14662170**	**20225250**	**57749334**
Expenditure					
Administrative Costs	690190	1090800	1090800	1090800	3962589
Salaries and Wages	767876	236340	236340	236340	1476896
Equipment Costs	1524073	363600	363600	363600	2614873
Operating Costs	1088626	501768	501768	501768	2593930
Research, Training & Workshops	435451	73811	73811	73811	656883
Construction and Infrastructure	2177248	545400	545400	545400	3813448
Marketing and Studio Recording	217728	36724	-	36724	291175
Travelling and Accommodation	653175	491587	491587	491587	2127936
Vehicles	-	653171	-	363600	1016771
Other Expenses	653175	93700	93700	93700	934 274
TOTAL	**8207539**	**4086900**	**3397006**	**3797329**	**19488775**
Repayment					
Equity and Dividend Payments	1888590	1888590	1888590	1888590	7554358
Interest - 18%	339948	339948	339948	339948	1359792
Charges and Accounting	66859	66859	66859	66859	267435
TOTAL	**2295396**	**2295396**	**2295396**	**2295396**	**9181584**
Total Income	9715956	13145958	14662170	20225250	57749334
Total Expenditure	10502935	6382296	5692402	6092725	28670358
B/Forward	-786979	6763662	8969768	14132525	29078976
B/ Down	**-786979**	**6763662**	**8969768**	**14132525**	**29078976**

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