Module Definition Form (MDF)

Module code: MOD006292	**Version:** 2 **Date Amended:** 15/May/2024

1. Module Title
Fundamentals of Epidemiology

2a. Module Leader
Rudolph Schutte

2b. School
School of Allied Health and Social Care

2c. Faculty
Faculty of Health, Medicine and Social Care

3a. Level
5

3b. Module Type
Standard (fine graded)

4a. Credits
15

4b. Study Hours
150

5. Restrictions

Type	Module Code	Module Name	Condition
Pre-requisites:	None		
Co-requisites:	None		
Exclusions:	None		
Courses to which this module is restricted:			

LEARNING, TEACHING AND ASSESSMENT INFORMATION

6a. Module Description

Explore the basic concepts of epidemiology and biostatistics as applied to public health problems. Dive into the core principles and methods of epidemiologic investigation, appropriate summaries and displays of data, and the use of classical statistical approaches to describe the health of populations. We'll study the dynamic behaviour of disease; usage of rates, ratios and proportions; methods of direct and indirect adjustment, and clinical life tables that measures and describes the extent of disease problems facing the world today. We'll introduce various methods of epidemiologic study designs for investigating associations between risk factors and disease outcomes. The data you'll learn to gather and interpret forms the foundation of decision-making, influencing policies at the local and government levels.

We'll actively participate in stimulating conversations on medical ethics. Through these discussions, you'll gain an understanding of the close relationships between personal- and professional ethical judgement in decision-making in medical research collecting epidemiological data in and out of the clinical setting.

6b. Outline Content

- Roles of quantitative methods in public health: biostatistics and epidemiology within the paradigm of public health; epidemiologic investigation; exploratory data analysis; tables and graphs.
- Quantifying and comparing public health measures: summary measures (ratios, proportions, rates); indices of morbidity and mortality; direct and indirect methods of adjustment.
- Quantifying the natural history of disease: life tables; measures of prognosis.
- Probability concepts and their use in evaluation of diagnostic and screening tests: probability concepts; evaluation of diagnostic screening tests.
- Epidemiologic study designs: randomised clinical trials; cohort studies; case-control studies; cross-sectional studies.
- Estimating risk and interpretation of data from epidemiologic studies: measures of association; use of the chi-square statistic; bias and confounding; causal association; interaction.
- Ethical considerations in medical research and treatment.

6c. Key Texts/Literature

The reading list to support this module is available at: https://readinglists.aru.ac.uk/

6d. Specialist Learning Resources

Computer laboratory; SPSS statistical software; Canvas

7. Learning Outcomes (threshold standards)		
No.	**Type**	**On successful completion of this module the student will be expected to be able to:**
1	Knowledge and Understanding	Evaluate the fundamental principles of epidemiology
2	Knowledge and Understanding	Demonstrate knowledge and an appreciation of good ethical practice in medical research
3	Intellectual, practical, affective and transferrable skills	Compare appropriate study designs and data collection methods
4	Intellectual, practical, affective and transferrable skills	Appraise and communicate to an audience the key concepts of a selected study design in public health research

8a. Module Occurrence to which this MDF Refers				
Year	**Occurrence**	**Period**	**Location**	**Mode of Delivery**
2025/6	ZZF	Template For Face To Face Learning Delivery		Face to Face

8b. Learning Activities for the above Module Occurrence			
Learning Activities	**Hours**	**Learning Outcomes**	**Details of Duration, frequency and other comments**
Lectures	20	1-4	2h x 10 weeks
Other teacher managed learning	12	1-4	Seminar and group tutorials
Student managed learning	118	1-4	Including time spent pre-reading cases and on assignment preparation
TOTAL:	150		

9. Assessment for the above Module Occurrence					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
010	Practical	1-4	60 (%)	Fine Grade	30 (%)
Up to 15 minute presentation evaluating a selected intervention including questions and answers equivalent to 1500 words					
Assessment No.	**Assessment Method**	**Learning Outcomes**	**Weighting (%)**	**Fine Grade or Pass/Fail**	**Qualifying Mark (%)**
011	Coursework	1-4	40 (%)	Fine Grade	30 (%)
Written report of 1500 words					

In order to pass this module, students are required to achieve an overall mark of 40% (for modules at levels 3, 4, 5 and 6) or 50% (for modules at level 7*).

In addition, students are required to:
(a) achieve the qualifying mark for each element of fine graded assessment as specified above
(b) pass any pass/fail elements

[* the pass mark of 50% applies for all module occurrences from the academic year 2024/25 – see Section 3a of this MDF to check the level of the module and Section 8a of this MDF to check the academic year]