



“Investing in Africa’s Future”

COLLEGE OF HEALTH, AGRICULTURE AND NATURAL SCIENCES

DEPARTMENT OF PUBLIC HEALTH AND NURSING

NREM 500: RESEARCH METHODS

END OF SECOND SEMESTER EXAMINATIONS

MAY/APRIL 2025

LECTURER: Dr S CHITUKU

DURATION: 3 HOURS

INSTRUCTIONS

Section is A Compulsory Answer ALL questions
Answer Four (3) questions in section B

THE MARK ALLOCATION FOR EACH QUESTION IS INDICATED AT
THE END OF THE QUESTION

CREDIT WILL BE GIVEN FOR LOGICAL, SYSTEMATIC AND NEAT
PRESENTATION

SECTION A ANSWER ALL QUESTIONS (40 marks)

QUESTION 1

- a) Explain the primary differences between qualitative and quantitative research methodologies in public health. (5 Marks)
- b) Discuss the types of data collected in qualitative and quantitative research methodologies. (5 Marks)
- c) Provide an example of a research question best addressed using qualitative research methodology and explain why. (5 Marks)
- d) Provide an example of a research question best addressed using quantitative research methodology and explain why. (5 Marks)

QUESTION 2

- a) List and explain five advantages of using surveys as a data collection method in public health research. (5 Marks)
- b) Provide examples of scenarios in public health where surveys are particularly useful. (5 Marks)
- c) Discuss five disadvantages of using surveys as a data collection method in public health research. (5 Marks)
- d) Explain strategies to minimize the impact of these disadvantages in public health research. (5 Marks)

SECTION B ANSWER ANY THREE (3) QUESTIONS (60 Marks)

QUESTION 3

- a) Outline the steps involved in performing a regression analysis to investigate the relationship between socioeconomic status and health outcomes. Discuss the role of model selection and the use of software tools in conducting regression analysis. (10 Marks)
- b) Explain how to interpret the coefficients of the independent variables in a regression analysis. Discuss the significance of the R-squared value and the p-values in assessing the model's fit and the relationships between variables. (10 Marks)

QUESTION 4

Evaluate the use of different statistical techniques in public health research for analyzing the impact of an intervention on health outcomes. In your response, discuss at least three different statistical methods, their applications, and the interpretation of results. Include a discussion on how to handle missing data and the importance of sensitivity analysis. (20 marks)

QUESTION 5

Discuss the importance of conducting a comprehensive literature review in the research process. (5 Marks)

b) Explain the steps involved in designing a research study to investigate a public health issue. (10 Marks)

c) Identify two potential challenges in conducting a literature review and suggest strategies to overcome them. (5 Marks)

QUESTION 6

Identify and describe the essential components of a research proposal in public health. Discuss the importance of each component in ensuring the proposal's success. (20 Marks)