

MAKERERE UNIVERSITY BUSINESS SCHOOL
COURSE WORK ONE TAKE HOME FOR THE DEGREE OF
BACHELOR OF COMMERCE
OF MAKERERE UNIVERSITY AY 2025/2026

COURSE UNIT : ACTUARIAL SCIENCE AND ANALYTICS
COURSE CODE : FIN2225
YEAR OF STUDY : TWO
SEMESTER : TWO
DATE : MARCH 14, 2026

INSTRUCTIONS

1. *This is a take home assignment to be done individually.*
2. *Students are required to attempt all questions.*
3. *Students are required to save both the MS Excel and MS Word files in their **name** and **student number**. For example, **KAHUNDESHAKIRAH2300708650**.*
4. *Submission date is March 24, 2026 at 14:00 hours.*
5. *Submission is to be made electronically via email to: robele@mubs.ac.ug.*
6. *Students are expected to register on the attendance list that will be provided upon submission of their work.*

Question One

Using the claims data set that was shared, you are required;

- a) To build a claims/loss dashboard using Microsoft Excel. **(04 Marks)**
- b) To compute the following using the Microsoft excel dashboard created;
 - i. Claim count and total claim amount. **(01 Mark)**
 - ii. Total premium. **(01 Mark)**

iii. Average claim size. **(01 Mark)**

iv. Loss ratio. **(01 Mark)**

c) Segment the results in (b) above by product line, region and sales channel. **(03 Marks)**

d) Make a commentary of your results in a Microsoft word document answering the following questions

i. Which segment has the highest loss ratio? Why might that be? **(02 Mark)**

ii. Is high loss ratio driven by frequency or severity? **(01 Mark)**

iii. What additional data would you want before changing price? **(01 Mark)**

Question Two

a) Identify any three insurance products of your choice **(03 Marks)**

b) Create a mapping table for the products selected in (a) above, and for each product write;

i. Event insured

ii. Main frequency driver

iii. Main severity driver

iv. Timing (short/long tail)

v. Data needed

vi. What could go wrong (fraud, selection, inflation) **(@ 02 Marks)**