Introduction
Actuarial Science is a study of Insurance, Statistics or Mathematics. The subject is about applying mathematical, statistical and economic models to study and calculate risks associated with insurance, pensions and other financial systems. The knowledge of Actuarial Science also enables one to interpret the economic environment and make informed decisions on future inflation, returns on investment, stock market behaviour, exchange rates and economic growth.

Objectives

Overall objective
The programme seeks to improve the quality of personnel working in financial and insurance sectors.

Specific objectives
- To train professionals in Actuarial Science to work in many financial and insurance institutions in Uganda and East Africa as a whole.
- To provide a strong background to people who are interested in the Actuarial career.
- To meet the existing demand of financial and insurance institutions for actuaries in East Africa.
- To upgrade the skills of those in the financial and insurance industry.

Entry into Second Year
Entry into second year of the programme requires a special resolution of the Institute Board of Studies and Senate. The Board of Studies may evaluate the courses done by individual candidates and work out appropriate credit transfers which shall not exceed 40% of the minimum degree credit units.

Programme Duration
The Bachelor of Science in Actuarial Science degree programme shall run over a minimum period of three years. Each year shall consist of two semesters.

Length of Semester
A semester shall be 17 weeks – 15 weeks for teaching and 2 weeks for examinations.

Types of Courses
Courses in the programme shall be classified as follows:
(a) A core course – one that must be registered for and passed by a student to obtain a degree.
(b) An elective course – one that must be taken to make up the minimum requirements of the degree.
(c) An audited course – one that a student attends but is not examined in.
(d) A prerequisite course – is one that must be taken before a related higher level course and in which a student needs to score at least 40 percent before moving to the next level.

Course Credits
Instruction shall be by courses quantified into course credit units.
(a) A credit unit is granted for a series of fifteen contact hours or one contact hour per week per semester.
(b) A contact hour is calculated as being equivalent to:
   - one lecture hour or
   - one tutorial hour or
   - two practical hours or
(c) No course shall carry less than one credit unit.

Full Time Study
A full time student on the B.Sc in Actuarial Science degree programme shall not carry less than 15 credit units in a semester and not more than 25 credit units per semester.

Curriculum
The Programme shall consist of 42 courses, one research project and a professional training attachment. All courses will be core.

Programme Structure
In the first year it is essential to provide a firm foundation for subsequent study. Since actuaries need to be able to apply a wide range of mathematical and statistical techniques, most of the first year units are mathematics and statistics courses. Details of the programme structure are specified below.
Year I
Semester I
ECO 1101 Introductory Micro Economics 3
SAS 1101 Principles of Development 3
MTH 1101 Calculus I 3
MTH 1102 Linear Algebra I 3
STA 1101 Descriptive Statistics 3
STA 1102 Official Statistics 3
STA 1103 Time Series & Index Numbers 3
STA 1105 Introduction to ICT 3

Semester II
ECO 1202 Introductory Macro Economics 3
ECO 1201 Principles of Development Economics 3
MTH 1201 Calculus II 3
SAS 1201 Mathematics of Finance I 3
SAS 1202 Accounting I 3
STA 1202 Probability Theory I 3
STA 1203 Statistical Inference I 3

Total Credits 42

Year II
In their second year, the students are expected to continue developing their skills in mathematics, statistics, financial subjects (Accounting) and actuarial subjects (Life contingencies). Later these subjects are allowed as exemptions from professional actuarial examinations. The list of second year course units per semester is as follows:

Semester I
ECO 2101 Micro Economics 3
MTH 2103 Differential Equations 3
MTH 2104 Linear Algebra II 3
SAS 2101 Mathematics of Finance II 3
SAS 2102 Life Contingencies I 3
SAS 2103 Actuarial Data Processing 3
STA 2106 Time Series Analysis 2
STA 2101 Probability Theory II 3

Semester II
ECO 2201 Macro Economics 3
MTH 2203 Linear Programming I 3
SAS 2201 Accounting II 2
SAS 2202 Life Contingencies II 3
SAS 2203 Statistics for Insurance 3
SAS 2206 Regression Analysis 3

Total Credits 42

Year III
The third year focuses largely on specialised actuarial topics: Investment, Asset Management, Life Assurance and Pensions. These courses provide a good background and a better understanding of the topics relevant to the actuarial profession. Four courses in third year will be electives. The list of third year course units per semester is as follows:

Semester I
SAS 3101 Demographic Statistics 3
STA 3102 Multivariate Analysis 3
STA 3103 National Accounts and Income Analysis 3
STA 3106 Demographic & Social Statistics 3
STA 3116 Industrial Statistical Modeling 3
SAS 3102 Principles and Practice of Insurance 3
SAS 3103 Management Accounting I 3
SAS 3104 Econometric Modelling 3
SAS 3105 Project Appraisal 3
SAS 3106 Introduction to Sociology 3

Year III, Semester I total credit units 21

Semester II
MTH 3203 Linear Programming 3
SAS 3201 Investment and Asset Management 3
SAS 3202 Life Assurance 3
SAS 3203 Pension Analysis 3
SAS 3204 Research Project Paper 5
SAS 3205 Industrial Statistical Modelling 3
SAS 3206 Project Planning* 3
SAS 3207 National Accounts* 3
STA 3203 Research Project 3
STA 3215 Econometric Methods 3
STA 3223 Operations Research 3

Year III, Semester II total credit units 20

Year III Total credit units 41

Key
* Select one