

University of Stellenbosch

Actuarial Science Programme

1. What are Actuaries?

Actuaries have been described as being:

- Experts in the analysis and modelling of situations involving financial risk and contingent events.
- Concerned with asset and liability management and associated risks – in other words with both sides of the balance sheet.
- Professionals who are respected, trusted and admired, and who are independent in outlook.
- Highly practical, innovative, versatile and numerate.
- Able to provide realistic solutions to complex problems and with a long term forward looking outlook on issues.
- Good communicators who can explain methodology and conclusions to others and contribute to multi-disciplinary teams.

2. How to become an Actuary

To become an actuary (a Fellow member of the Actuarial Society of South Africa (ASSA) – an internationally-recognised qualification) – students will need to pass the following set of examinations through ASSA:

Part A1 (Foundation Technical)

- A111 Actuarial Statistics
- A112 Business Economics
- A113 Business Finance

Part A2 (Intermediate Technical)

- A211 Financial Mathematics
- A212 Risk Modelling and Survival Analysis
- A213 Contingencies
- A214 Actuarial Economic Modelling

Part A3 (Core Principles)

- A311 Actuarial Risk Management

Part NA (Normative Skills – Actuarial Professional Practice)

- N111 Foundation Actuarial Professional Practice
- N211 Communications
- N311 * Core Actuarial Professional Practice

Part F1 (Fellowship Principles) – Any two subjects from:

- F102 Life Insurance Principles
- F103 General Insurance Principles
- F105 Finance and Investment Principles
- F106 Enterprise Risk Management
- F107 Banking Principles
- F108 Social, Health and employee Benefits Principles

Part F2 (Fellowship Applications) – Any one subject from:

- F201 Health and Care Applications
- F202 Life Insurance Applications
- F203 General Insurance Applications
- F204 Retirement and Related Benefits Applications
- F205 Finance and Investment Applications
- F206 Banking Applications

Part NF (Normative Skills – Actuarial Professional Practice)

- N411 * Fellowship Actuarial Professional Practice

* Taken while working, involving the attendance of workshops and group discussions together with completing the required Work-based Learning (WBL). Assessments may be online or by traditional examination.

3. University of Stellenbosch Actuarial Programme

The B.Com. (Actuarial Science) degree is structured as follows:

First Year:

- Actuarial Science 112 and 142
- Business Management 113 and 142
- Computer Science 113
- Economics 114 and 144
- Financial Accounting 188
- Mathematics 114 and 144
- Probability Theory and Statistics 144

Second Year:

- Actuarial Science 211 and 241
- Economics 214
- Financial Risk Management 212
- Mathematical Statistics 214, 245 and 246
- Mathematics 214 and 244

Plus at least one of:

- Financial Risk Management 242, or
- Economics 244

Third Year:

- Actuarial Science 311, 341 and 371
- Mathematical Statistics 312, 316, 344 and 364

Note:

Actuarial Science lectures will be presented in English (with simultaneous translations available into Afrikaans for those who require this). In some of the larger courses, e.g. first year Economics, separate English and Afrikaans classes are likely to be available. The notes, tests and examinations in all Actuarial Science modules will be in English. In other subjects students will have the option of writing in English or Afrikaans.

4. Obtaining Exemptions from the Profession's Examinations

The level of accreditation the university has with the Actuarial Society of South Africa provides our graduates the opportunity to obtain the maximum number of exemptions from the profession's examinations available through any university.

Our actuarial programme is structured in such a way that students can obtain exemption from all of the Part A1 & A2 subjects (including the four associated computer-based examinations) as well as the Foundation Actuarial Professional Practice subject in the B.Com. (Actuarial Science) degree.

Exemption from the Part A3 subject and Communications are available in the B.Com. Honours programme. Exemptions from subjects in Part F1 can be obtained as part of a Postgraduate Diploma or Master's degree.

To be recommended for an exemption for any given subject students need to achieve an appropriate mark in the corresponding university course(s) as outlined below:

ASSA subject	Corresponding University Module(s)
A111	Mathematical Statistics 214, 245 and 246; and Actuarial Science 311
A112	Economics 114, 144 and 214
A113	Financial Accounting 188; Financial Risk Management 212; Actuarial Science 142; and Business Management 142
A211	Actuarial Science 211
A212	Actuarial Science 241 and 311; and Mathematical Statistics 344 and 364
A213	Actuarial Science 341
A214	Actuarial Science 371
A311	B.Com. Honours (Actuarial Science) module
N111	Spread across the B.Com. (Actuarial Science) degree
N211	B.Com. Honours (Actuarial Science) module

5. Admission Requirements

Actuarial Science is an extremely demanding field of study and only very dedicated and capable students are likely to succeed. The minimum requirements for admission to the B.Com. (Actuarial Science) programme are:

- An NSC average based on the six best subjects, excluding Life Orientation, 80%;
- Mathematics 80%;
- Home Language 60%;
- If English was not the home language: English First Additional Language 75%.

The Bachelor's programme is a Selection Programme. The Selection Mark, on which selections will be based is calculated as the average of a student's best 6 NSC marks (or best 4 where students have fewer than 6 subjects), including Mathematics and English/Afrikaans and excluding Life Orientation.

For provisional acceptance (based on Grade 11 results), and for possible final acceptance (based on final Grade 12 NSC (or other) results), applicants will most likely need to have met the minimum admission requirements, have a mark of at least 85% for Mathematics and have a selection mark of at least 85%. Applicants with lower selection marks may then be considered on academic merit, taking account of the number of places available.

It should be noted that the average first year student in the programme typically has a mark of slightly above 90% for Grade 12 mathematics and close to a 90% overall aggregate for the NSC examinations.

6. Bursaries

Students can contact the Bursaries and Loans Department of the University at +27 (0)21 808-4627.

Students may also wish to contact the large life insurance companies to discuss the possibility of obtaining bursaries from them.

7. Further Information

For more information on the Actuarial programme of the University of Stellenbosch contact either:

- The actuarial science secretary at e-mail actuarial@sun.ac.za or on telephone +27 (0)21 808-3952, or
- Ms. HM Cilliers at hmc@sun.ac.za (Tel:+27 (0)21 808-3249)

For information on the university registration process please contact:

- Ms. L Delport at LaurenD@sun.ac.za (Tel: +27 (0)21 808-4837).

Students may wish to "job shadow" with an actuary to find out more about the actuarial profession. Students can contact the companies using actuaries directly to find out whether such opportunities exist.

For more information on an actuarial career visit the websites of:

- The Actuarial Society of South Africa at www.actuarialsociety.org.za &
- The Institute and Faculty of Actuaries at www.actuaries.org.uk

Prof. G Slattery

Head: Actuarial Science

Department of Statistics and Actuarial Science

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