UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Faculty of Natural and Agricultural Sciences

Fakulteit Natuur- en Landbouwetenskappe
Lefapha la Disaense tša Tlhago le Temo

BSc (Actuarial and Financial Mathematics)

The modern financial world has a growing need for graduates who are well skilled in analytical problem solving, modelling and other quantitative techniques. The programme provides students with a broad education and skills development in these areas. Students can tailor their coursework to either an actuarial or a financial mathematics option.

The actuarial programme is structured to provide the aspiring actuary with the opportunity to fulfil the requirements needed for exemption from the Actuarial Society of South Africa examinations in the shortest possible time. For aspiring financial analysts or financial engineers, the programme provides depth and develops the student's ability to design and analyse financial products.

What is an actuary?

An actuary is a professional who applies analytical, statistical and mathematical skills to financial and business problems. This is especially valuable when facing real-world problems that involve uncertain future events or financial risk. This ability to quantify that which is unclear helps individuals and businesses to safeguard their future, confidently and at a fair price, in an ever-changing world. (Actuarial Society of South Africa).

Who is the ideal candidate?

The ideal candidates are students who achieve seven or more A's easily in high school. They are involved in a variety of sports and cultural activities and usually hold leadership positions throughout high school. They are well-balanced and very motivated.

While not prerequisites at school, prospective students are probably taking and enjoying an AP Mathematics course, where possible. They are also likely to enjoy coding or solving problems using a computer where these opportunities are available.

What career opportunities exist for graduates?

Many actuaries follow careers in the more traditional fields of insurance and retirement funds. However, actuaries are also increasingly working in other fields following recognition of their analytical skills. This includes healthcare, financial consulting, risk management and banking. Because of their unique skills, many actuaries are appointed to senior management positions after their initial analytical roles.

Financial engineers can be employed by banks and financial institutions, brokerage firms and investment institutions. They are essential in portfolio and risk management. Activities include asset management (trading in bonds, futures and derivative instruments such as options), designing new financial products and devising strategies to control credit risk.

What makes this programme unique?

The study programme prepares students for qualification as actuaries or financial engineers. Specialisation in either of these fields occurs in the third year of study and continues at postgraduate level.

The programme is accredited with the Actuarial Society of South Africa and gives students the opportunity to earn exemptions from the A100 and A200 subjects of the Actuarial Society during their undergraduate degree. To achieve further exemptions, a follow-up honours degree is recommended.

We prepare our students to compete in the actuarial workplace. Large employers of actuarial students speak highly of our graduates and some actively seek students from our programme.

Which companies employ our graduates?

BSc (Actuarial and Financial Mathematics) graduates are generally employed by:

- accounting firms
- banks
- consulting firms
- insurance companies
- investment companies
- medical schemes
- universities