

DO YOU LOVE MATHS?

If mathematics is your favourite school subject, you should consider enrolling for one of the Business Mathematics and Informatics® (BMI) courses presented by the Centre for Business Mathematics and Informatics® at the North-West University.

Currently the BMI programmes comprise four courses:

- Quantitative Risk Management (referred to as the B-leg)
- Financial Mathematics (referred to as the M-leg)
- Business Analytics (referred to as the I-leg)
- Actuarial Science (referred to as the A-leg)

For more information on the courses refer to www.nwu.ac.za/bmi.

ADMISSION REQUIREMENTS

Mathematics above 70% (Level 6) and an APS-Score of at least 32. However, the higher the mathematics mark, the better the chances to pass the BMI courses.

What school subjects do you need?

All programmes require at least grade 12 Mathematics. Although not a strict requirement, all learners are advised to do information technology, and learners who want to follow the A- and B-legs, are advised to study Accounting.

PROFESSIONAL QUALIFICATIONS

Professional qualifications for which you are prepared:

- FASSA - Fellow of the Actuarial Society of South Africa
- FIA - Fellow of the Institute of Actuaries
- PRM - Professional Risk Manager

The Hons BSc Actuarial Science programme of the Centre for Business Mathematics and Informatics® (BMI) is accredited by the Institute and Faculty of Actuaries (IFA) to recommend exemption for CT1-CT8 (<http://www.actuaries.org.uk>). The Centre for BMI is also accredited for the same courses (A101-A103 and A201-A205) at the Actuarial Society of South Africa (<http://www.actuariesociety.org.za/>).

PRMIA (professional risk managers' international association) has accredited the Hons BSc Quantitative Risk Management training programme for Level I and II of their PRM (professional risk manager)(see <http://www.prmia.org/>).

Upon completion of the Hons. BSc, BMI students are well prepared for the FRM (Financial Risk Management) and CFA (Charter Financial Analyst) exams.

WHAT IS RISK?

Since all four BMI programmes focus primarily on risk, it is necessary to explain the basics of risk. Risk comes in many forms. Every person and organisation faces risk. As experts in measuring and managing risk, actuaries and risk managers fulfill a significant need in our society. Their contribution to society's psychological, physical and economic wellbeing is immense. If the risk management programmes that actuaries and risk managers develop didn't exist, our economy would not be able to grow as it does.

Consider the following:

- Would as many people be willing to own a home if fire insurance did not exist?
- Would a company build a factory that could be destroyed in an earthquake if it were not protected by insurance?
- Would people spend money today and still be confident about their future if there were no retirement programmes?
- Would the cars people drive be safe if the parts were not rigorously tested to last for many years using mathematical techniques actuaries, engineers and risk managers routinely use?
- Would parents enjoy risky and adventurous recreational activities such as rock climbing or skiing if their children faced financial disaster in the event of an accident?
- Would the banks (and the money deposited in them) be safe if their assets and liabilities were not carefully managed to control financial risk?
- Would the returns on our investments be high if financial institutions such as mutual funds, banks and insurance companies did not use sophisticated techniques to improve returns without increasing risk too much?

WHAT IS DATA SCIENCE?

Data Science (known as Business Analytics) refers to the skills, technologies, applications and practices for continuous iterative exploration and investigation of huge data bases in order to gain insight and drive business planning. Business Analytics is forward looking taking business objectives into account.

Consider the following:

- The data warehouses of some big retailers now contain information measured in petabytes (1 million gigabytes). How can this be analyzed and used in their business planning?
- How can a combination of social network and other customer data be used to forecast customer behaviour in a telecoms environment?
- Every time customers swipe their credit cards at a grocery store, they require an authorization. Fraud detection in these kinds of transactions has to happen almost instantly.

LANGUAGE POLICY OF NWU

The under-graduate classes on the Potchefstroom Campus are presented in Afrikaans, while english interpreter services are available for the Actural Program. The BMI (B-, and I-leg) under-graduate classes are presented in English at the Vaal Triangle Campus. To prepare students well for the industry all post-graduate courses are presented in English.



WHAT DO PEOPLE SAY ABOUT BMI?

"I believe that this program has bridged a significant gap between very theoretical research and business reality. The success of candidates in getting jobs with the institutions with whom they have done their research projects clearly indicates how institutions value the project output but just as importantly that they know that they are employing individuals who can add value from day 1"

David Hodnett

Deputy CEO: Barclays Africa Group

"My experience of BMI graduates is that they compare favourably with the best graduates that we employ from Universities in the UK."

Ian Wilson

Head of Wholesale Credit Risk Measurement: Group Risk, Barclays, London

"SAS Institute believes that the world leading programmes at BMI deliver superior professionals to our customers. The core of this success is found in the quality of their students, teaching and leadership."

Murray de Villiers

General Manager: Middle East & Africa Regional Academic Program.

Where am I going to work?

Mostly in large companies in the financial services sector (e.g. Absa, Barclays, Nedbank, Transunion, Standard Bank, KPMG, Ernst & Young and PricewaterhouseCoopers).



BURSARIES AVAILABLE?

NWU Merit Bursaries

Merit bursaries are available to students. Top academic achievers in school may qualify for up to 110% discount on class fees in their first year of study.

Absa Bursary Scheme

An Absa Bursary scheme is also available for top academic achievers who want to study BMI courses.

Administrative Official: Undergraduate Bursaries

Tel: 018 299 4245

Administrative Official: Undergraduate Loans

Tel: 018 299 2193

Enquiries:

Centre for BMI, Tel: 018 299 2575

BMI

Natural Science building G3
Level 3, Room H301-H322

POSTAL ADDRESS:

Centre for BMI
North-West University
Private bag X6001
Potchefstroom
2520

GENERAL INFORMATION:

Centre for BMI
E-mail: bmi@nwu.ac.za
www.nwu.ac.za/bmi
Tel: +27 18 299 2575
Fax: +27 18 299 2584

NWU ADMISSION OFFICE:

Tel: +27 18 299 2458

CENTRE FOR BUSINESS MATHEMATICS AND INFORMATICS®

Marketing flyer for
prospective students



Centre for BMI
Senteramo ya DII
Sentrum vir BWI



NORTH-WEST UNIVERSITY
YUNIBESITHI YA BOKONE-BOPHIRIMA
NOORDWES-UNIVERSITEIT
POTCHEFSTROOM CAMPUS