



Where in the world can Statistics take you?



THE UNIVERSITY
OF AUCKLAND

FACULTY OF SCIENCE

Department of Statistics

Careers in Statistics

“For today’s graduate, just one word: Statistics”

The New York Times, August 6 2009

Internet-age statisticians are finding themselves increasingly in demand. Using powerful computers and sophisticated mathematical models, they sift through huge amounts of data for insights which can improve internet search, provide gene sequencing for medical research, or optimise routing for food shipments, to give but a few examples.

The current economic climate has seen many corporations reduce their spending on technology but the use of business intelligence software stands out as an exception, because it can be used to discover both market trends and ways to cut costs.

Our graduates work in:

- Finance and Banking
- Medical Statistics
- Manufacturing
- Forensic Statistics
- Energy Statistics
- Quality Control
- Market Research
- Ecology
- Astrostatistics
- Sports Statistics
- Teaching
- Economics
- Social Science
- Actuary
- Operations Research

Majoring in Statistics

Statistics can be taken as a major in either a Bachelor of Science or a Bachelor of Arts. Statistics can also be studied as part of most other degrees. The Operations Research specialisation is available in a Bachelor of Science. A major in Statistics can be used to support many other subjects, helping to create graduates with valuable numeracy skills that are very desirable to employers.

For Science:

Statistics combines well with Mathematics, Operations Research, Computer Science, Physics, Sports Science, and other scientific fields.

In a Bachelor of Science it is possible to take a second major in Statistics that concentrates on Applied Statistics and does not require a mathematical background. This provides excellent support for subjects such as Psychology, Environmental Science, Biological Science, Marine Science, Medical Science and Sport Science.

For Commerce:

A supporting major in statistics is best taken as a part of a conjoint degree (either BCom/BSc or BA/BCom). Statistics combines especially well with Finance, Market Research, Economics and Operations Management.

For Arts:

Statistics combines well with subjects such as Mathematics, Economics, Psychology, Sociology, and Geography. You can take Statistics either as a major or as a minor.

Front cover photo: Asad Ali, a PhD student in Astro-statistics, measuring gravitational waves from space.

Stage 1 Statistics Courses

The Statistics department has a range of first year courses.

The 10x Courses – STATS 101, 108 / STATS 101G

These are intended for anyone who will have to collect or make sense of data, either in their career or private life. They are our basic Statistics courses and cover material similar to NCEA Level 3 Statistics and Modelling but at a more advanced level. The emphasis is on understanding and interpretation rather than on calculation. Please note you can only choose one course from STATS 101 - 108.

STATS 125: Probability and its Applications

This is intended for students with good Year 13 mathematics marks (or university equivalent). Probabilistic models are used in disciplines as varied as commerce and biology (e.g. for calculating the probability that a share price exceeds a certain level or the probability that a population becomes extinct). They are critical in the assessment of risk.

STATS 150/STATS 150G: Lies, Damned Lies, and Statistics

This is a course about the uses, limitations, and abuses of statistical investigations and statistical information. It is concerned with the critical examination of the data-based arguments that pervade the media and public policy debate rather than hands-on data analysis.



Ross Parsonage, a member of our Stage 1 team, demonstrating the Clickers, a high-tech teaching aide

Statistics: improving your career prospects

Medical Statistics

It's about the heart of the Pacific.

Is there a difference between the health risks for European, Māori and Pacific people living in New Zealand?

My study revealed that the length of residence for immigrants related directly to socio-economic and cardiovascular risk status.

Newer immigrants on average had lower socio-economic status and more adverse cardiovascular risk factors. The challenge now is how to lower those risks.

Want to change lives? Join us to make your mark.

- Gerhard Sundborn (PhD student)



Contact:

Christine Miller
c.miller@auckland.ac.nz
(09) 373 7599 ext 84275

David Smith
dp.smith@auckland.ac.nz
(09) 373 7599 ext 85390

Statistical Ecologist

How many penguins are there in Antarctica?

How many minke whales in the Southern Ocean?
How many lions in the Serengeti or dolphins in the Canadian Fiords? Knowing "how many" is often the first and most important question.



Penguin numbers are needed to manage fisheries and to understand the impacts of climate change. But how can we know how many when we can't possibly count them all?

Enter the statistical ecologist!

Want a career that counts? Join us to make your mark.

- Rachel Fewster (Senior Lecturer)

Department of Statistics
The University of Auckland
Private Bag 92019, Auckland, New Zealand
www.stat.auckland.ac.nz