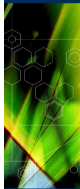


Careers and Opportunities in Mathematics

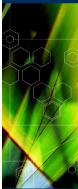
Institute of Fundamental Sciences
College of Sciences
Massey University

2011



Why study mathematics?

- Careers in mathematics and statistics have consistently been rated the highest paid and most satisfying world wide.
- Technology is NZ's 2nd biggest export after dairy — \$5b now, \$10b in 2020.
- Growing areas (geospatial ICT, robotics, energy, electronics, ...) require a high level of education in science & mathematics.
- Diversify & keep your options open
 - Many students take double majors or double degrees like BBS/BSc and include a minor
 - BSc requires at least
 - five 300 level papers (4 for a major, 1 for a minor)
 - eight 200 level papers (4 for a major, 3 for a minor)

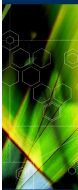


Mathematics graduates go into...

- actuarial work
- teaching
- analyst roles
- programming and IT
- risk analysis consultancy
- accountancy
- banking and finance
- meteorology
- market research
- planning and surveying
- operations research

A sample from the Massey alumni database

Development Manager - Mathematical Statistician - Computer Programmer - Manager, Contracts & Planning - Actuarial Analyst - Research Scientist - Software Engineer - Operations Manager - Research & Development manager - Professor



Where have some Massey maths graduates ended up?

Nick Allsop Works as an actuary (NZ and Australia)

Joanne Hendy Meteorological service, predicting turbulence

Shaun Hendy Distinguished Scientist, Industrial Research Ltd
Math modelling of nanoscience problems

Rebecca Hickson Lecturer in Veterinary Science

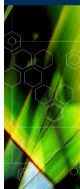
Katya Hope National Bank, online banking

Rebecca Keen High-school teaching

Kristin McLeod PhD student in France, modelling cardiac deformations and growth using medical images

Chris Palliser Dexcel, math modelling of agricultural problems

Aroon Parshotam Landcare, modelling carbon emissions



200 level maths courses at Massey

160.203 *Calculus II*

- Calculus of several variables
- Required for Nanoscience and Physics; can count towards a Statistics Major

160.204 *Differential Equations I*

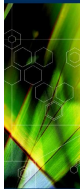
- The basis of applied modelling, used in all areas of science, technology, & analysis

160.211 *Applied Linear Algebra*

- Understanding, transforming, & manipulating large sets of data
- Can count towards a Statistics Major
- One of 203, 211 required for honours in stats

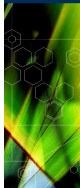
160.212 *Discrete Mathematics*

- Studies networks, encryption, symmetry
- Recommended for Computer Science



TeachNZ scholarships

- The government wants more math teachers in secondary schools.
- 50 scholarships were available this year in mathematics alone.
- Pays your course fees and an allowance.
- See www.teachnz.govt.nz/scholarships



Finding out more

- Ask your lecturer
- Your Massey careers service:
 - careers.massey.ac.nz
 - careerhub.massey.ac.nz (graduate vacancy system)
- Some overseas sites of interest:
 - www.maa.org/careers
 - www.ams.org/careers
 - www.siam.org/careers
 - www.math-jobs.com (has a section for NZ and Australia)
- TeachNZ:
 - www.teachnz.govt.nz

