### FORENSIC SCIENCE POSTGRADUATE HANDBOOK



### SCIENCE

# Welcome to Forensic Science

The Forensic Science Programme at the School of Chemical Sciences gives science graduates the opportunity to progress their interest and knowledge of forensic science at several different levels.



You'll be taught details of the topic by practitioners and by academics, passing on their skills and understanding, and perhaps carry out research in well-equipped laboratories on the areas of forensic work that interest you most. All this will help to fit you for a career in forensic and other sciences.

Postgraduate study in Forensic Science will enable students to begin or further their career in forensic or other sciences.

DR DOUGLAS ELLIOT Director of the Forensic Science Programme

# The University of Auckland consistantly ranks in the **TOP**

199



universities worldwide\*

\*QS World University Rankings 2016

The Forensic Science programme is jointly run by the University of Auckland and The Institute of Environmental Science and Research (ESR) (the suppliers of forensic science to the New Zealand Police).

Students benefit from expert guest lecturers, including Crown Prosecutors and independent forensic practitioners.

> 2016

#### The Forensic Science Programme is one of the longest established forensics programmes in Australasia



# Postgraduate study options in Forensic Science

BSc

PGDipForensic

MSc

PhD

### **Certificate of Proficiency**

Selected courses from the Forensic Science programme may be taken individually. In particular, FORENSIC 701 and 702 provide a unique education in forensic science for professionals and graduates in all involved disciplines such as lawyers, justice persons, the police, scientists, health and medical professionals, and journalists. **Prerequisite:** A Bachelor of Science or other relevant qualifications as approved by the Programme Director.

**Structure:** FORENSIC 701 and 702 (15 points each). FORENSIC 703 and 706 are also available to qualified applicants.

Length: Each course takes one semester

# Postgraduate Diploma in Forensic Science (PGDipForensic)

The Postgraduate Diploma in Forensic Science qualification (one year taught programme) normally requires candidates to have completed a degree in science, medicine, technology or related topics. A candidate's professional experience is also taken into account in the selection process.

**Prerequisite:** A BSc or other relevant qualifications as approved by the Programme Director.

**Structure:** 105 points from FORENSIC 701-704, 706, 707. 15 points from any approved 600 or 700 level course

Length: Two semesters of full-time study

The average number of years it takes to complete a PGDipForensic







### Master of Science (MSc) in Forensic Science

The one year research MSc is available to students who wish to perform research in a Forensic Science field. A thesis (FORENSIC 796, 120 points) based on a research project is normally completed within one year.

**Prerequisite:** A PGDip in Forensic Science with an average of B- or higher or other relevant qualifications as approved by the Programme Director.

**Structure:** Independent research with a supervisor **Length:** One year of full-time study

The average number of years it takes to complete a Master of Science



Students are advised to consult the 2016 Calendar for detailed regulations for this degree.



### Doctor of Philosophy (PhD) in Forensic Science

### **Quick facts**

Points per degree: 360 points Full-time study: 3-4 years Part-time study: 6-8 years Degree structure: Research Taught at: All Campuses or off-campus registration (subject to approval) Application closing dates: Apply at any time Start date: Start at any time

#### **Entry to PhD**

The normal requirement for admission to the PhD in Forensic Science is a masters degree with second class honours (first division) or better. Candidates with overseas qualifications should consult the School for advice and assessment of their qualifications. Candidates may be required to enrol in one or more courses concurrent with research work to complement either their research work or their background in the subject.

Postgraduate Forensic Science courses			
Course code	Title	Semester	
FORENSIC 701	Fundamental Concepts in Forensic Science	S2	
FORENSIC 702	Introduction to Forensic Science	S1	
FORENSIC 703	Statistics and Molecular Biology in Forensic Science	S1	
FORENSIC 704	Techniques and Applications for Forensic Science	S2	
FORENSIC 706	Environmental Forensic Science	S1	
FORENSIC 707	Project in Forensic Science	S1/S2	
FORENSIC 796	MSc Thesis in Forensic Science	S1/S2	

For course descriptions and more information, go to www.chemistry.auckland.ac.nz/pgcourses

# Research areas

Forensic science covers a broad range of subjects, from the statistical evaluation of glass evidence to the development of new molecules to aid in the visualisation of fingerprint residues. Some past and possible future research areas are:

- Field Science: 3D laser scanning, blood pattern analysis)
- Physical Evidence: differentiating lubricants, discriminating glass fragments, gunshot residue analysis)

- Forensic Biology (DNA fingerprinting, Wildlife forensics, Next generation sequencing, Identification of tissue types)
- Illicit Drugs (Identification of trace impurities, Analysing designer drugs)
- Environmental Forensic Science (Investigating contamination at clandestine laboratories)

# **Careers in Forensic Science**

Graduates have been employed in the positions shown below, as well as in other roles with scientific organisations or manufacturers.

Customs Officers		
Documents examiners		
Entomologist		
Fingerprint examiners		
Forensic scientists or technicians with ESR		
Forensic geologist		
Independent forensic scientists		
Laboratory technicians		
Patent officer		
Pharmaceutical representative		
Police (uniformed police officers, scene of crime		
officers, CIB)		
University academic		



"One thing quite exciting about my job is having access to places that most people would never get to see, because crime scenes can be anywhere."

Jason Barr studied a MSc in Forensic Science.

Meet our graduate,

Jason Barr





"My thesis will evaluate the discriminating power of DNA methylation patterns in forensic applications. It's in the area of forensic biology which includes the identification of individuals, linking of biological evidence to an individual and/or other biological evidence, as well as ancestry analysis and body fluid identification to name a few.

"The University of Auckland is the only New Zealand University which offers an MSc (and PhD) in forensic science. They also have close ties with The Institute of Environmental Science and Research (ESR) which is the sole provider of forensic services to the police. The opportunity to be based at a forensic laboratory is invaluable, as I can see first-hand what being a forensic scientist/ technician actually entails."

Rebecca Richard is studying toward a Master of Science majoring in Forensic Science.

#### Disclaimer

Although every reasonable effort is made to ensure accuracy, the information in this document is provided as a general guide only for students and is subject to alteration. All students enrolling at the University of Auckland must consult its official document, the University of Auckland Calendar, to ensure that they are aware of and comply with all regulations, requirements and policies.



# Helpful information

Academic dates	www.auckland.ac.nz/dates	
Accommodation	www.accommodation.auckland.ac.nz	
Apply for postgraduate study	www.auckland.ac.nz/applynow	
Career Development and Employment Services	www.cdes.auckland.ac.nz	
Childcare	www.auckland.ac.nz/childcare	
Degree planning and course advice	www.science.auckland.ac.nz/student-centre	
Disability Services	www.disability.auckland.ac.nz	
How to enrol	www.auckland.ac.nz/enrolment	
Information for postgraduate students	www.postgraduate.ac.nz	
International students	www.international.auckland.ac.nz	
Libraries and Learning Services	www.library.auckland.ac.nz	
Māori and Pacific students	www.science.auckland.ac.nz/tuakana	
Need help?	www.askauckland.ac.nz	
Postgraduate Students' Association	www.pgsa.org.nz	
Rainbow Science Network for LGBTI students	www.science.auckland.ac.nz/rainbowscience	
Scholarships, awards and fees	www.scholarships.auckland.ac.nz	
	www.auckland.ac.nz/fees	
	www.auckland.ac.nz/studentloansandallowances	
Support for science students	www.science.auckland.ac.nz/support	

#### Questions about Forensic Science? Email douglas.elliot@esr.cri.nz



#### Connect with us

Faculty of Science, The University of Auckland Private Bag 92019, Auckland 1142, New Zealand

Phone: 0800 61 62 63 | Email: pgscience@auckland.ac.nz Web: www.forensic.auckland.ac.nz





