

Chemistry

Postgraduate Handbook 2018



THE UNIVERSITY OF
AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

SCIENCE

SCHOOL OF CHEMICAL SCIENCES

Welcome to the School of Chemical Sciences

Postgraduate qualifications in chemistry introduce you to world-class chemical research and prepare you for chemistry-related careers.



Our School of Chemical Sciences conducts world-class research across a wide range of chemical sciences.

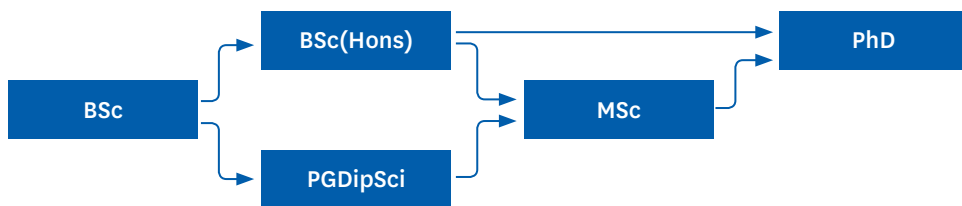
You might find yourself in a research group designing enzyme inhibitors for diseases such as certain cancers, preparing new catalysts to help harness solar energy, provide greater understanding and control of wine aromas, or designing new analytical instrumentation using laser micromachining. To aid this wide range of activities we have an excellent suite of chemical instrumentation and state of the art laboratories.

Members of the school have strong collaborations within the University, nationally, and internationally.

We welcome you to our School of Chemical Sciences, and hope you are inspired by our vibrant intellectual community.

GORDON MISKELLY
Head of School

Postgraduate study options in Chemistry



Bachelor of Science (Honours) in Chemistry

For admission to the BSc(Hons), please consult the *University of Auckland Calendar*.

Prerequisites

- Bachelor of Science majoring in Chemistry
- At least 90 points at Stage III



Programme structure

The Bachelor of Science (Honours) programme involves one year of full-time study, or two years of part-time study.

Option one:

- 60 points from CHEM 793 (Dissertation)
- 60 points from CHEM 710-780

Option two:

- 60 points from CHEM 793 (Dissertation)
- 45 points from CHEM 710-780
- 15 points from 700 level courses in a related subject (subject to Head of Department approval)

A candidate for BSc(Hons) must achieve a GPA average of 4 or above to be awarded this degree. A student who completes the BSc(Hons) year but does not attain the minimum grade for honours may credit the 700 - level courses towards a Postgraduate Diploma in Science (PGDipSci).



Postgraduate Diploma in Science (PGDipSci) in Chemistry

Prerequisites

- Bachelor of Science majoring in Chemistry, or
- An approved degree of equivalent standing completed at another university

Programme structure

Part-time study must be completed within four years

- Consists of 120 points (usually eight courses)
- At least 90 points from CHEM 691, 710-780, 795
- Up to 30 points from 600 or 700 level courses in Chemistry or related subjects with approval of the Head of Department
- CHEM 750 is strongly recommended

Students may elect to take CHEM 691 the Postgraduate Diploma Dissertation (30 point) carried out under the supervision of an academic staff member.

Please complete the Expression of Interest for PGDipSci research supervision form:
www.chemistry.auckland.ac.nz/selectingsupervisor

Students intending to study for a Master of Science in Chemistry must take CHEM 795

Please note: A student who is within 15 points of completing all the requirements for a BSc may, with the approval of the Head of School, enrol for a PGDipSci provided that the remaining course is completed within 12 months of entry to PGDipSci and is not a course required for the major.

Master of Science (MSc) in Chemistry

Prerequisite

- A BSc(Hons) or PGDipSci in Chemistry including CHEM 795 OR an approved degree of equivalent standing completed at another university

Programme structure

- 120 points: CHEM 796 MSc Thesis in Chemistry

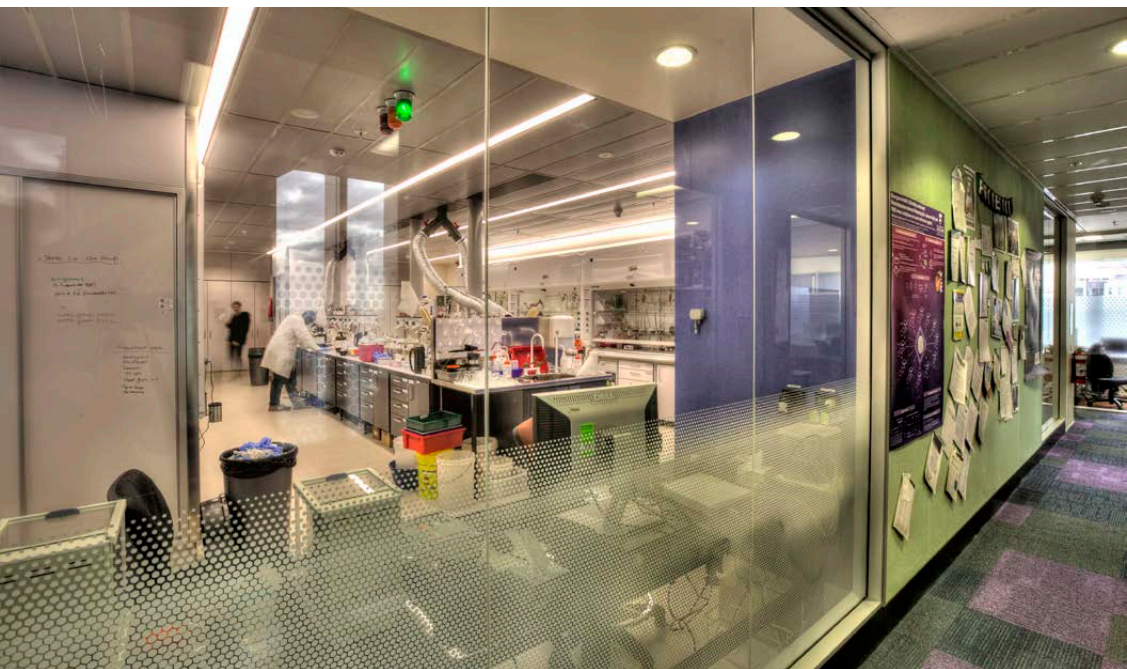
Selection of supervisor

Students need to select a research supervisor in parallel with the application to enrol for BSc(Hons) and MSc in Chemistry. Please contact individual staff members to discuss the projects that are interesting to you. You should consult with at least three staff members. Fill out a supervisor selection form and indicate, in order of preference, three supervisors with whom you would like to work. Submit this form by 20 November (for Semester One intake) or 5 July (for Semester Two intake). The School of Chemical Sciences will endeavour to offer students their first choice and will confirm supervisor selection to students as soon as possible after the application closing dates.



Please note:

- *A student who is within 15 points of completing a BSc(Hons) or PGDipSci may, with the approval of the Head of School, enrol for MSc provided that the remaining course is completed within 12 months of entry to MSc.*
- *A mid-year enrolment is possible for the MSc, please consult a course coordinator for advice.*



Doctor of Philosophy (PhD)

Quick facts

Points per degree: 360 points

Fulltime 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

For more information:

www.science.auckland.ac.nz/phd

Entry to PhD

The normal requirement for admission to the PhD is an honours degree with second class honours (first division) or better, either MSc, BSc(Hons), or BTech. Candidates with overseas qualifications should consult the School of Chemical Sciences 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 Chemistry courses

Course code	Title	Semester
CHEM691* A & B	PG Diploma Dissertation (Chemistry)	S1/S2
CHEM701	PG Topics in Chemistry 1	
CHEM702	PG Topics in Chemistry 2	
CHEM710	Advanced Physical Chemistry	S2
CHEM720	Advanced Inorganic Chemistry	S1
CHEM730	Modern Methods for the Synthesis of Bioactive Molecules	S1
CHEM735	Advanced Medicinal Chemistry	S1
CHEM738	Biomolecular Chemistry	S2
CHEM740	Current Topics in Analytical Chemistry	S2
CHEM750/751	Advanced Topics in Chemistry 1 & 2	S1/S2
CHEM 760	Advanced Green Chemistry	S1
CHEM770	Advanced Environmental Chemistry	S2
CHEM780	Advanced Materials Chemistry	▲
CHEM793	BSc(Hons) Dissertation in Chemistry	S1/S2
CHEM795	Research Methods in Chemistry	S1/S2
CHEM796	MSc Thesis in Chemistry	S1/S2

* Limited number of topics are available for CHEM 691 projects.

▲ May not be available for 2018

For course descriptions and more information: www.chemistry.auckland.ac.nz/pgcourses

Find masters and doctoral supervisors and research projects that you can join:
www.findathesis.auckland.ac.nz

Careers in Chemistry

Analytical chemist

Biochemist

Chemistry technician

Higher education lecturer

Inorganic chemist

Management of research and development units

Materials chemist

Organic chemist

Physical chemist

Research scientist

Science technician

Scientific advisor

Secondary teacher

Technical assistant

Industries and fields may include:

Crown Research Institutes

Pharmaceutical, polymers and coatings industries

Food, paper, brewing, paint and plastics, ceramics, metals and agricultural industries

Special applications include forensic science, and the running of hospital laboratories.

“What I like most about postgraduate study is the independence of having intellectual freedom to develop ideas relevant to my research project.”

“I was interested in pursuing a PhD at the University of Auckland because we are a well-known, highly-ranked institution, and because of the wide variety of research projects offered from different research groups within the University. This enabled me to choose a project which intrigued me.”

“My thesis is about the use of peptide-drug conjugate systems as potential therapeutics for Polycystic Kidney disease. When I graduate, I hope to contribute to the research sector to develop modern therapeutics and to continue working in research and development.”

“One thing about doing a PhD is you learn very quickly about how many challenges you face with the research, and if it isn't for the support of your fellow researchers and the supervisors it is difficult to stay focused.”

Shama Dissanayake is studying toward a PhD specialising in Chemistry after completing a Bachelor of Science (Honours) specialising in Medicinal Chemistry.



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

Course advice and degree planning in Science

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/rainbowsience

Scholarships and awards

www.scholarships.auckland.ac.nz

www.auckland.ac.nz/fees

Support for students

www.science.auckland.ac.nz/support

**Questions about Chemistry
at postgraduate level?
v.sarojini@auckland.ac.nz**

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.



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Web: www.chemistry.auckland.ac.nz



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