Welcome to Food Science and Food Safety

Food science is the study of the physical, chemical, and biological properties of foods, and their effects on the sensory, nutritional and storage properties.

Recent advancements in science and technology have opened new frontiers for the production and shelf life of foods, providing convenience and health benefits, thus creating exciting and challenging opportunities to work. A basic or advanced qualification in food science will equip you with the skills to take up challenging positions within the food industry, research institutes and in an academic field.

Our programme is at the forefront of teaching in the discipline of Food Science. Our students are exposed to new developments and interact with the academic staff at the school, including visiting national and international experts. We also have a strong research culture and offer opportunities to engage in fundamental and applied research activities ranging from modelling of food biomolecules to product development.

This handbook guides you through the various courses offered under the umbrella of Food Science at the University of Auckland. Whether you are ready for honours, postgraduate diploma, masters or PhD study in Food Science, or are looking to undertake our Master of Professional Studies in Food Safety, we look forward to welcoming you to Food Science at the University of Auckland.

ASSOCIATE PROFESSOR SIEW-YOUNG QUEK
Director, Food Science Programme

Why study with us?

Food products must be safe, attractively packaged and meet the high standards of the international market place. Much of the science that underpins the technology of food processing derives from chemistry, biological sciences, physics, engineering, and nutrition. A postgraduate qualification in Food Science from the University of Auckland provides in-depth knowledge in these areas and can help you further your career.
Postgraduate study options in Food Science and Food Safety

Bachelor of Science (Honours) in Food Science

Prerequisites

• Bachelor of Science majoring in Food Science, Food Science and Nutrition, or equivalent

• At least 90 points at Stage III

Programme structure

Length: one year of full-time study or two years of part-time study.

• At least 30 points from CHEMMAT 757, FOODSCI 706-710

• Up to 30 points from MEDSCI 709, 710, BIOSCI 741 or other courses approved by the Programme Director

• 60 points FOODSCI 788 Dissertation

www.science.auckland.ac.nz/food-science

A candidate for BSc(Hons) must achieve a GPA average of B- 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 Food Science

Prerequisites

- Bachelor of Science majoring in Food Science, Food Science and Nutrition, Biological Sciences, or Chemistry
- Or an approved degree of equivalent standing completed at another university

Programme structure

Length: one year of full-time study or part-time study must be completed within four years.

Consists of 120 points (usually eight courses):

- 60 points from FOODSCI 703, 707, 708, CHEMMAT 757
- 60 points from approved 600 and 700 level courses
Master of Science (MSc) in Food Science

Prerequisite

- A BSc(Hons) or PGDipSci in Food Science, or an approved degree of equivalent standing completed at another university

www.science.auckland.ac.nz/food-science

Programme structure

Length: one year of full-time study or two years of part-time study.
- 120 points FOODSCI 796 MSc Thesis in Food Science

Selection of supervisor

Students need to select a research supervisor in parallel with their application to enrol for BSc(Hons) and MSc in Food Science.

www.chemistry.auckland.ac.nz/supervisors

Master of Professional Studies in Food Safety (MProfStuds in Food Safety)

The MProfStuds programme provides skills and training that are in demand in the international food and food production industries. It has been designed for those keen to earn a degree while maintaining their professional careers. Courses are delivered only online, offering flexible hours and remote learning. This specialisation is offered jointly by the Faculty of Science and the Faculty of Medical and Health Sciences.

International students: please note, that the MProfStuds is currently restricted to New Zealand and Australian citizens/residents.

www.science.auckland.ac.nz/food-safety

Prerequisites

- A relevant four year Bachelors degree
  or
- A relevant four year Bachelors (Honours) degree
  or
- A three year Bachelors degree and either a professional qualification equal to one year postgraduate study, or three years relevant work experience

Entry is with the approval of the Director of the programme.

Applicants without one of these qualifications may wish to consider a PGDipSci in Food Science.

Programme structure

Length: one year of full-time study or two years of part-time study.
- 60 points: FOODSCI 711-714
- 15 points from FOODSCI 715-717, or other courses as approved by the Programme Director
- 45 points: FOODSCI 797 (project)
**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](http://www.science.auckland.ac.nz/phd)

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**Entry to PhD**

The normal requirement for admission to the PhD is an honours degree with 2nd class honours division 1 or better, either MSc, BSc(Hons), or BTech. 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.

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**Postgraduate Food Science and Food Safety courses**

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<thead>
<tr>
<th>Course code</th>
<th>Title</th>
<th>Semester</th>
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<tbody>
<tr>
<td>FOODSCI 703</td>
<td>Food Processing</td>
<td>S1</td>
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<tr>
<td>FOODSCI 705/705A&amp;B</td>
<td>Project in Food Science</td>
<td>S1</td>
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<tr>
<td>FOODSCI 706</td>
<td>Food Safety</td>
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<tr>
<td>FOODSCI 707</td>
<td>Food Science</td>
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<tr>
<td>FOODSCI 708</td>
<td>Advanced Food Science</td>
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<tr>
<td>FOODSCI 709 A &amp; B</td>
<td>Selected Topics in Food Science and Technology</td>
<td>S1/S2</td>
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<tr>
<td>FOODSCI 710</td>
<td>Industrial Internship</td>
<td>S1/S2/Summer</td>
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<tr>
<td>FOODSCI 711</td>
<td>The Science of Food Contaminants and Their Control</td>
<td>S1</td>
</tr>
<tr>
<td>FOODSCI 712</td>
<td>Food Safety Management</td>
<td>S1</td>
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<tr>
<td>FOODSCI 713</td>
<td>Food Legislation</td>
<td>S2</td>
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<tr>
<td>FOODSCI 714</td>
<td>Research Methodology in Food Safety</td>
<td>S2</td>
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<tr>
<td>FOODSCI 715</td>
<td>Food Allergens and Intolerants</td>
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<td>FOODSCI 717</td>
<td>Food Processing and Sanitation</td>
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<td>FOODSCI 740</td>
<td>Food Analysis</td>
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<td>FOODSCI 788 A &amp; B</td>
<td>BSc(Hons) Dissertation in Food Science</td>
<td>S1/S2</td>
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<tr>
<td>FOODSCI 796 A &amp; B</td>
<td>MSc Thesis in Food Science</td>
<td>S1/S2</td>
</tr>
<tr>
<td>FOODSCI 797</td>
<td>Project in Food Safety</td>
<td>S1/S2</td>
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For course descriptions and more information: [www.chemistry.auckland.ac.nz/pgcourses](http://www.chemistry.auckland.ac.nz/pgcourses)

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Find masters and doctoral supervisors and research projects that you can join:
[www.findathesis.auckland.ac.nz](http://www.findathesis.auckland.ac.nz)
Careers in Food Science and Food Safety

Food science graduates can expect to find employment in the food industry (both national and international), Crown Research Institutes, and government agencies in areas such as food manufacture, food safety, food analysis, brewing, cereals and baking, dairy products, minimally processed fruits and vegetables, food additives, product development, sensory evaluation and winemaking.

Opportunities include:
- Compliance manager
- Food quality assurance officer
- Food safety officer
- Policy developer
- Regulatory affairs manager

Graduates of our postgraduate programmes are already employed in:
- Brewing
- Crown Research Institutes
- Dairy industry
- Food Manufacturing Companies
- Government agencies
- Multinational food companies

“I want to make an original contribution to scientific knowledge in Food Science and Technology.”

“As the University of Auckland is one of the world’s highly ranked universities, I found a research topic of interest and decided to study here.

“My thesis topic is about the study of probiotic potential and fermentation metabolomics of honey for Lactobacillus reuteri DPC16. My research focusses on how New Zealand mānuka honey can improve the probiotic efficacy (growth and antibacterial activity) of one Lactobacilli strain.

“While studying, the networking opportunities within the food industry have meant that I can work on practical challenges and research problems. I’ve also found the doctoral support group and workshops on doctoral skills are really helpful.”

Anand Mohan is studying for a PhD in Food Science.
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/rainbowscience

Scholarships and awards
www.scholarships.auckland.ac.nz

Support for students
www.science.auckland.ac.nz/support

Questions about Food Science and Food Safety?
chemistry@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.