Welcome to Food Science and Nutrition

The food and beverage industry and food research institutes need well-trained Food Science and Nutrition graduates who can help to ensure safe, innovative and high quality food production. At the same time, informed consumers are looking for foods that are not only safe but healthy, sustainable, natural, convenient and have good sensory properties to maintain well-being.

At the University of Auckland, the top ranked University in New Zealand*, we encourage innovation and provide our students with fundamental knowledge and skills valued by employers.

Our Bachelor of Science (BSc) in Food Science and Nutrition major offers distinct pathways in both Food Science and in Nutrition, drawing on expertise from across the University.

You can decide to follow the Food Science or Nutrition pathway, or choose to change between the pathways, provided the major requirements are fulfilled. This booklet gives you some useful information on the degree. We look forward to you joining our programme.

ASSOCIATE PROFESSOR SIEW-YOUNG QUEK
Director, Food Science Programme

*See www.science.auckland.ac.nz/excellence
Food Science pathway

The Food Science pathway covers all aspects of manufacturing, processing and production in food and food-related industries. You will learn about food components, their properties and how they interact in food products. You will do courses in food processing, sensory evaluation and product development, from benchtop to market. Internships may be available for selected students.

Postgraduate study options from the Food Science pathway

- Bachelor of Science (Honours) in Food Science
- Postgraduate Diploma in Science in Food Science
- Master of Science in Food Science
- Master of Professional Studies in Food Safety
- Master of Engineering Studies in Food Process Engineering
- Doctor of Philosophy (PhD)

Career opportunities

Food Scientists may find work in:

- Food industry
- Research institutes and government departments
- Food safety
- Food analysis
- Sensory evaluation
- Product development and waste management

www.science.auckland.ac.nz/degree-planners
Zoe Xie is studying for a Bachelor of Science majoring in Food Science and Nutrition, following the Food Science pathway.

“I am really curious about food composition and structure. I’ve always wondered why most of the healthy food is not that delicious while the junk food tastes so good. I hope to one day produce one kind of food that is healthy and has perfect taste as well.

“The University of Auckland is one of the world’s highly ranked universities, and the Faculty of Science has plenty of knowledgeable professional staff. The study environment is really good, and my fellow food science students are all passionate about what we do.

“The study of Food Science is amazing and interesting. I’ve learned so much in my studies. I hope to find employment where I can produce food.”
Nutrition pathway

The Nutrition pathway focuses on human nutrition, the maintenance of good health and the well-being of populations. This requires consideration of the environmental, social, economic and cultural determinants of eating behaviours and how they impact on health.

Postgraduate study options from the Nutrition pathway

- Bachelor of Science (Honours) in Biomedical Science
- Postgraduate Diploma in Science
- Postgraduate Diploma in Science in Biomedical Science
- Postgraduate Diploma in Health Sciences
- Master of Science in Biomedical Science
- Master of Science in Food Science
- Master of Health Sciences
- Master of Health Sciences in Nutrition and Dietetics
- Doctor of Philosophy (PhD)

Entry to the Master of Health Sciences in Nutrition and Dietetics

The Nutrition pathway fulfils the undergraduate requirements for entry to the Master of Health Sciences in Nutrition and Dietetics. Please note that entry is competitive, applicants are ranked on GPA and places are limited. Selection will normally take place during the second year of the Bachelor of Science in Food Science and Nutrition with limited additional offers made at the end of the third year.

Career opportunities

Nutrition graduates may find work in:

- Private practices
- Food industry
- Research institutes
- Non-governmental organisations and government departments
- Nutrition information services
- Health promotion
- Health programme planning and health policy

Registration as a nutritionist or a dietitian can be available after specialised training and work experience.
# BSc degree planner – Food Science and Nutrition

## Nutrition Pathway

### BSc

<table>
<thead>
<tr>
<th>Year 1</th>
<th>BIOSCI 101</th>
<th>BIOSCI 106</th>
<th>BIOSCI 107</th>
<th>CHEM 110</th>
<th>MEDSCI 142</th>
<th>POPLHLTH 111</th>
<th>LIST A</th>
<th>GEN ED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LIST A</td>
<td>MEDSCI 142 and POPLHLTH 111 are compulsory prerequisite courses for Nutrition Pathway students</td>
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<table>
<thead>
<tr>
<th>Year 2</th>
<th>BIOSCI 204</th>
<th>MEDSCI 203</th>
<th>POPLHLTH 206</th>
<th>MEDSCI 205</th>
<th>BIOSCI 202</th>
<th>BIOSCI 203</th>
<th>FOODSCI 201</th>
<th>STATS 101 or 108</th>
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</table>

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<tr>
<th>Year 3</th>
<th>MEDSCI 315</th>
<th>BIOSCI 358</th>
<th>POPLHLTH 305</th>
<th>LIST B</th>
<th>LIST B</th>
<th>LIST C</th>
<th>LIST C</th>
<th>GEN ED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>LIST B</td>
<td>LIST B</td>
<td>LIST C</td>
<td>30 points from LIST B</td>
<td>30 points from LIST C</td>
<td>30 points from LIST C</td>
<td>GEN ED</td>
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</tr>
</tbody>
</table>

### LIST A:
- CHEM 120, HLTHPSYCH 122, MEDSCI 142, PHYSICS 160, POPLHLTH 101, 102, 111

### LIST B:
- 30 points from MEDSCI 301, 312, FOODSCI 301, 303

### LIST C:
- 30 points from BIOSCI 201, CHEM 240, FOODSCI 301-304, MEDSCI 301, POPLHLTH 202, 301, SCIGEN 201, EXERSCI 206

### NOTE:
- BSc (Food Science & Nutrition) is a single major which offers two distinct pathways: Food Science and Nutrition, and a limited opportunity to mix the two. Students should follow the suggested pathways, particularly at Stage I to meet prerequisites for future courses. This applies particularly to students following the Nutrition pathway with the intention of entering dietetics training, and students who fail to meet prerequisites and GPA requirements will not gain access to year 2 and 3 courses. Similarly Food Science students can consider adding extra nutrition skills. Please note the recommended pathways as outlined in the Planner are aligned with the skills & competencies we know employers prefer, and you must meet the full requirements of the regulations to graduate:

### Degree Planners for double majors can be found at [www.science.auckland.ac.nz/course-planning](http://www.science.auckland.ac.nz/course-planning)

1. At least 180 points (12 courses) must be above Stage I
2. 30 points (two courses) must be taken from the appropriate General Education Schedules for BSc students
3. This planner describes the recommended order for completing courses to assist with satisfying prerequisites or core requisites
4. Students must take at least 75 points (five courses) at Stage III

It is the student’s responsibility to check that the final programme complies with University Regulations. The Faculty of Science is the final authority on all BSc regulations.
## BSc degree planner – Food Science and Nutrition

### Food Science Pathway

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
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</thead>
<tbody>
<tr>
<td>BIOSCI 101</td>
<td>BIOSCI 106</td>
<td>BIOSCI 204</td>
</tr>
<tr>
<td>BIOSCI 107</td>
<td>CHEM 110</td>
<td>CHEMMAT 211</td>
</tr>
<tr>
<td>MATHS 110</td>
<td>LIST A</td>
<td>BIOSCI 203</td>
</tr>
<tr>
<td>LIST A</td>
<td>STAT 101 or 108</td>
<td>FOODSCI 201</td>
</tr>
<tr>
<td>GEN ED</td>
<td>BSc Elective (Stage II or III)</td>
<td>CHEMMAT 756</td>
</tr>
</tbody>
</table>

MATHS 110 is a compulsory prerequisite for the Food Science Pathway, and CHEM 120 will be required if a B- is not achieved in CHEM 110.

**LIST A:** CHEM 120, ENGSCI 111 or MATHS 110, HLTHPSYCH 122, MEDSCI 142, PHYSICS 160, POPLHLTH 101, 102, 111

**LIST B:** 15 points from BIOSCI 358, FOODSCI 304

**LIST C:** 15 points from BIOSCI 201, 358, CHEM 240, FOODSCI 304, SCIGEN 201, EXERSCI 206

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<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
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<tbody>
<tr>
<td>FOODSCI 201</td>
<td>Foundations of Food Science</td>
</tr>
<tr>
<td>FOODSCI 301</td>
<td>Food Quality Attributes</td>
</tr>
<tr>
<td>FOODSCI 302</td>
<td>Food Preservation</td>
</tr>
<tr>
<td>FOODSCI 303</td>
<td>Sensory Science</td>
</tr>
<tr>
<td>FOODSCI 304</td>
<td>Food Product Development</td>
</tr>
<tr>
<td>BIOSCI 101</td>
<td>Genomes to Organisms</td>
</tr>
<tr>
<td>BIOSCI 106</td>
<td>Foundations of Biochemistry</td>
</tr>
<tr>
<td>BIOSCI 107</td>
<td>Biomedical Science</td>
</tr>
<tr>
<td>BIOSCI 202</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIOSCI 203</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>BIOSCI 204</td>
<td>Microbiology</td>
</tr>
<tr>
<td>BIOSCI 348</td>
<td>Food and Industrial Microbiology</td>
</tr>
<tr>
<td>BIOSCI 358</td>
<td>Nutritional Science</td>
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<tr>
<td>CHEM 110</td>
<td>Chemistry of the Living World</td>
</tr>
<tr>
<td>CHEM 120</td>
<td>Chemistry of the Material World</td>
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<tr>
<td>CHEM 230</td>
<td>Molecules for Life: Synthesis and Reactivity</td>
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<tr>
<td>CHEM 240</td>
<td>Analytical chemistry</td>
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<tr>
<td>MATHS 110</td>
<td>Mathematics for Science</td>
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<tr>
<td>SCIGEN 201</td>
<td>Innovating for a Knowledge Society</td>
</tr>
<tr>
<td>EXERSCI 206</td>
<td>Exercise Nutrition</td>
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<tr>
<td>STATS 101/108</td>
<td>Introduction to Statistics</td>
</tr>
<tr>
<td>HLTHPSYC 122</td>
<td>Behaviour, Health and Development</td>
</tr>
<tr>
<td>MEDSCI 142</td>
<td>Biology for Biomedical Science: Organ Systems</td>
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<tr>
<td>MEDSCI 203</td>
<td>Mechanisms of Disease</td>
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<tr>
<td>MEDSCI 205</td>
<td>The Physiology of Human Organ Systems</td>
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<td>MEDSCI 301</td>
<td>Molecular Basis of Disease</td>
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<td>MEDSCI 312</td>
<td>Endocrinology of Growth and Metabolism</td>
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<tr>
<td>MEDSCI 315</td>
<td>Nutrition, Diet and Gene Interactions</td>
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<tr>
<td>POPLHLTH 102</td>
<td>Health and Society</td>
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<tr>
<td>POPLHLTH 111</td>
<td>Population Health</td>
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<td>POPLHLTH 202</td>
<td>Research Methods in Health</td>
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<td>POPLHLTH 206</td>
<td>Life Cycle Nutrition</td>
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<tr>
<td>POPLHLTH 305</td>
<td>Community Nutrition</td>
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<tr>
<td>CHEMMAT 211</td>
<td>Introduction to Process Engineering</td>
</tr>
<tr>
<td>CHEMMAT 756</td>
<td>Food Process Engineering</td>
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</tbody>
</table>
What should I study to best prepare for this programme?

Many factors will influence your achievement at University. Some Stage I courses may assume you have already studied the subject at high school. In preparation for a Bachelor of Science in Food Science and Nutrition, here is information that should make your decision making and life at University a bit easier: www.chemistry.auckland.ac.nz/food-science-and-nutrition-advice-for-school-leavers

Anna Worthington is studying for a Bachelor of Science majoring in Food Science and Nutrition, following the Nutrition pathway.

“I have a real interest in how the body works. How do we break down food to provide us with the energy we need? What constitutes a healthy diet? Is there a way to engineer food to improve its nutritional value?

“Studying Nutrition is about so much more than just food. Firstly, the major helps you to build a solid framework of knowledge on the anatomy and physiology of the human body. Along with integrating some chemistry and biology of nature, you also get an introduction to the importance of population health.

“I like that my major challenges me. I like that it aligns with my interests and piques my curiosity. I also enjoy that there are a range of great lecturers who endeavour to present their material in engaging and entertaining ways; this makes going to 8am lectures much more bearable. I have also enjoyed meeting like-minded people in my major who share a passion for nutrition.”
Helpful information

Academic dates
www.auckland.ac.nz/dates

Academic Integrity Course
www.auckland.ac.nz/academic-integrity

Accommodation
www.accommodation.auckland.ac.nz

Buy coursebooks
www.science.auckland.ac.nz/resource-centre

Career Development and Employment Services
www.auckland.ac.nz/careers

Course advice and degree planning in Science
www.science.auckland.ac.nz/student-centre

General education
www.auckland.ac.nz/generaleducation

How to apply
www.apply.auckland.ac.nz

How to enrol
www.auckland.ac.nz/enrolment

International students
www.international.auckland.ac.nz

Māori and Pacific students
www.science.auckland.ac.nz/tuakana

Need help?
www.askauckland.ac.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

Applications close on 8 December for Semester One and 4 July Semester Two

Questions about Food Science and Nutrition?
scifac@auckland.ac.nz
or Peter Swedlund:
p.swedlund@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.