commencing:
semester 1 or semester 2
location:
st lucia
delivery mode:
internal

postgraduate coursework programs in
food science and technology

among the greatest challenges the world faces now is not how much food we can produce, but how to improve the taste, quality, appearance nutritional value and safety of food. be part of a growing area of science contributing to the health and wellbeing of global communities.

postgraduate study in food science and technology at the university of queensland (uq) will expand your career prospects into a wide range of government, commercial or research based supervisory roles. build on your existing theoretical and practical knowledge, and develop expertise in a variety of different areas such as food chemical and microbiological testing, food safety systems, quality control, food structure and sensory analysis, food engineering and new product development.

in addition to the sciences, you will gain an understanding of the policies behind safe food production. a 13-week industry placement offered during your final year enables you to apply your theoretical skills to real scenarios in food processing companies. as a food science and technology graduate, you will use your leadership, analytical and problem-solving skills to respond to global consumer demand for quality, safe and nutritious food products. the programs will prepare you for innovative opportunities within all aspects of technical and scientific food manufacturing industries.

uq advantage
uq is ranked as one of the top 20 universities in the world and number 1 in australia for agriculture related disciplines. leading researchers teach into the programs ensuring that current technologies and breakthroughs are shared with students to enhance their theoretical skills and knowledge. strong links are maintained to the australia and international food industry through student placements and mentoring, research funding and collaborative projects which allow students to develop their practical skills. this combination of current theory and practical application creates a firm foundation for a globally relevant career.

www.uq.edu.au/study
Key Australian food industry collaborators include:

- Dairy Innovation Australia Ltd
- Queensland Alliance for Agriculture and Food Innovation
- Queensland Department of Science, Information Technology, Innovation and the Arts
- Queensland Department of Agriculture, Fisheries and Forestry
- Horticulture Australia Ltd
- Australian Food and Grocery Council
- Universities and industry research corporations
- International collaborators include organisations in Argentina, Vietnam, Singapore, USA, China, India, Switzerland, Germany, Pakistan, Canada, The Philippines and New Zealand.

Specialised research centres such as the Centre for Nutrition and Food Sciences (CNAFS) integrate applied and fundamental research in the physical, chemical and biological properties of food to enhance health outcomes and economic benefits globally.

Career opportunities

The food industry is Australia’s largest manufacturing sector and has unmet labour demand. By completing postgraduate study in Food Science and Technology, you could gain employment in supervisory or managerial roles as a:

- Food technologist
- Food chemist
- Food microbiologist
- Laboratory supervisor
- Production manager
- Process and product development manager
- Quality control manager

What you will study

Through a combination of scientific theory and practical application, you will heighten your problem solving and project management skills to enhance your employability in the global food processing and production industry.

For instance, to increase your fundamental scientific knowledge of food and the effects of processing, study a combination of courses such as Food Microbiology, Food Chemistry and Analysis, Food Safety and Quality Management, and Food Processing Technology.

Additionally, enhance your research skills and expand your thinking by studying courses such as Agricultural Research Methodologies and Global Challenges in Agriculture. Each individual course will provide an important contribution to your development as a food industry professional.

Food Microbiology

Investigate important foodborne pathogens, techniques of food preservation, food spoilage, food fermentation, rapid and culture-based microbe detection and genotyping methods, probiotics and bacteriophages.

Agricultural Research Methodologies

Using both qualitative and quantitative analysis techniques, gain the skills needed to design and undertake a research project including the legal and ethical requirements in planning research projects; experimental design and analytical methods and how to present data for extension to the wider community.

Food Chemistry and Analysis

Examine the chemistry and stability of food components; learn to identify and quantify them using chemical techniques and discover how they interact to affect the properties of food.

Food Processing Technology

Acquire an advanced knowledge and understanding of the processes and engineering principles of heating, cooling, freezing and drying of foods using methods such as crystallisation, extrusion and membrane separation as well as the kinetics of physico-chemical changes during processing.

Nutrition and Health

Investigate the major nutrition issues of developing and developed countries by examining the functions and food sources of nutrients, the basis of recommended dietary intakes, the major nutritional disorders found in populations, and nutritional needs throughout the lifecycle.

Food Safety and Quality Management

Apply the principles of total quality management to ensure product quality and safety. Using tools such as statistical process control, examine the development of food safety programs and how to audit these. Study the development and the scientific basis of international and national food regulatory systems and investigate current issues in food safety using applied risk analysis.

Global Challenges in Agriculture

UQ graduates will be equipped to shape the future of both developed and developing economies. Your study topics will include global megatrends, development of futuring and foresighting skills, globalisation, food security, climate change, water resources, sustainability and resilience. After an introduction to the major emerging issues affecting policy and practice in the agricultural, agribusiness, food sciences and rural development fields, you will undertake case studies and apply your knowledge to these issues in the context of a rapidly changing world.

Entry requirements

Graduate Certificate in Food Science and Technology (0.5 years)
Bachelor’s degree in food science, science or engineering (chemistry, biology, biochemistry, microbiology) or a degree in a relevant area with GPA of at least 5.5 on a 7 point scale.

Master of Food Science and Technology (#24) (1.5 year)
Bachelor’s degree in food science, food technology or engineering (food science or technology major) or a degree in a relevant area with GPA of at least 5.5 on a 7 point scale (GPA of between 5.0 and 5.5 will be assessed on a case-by-case basis).

Master of Food Science and Technology (#32) (2 years)
Bachelor’s degree in science or engineering (chemistry, biology, biochemistry, microbiology) or a degree in a relevant area with GPA of at least 5.5 on a 7 point scale (GPA of between 5.0 and 5.5 will be assessed on a case-by-case basis).

How to apply

International applicants

Information about application procedures for international students can be found at www.uq.edu.au/international-students/application-instructions

Domestic applicants

Complete the online application form at www.uq.edu.au/study

Time of publication: Every effort has been made to ensure the accuracy of information in this document at the time of publication. The authoritative source of program and course information is the UQ Courses and Programs website at uq.edu.au/study. Where any conflict of information exists, the rules and associated course lists approved by the UQ Senate shall apply.

UQ graduate Vedaste Ndungutse