

NATS 3038 QUALITY ASSURANCE AND FOOD ANALYSIS

Credit Points 10

Legacy Code 300922

Coordinator Sunil Panchal ([https://directory.westernsydney.edu.au/search/name/Sunil Panchal/](https://directory.westernsydney.edu.au/search/name/Sunil%20Panchal/))

Description This subject covers the knowledge and tools required to maintain food quality. Students will develop an awareness of food laws, regulations and codes at the state, national and international levels. Students will be introduced to elementary toxicology and risk analysis as it applies to the regulation of food additives. The subject also integrates previous studies in HACCP (Hazard Analysis Critical Control Point) to develop deeper understanding of food quality assurance and quality management systems as they are applied to the control and management of the food supply. Students are introduced to the standard methods of analysis of foods as used for nutritional and quality assessment of foods. Practicals include determination of major and minor food components; functionality tests and sensory analysis of foods.

School Science

Discipline Food Science and Biotechnology

Student Contribution Band HECS Band 2 10cp

Check your fees via the Fees (https://www.westernsydney.edu.au/currentstudents/current_students/fees/) page.

Level Undergraduate Level 3 subject

Pre-requisite(s) PROC 2002 - Innovative Foods

Restrictions

Successful completion of 120 credit points

Assumed Knowledge

Students require good understanding of the principles of food preservation and HACCP (Hazard Analysis Critical Control Point).

Learning Outcomes

On successful completion of this subject, students should be able to:

1. Describe quality management theories and systems; food laws, regulations and codes at state, national and international levels.
2. Use risk analysis methodology to evaluate the safety of a food additive, including gather and collate information from a wide range of sources and critique the information to assess the toxicological safety of a food additive.
3. Work effectively in a group on a case study to produce a Quality Manual, integrating quality management theories, food safety regulations, and food process knowledge for the management of safe food.
4. Apply quality management statistical tools to monitor the quality of a food process.
5. Appraise and select appropriate methods for the chemical, physical and sensory analysis of foods.
6. Follow laboratory procedures and protocols to proficiently perform a range of food analysis methods safely and accurately;

systematically record experimental data and calculate results of these tests.

7. Demonstrate effective communication in a variety of written formats, scientific and professional; use of advanced word and excel skills for large and complex documents.
8. Recognise the legal and ethical responsibility, both individual and corporate, to maintain a safe food supply.

Subject Content

1. Food laws, regulations and codes at state, national and international levels.
2. Elementary toxicology, principles of food safety and risk analysis, and its application to the regulation of food additives in foods.
3. Quality Management Systems, including HACCP, ISO22000 and other current food management systems, plus relevant accreditation procedures.
4. Statistical tools of quality management for the management of food quality.
5. Methods for sensory analysis of foods, including questionnaire design and statistical analysis of sensory data.
6. Methods for the chemical analysis of foods, including method selection and tests for moisture, ash, sodium, protein, fat and carbohydrates.
7. Construction of nutrition information panels for food labels and food labelling legislation.

Assessment

The following table summarises the standard assessment tasks for this subject. Please note this is a guide only. Assessment tasks are regularly updated, where there is a difference your Learning Guide takes precedence.

Type	Length	Percent	Threshold	Individual/ Group Task	Mandatory
Quiz	5 x 20 mins	25	N	Individual	N
Report	1,800 words	25	N	Individual	N
Report	1,800 words	25	N	Individual	N
Professional Task	7,500 (1,500 per student)	25	N	Group	N

Teaching Periods

Autumn (2025)

Hawkesbury

On-site

Subject Contact Sunil Panchal ([https://directory.westernsydney.edu.au/search/name/Sunil Panchal/](https://directory.westernsydney.edu.au/search/name/Sunil%20Panchal/))

View timetable (https://classregistration.westernsydney.edu.au/odd/timetable/?subject_code=NATS3038_25-AUT_HW_1#subjects)