

NATS 7015 FOOD EVALUATION

Credit Points 10

Legacy Code 301181

Coordinator Sunil Panchal (https://directory.westernsydney.edu.au/search/name/Sunil_Panchal/)

Description This unit aims to provide students with the knowledge and skills required to evaluate food quality and safety. Students are introduced to contemporary methods of analysis of foods as used for nutritional, quality and safety assessment. Practical work includes determination of major and minor food components; physical and functionality tests; sensory assessment and microbiological analysis of foods.

School Science

Student Contribution Band HECS Band 2 10cp

Level Postgraduate Coursework Level 7 subject

Assumed Knowledge

Bachelor of Science majoring in science; such as biological sciences, chemistry, microbiology, nutrition, medical, forensic, animal science, zoology or pharmacology sciences.

Learning Outcomes

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

1. Appraise and select most suitable methods to determine food composition and where necessary to adapt the procedure to suit a particular food system.
2. Apply the theories of sensory evaluation to design and perform appropriate tests to assess the sensory properties of food.
3. Evaluate the theories for physical and functional assessment of foods and apply appropriate tests to evaluate the physical properties of food.
4. Apply microbiological risk assessment theories to determine appropriate microbiological testing procedures to characterise the microbial quality and safety of foods.
5. Design and perform experiments to assess food quality and safety.
6. Demonstrate practical skills to proficiently carry out selected methods accurately and reliably.
7. Systematically record experimental data and use statistical methods to summarise and assist interpretation of data, and communicate findings using the conventions of scientific writing.

Subject Content

1. Food composition, including the macro- and micro-nutrients; chemistry and nutritional properties of a variety of foods.
2. General principles of food analysis, application of a range of methods including using modern instrumentation to determine food composition.
3. Quantitative food assessment, food microstructure and rheology, physical assessments of food quality.
4. Theories and practices of sensory evaluation of food.
5. Factors affecting growth and survival of microorganisms in food, including food spoilage microorganisms and microorganisms of public health significance.

6. Methods for microbial examination of foods, microbiological standards and specifications.

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.

Item	Length	Percent	Threshold	Individual/Group Task
Online Quizzes	5 x 30 min	25	N	Individual
Food composition analysis practical and report	1,500 words	25	N	Individual
Sensory and quantitative assessment practical and report	1,500 words	25	N	Individual
Microbial quality and safety practical and report	1,500 words	25	N	Individual

Prescribed Texts

- Campbell-Platt, G. (2017). Food Science and Technology. 2nd ed, IUFoST, Wiley-Blackwell. U.K.

Teaching Periods

Autumn Hawkesbury

Day

Subject Contact Sunil Panchal (https://directory.westernsydney.edu.au/search/name/Sunil_Panchal/)

View timetable (https://classregistration.westernsydney.edu.au/even/timetable/?subject_code=NATS7015_22-AUT_HW_D#subjects)