

FOOD9102

Sensory Analysis of Foods

Term 3, 2022



Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Alison Jones	alison.jones@unsw.edu.au	Appointment via MS Teams or email	Rm 433	+61-2-938 5 5745

School Contact Information

For assistance with enrolment, class registration, progression checks and other administrative matters, please see [the Nucleus: Student Hub](#). They are located inside the Library – first right as you enter the main library entrance. You can also contact them via <http://unsw.to/webforms> or reserve a place in the face-to-face queue using the UniVerse app.

If circumstances outside your control impact on submitting assessments, Special Consideration may be granted, usually in the form of an extension or a supplementary assessment. Applications for Special Consideration must be submitted [online](#).

For course administration matters, please contact the Course Coordinator.

Course Details

Units of Credit 6

Summary of the Course

Although food quality is commonly assessed by microbiological, chemical and physical tests, ultimately the prospective buyer makes a judgement based on sensory attributes. Achieving reproducible and reliable sensory testing is challenging. Sensory Science is a growing area of Food Science in food production, processing and marketing. Sensory analysis has more confounding factors and natural variation; statistics is a major part of sensory science.

This course will provide in detail methods for classical sensory testing, data collection to describe a difference between food samples, to describe samples or to determine the acceptability of foods. An understanding of the physiological reaction of the body to sensory input; good sensory testing practice; discrimination of individuals; measurement of thresholds of perception; variation of intensity with time; judgement and bias; descriptive analysis; consumer field trials; and preference and acceptance testing are major sections will be the key components of the course.

Course Aims

This course aims to provide an understanding of the basic testing methods and data analysis required for sensory testing of food. Topics covered include: discrimination tests, descriptive analysis, hedonic/affective tests, understanding of the physiological reaction of the body to sensory input; reducing bias, good sensory testing practice; recruitment and screening of sensory panelists; measurement of thresholds of perception; variation of intensity with time; sensory data for quality control and shelf-life testing; consumer field trials and consumer research. Future career paths from this program include product development, food formulation, sensory analysis, research and marketing.

Course Learning Outcomes

1. Demonstrate an understanding of the theory regarding sensory testing and the use of descriptive statistics for consumer acceptance; demonstrate the ability to understand the correlation between existing sensory technology (analytical) and taste panels for interpreting consumer acceptance of products.
2. Demonstrate the ability to independently handle data, do appropriate statistics for assessment of consumer acceptance of food products.
3. Students will demonstrate their understanding of the principles of sensory testing of newly developed products using untrained consumer panels by actually independently designing a project and executing it practically.

Teaching Strategies

Please note: Due to the impact of Covid-19, this course will continue to be taught and run in a hybrid mode and can be completed entirely online. There will be no compulsory requirement for students to be present on campus for any of the lectures, tutorials or group exercises. This is a 6-credit course, with a 3-hr lecture/tutorial sessions per week. Some weeks will include assessment tasks, group work, practical components and/or guest lecturers (please refer to course schedule). Some weeks will also include web-based research and formative assessment tasks. It is therefore expected that student have access to an appropriate device (laptop, tablet or phone) with reliable Wi-Fi access in

order to access and to be able to participate in the online lecture/tutorial sessions and exams. Lecture materials will identify and discuss central topics in the subject but students must identify, find, and study supplementary information also.

Some weeks will consist of a practical group-work component where each group will have to solve a real-life sensory problem using the key knowledge and understandings from the prior-lectures. Each group will be responsible for producing their own group work. Students will be expected to conduct significant research and collaborative group work both within and outside of class hours. It is important that students balance their time between group work, individual research, and overall planning in order to meet their assigned objectives.

The design of this course, given that it is a post-graduate course, is based on independent learning and enrichment of concepts. Students will need to exhibit critical thinking, effective communication, collaboration, and independent learning. The approach taken to this course has been designed with the above goals in mind.

Additional Course Information

The proposed course is an advanced disciplinary course offered at the postgraduate level under the Master of Science Program in Food Science (8037). Enrolment is also open to undergraduate students with permission from the course authority.

This course is related to many other food courses studied at the undergraduate and postgraduate levels but it is an especially relevant extension to product development/ project design. FOOD9102 gives students an introduction into the various sensory tests used on commercial food products to determine the three main objectives: discrimination, descriptive analysis and acceptance. The data analysis studied in this course assumes a basic level of competence in statistical concepts (dependent and independent variables, variance, standard deviations, students t-tests, ANOVA), which is why MATH1041 or similar statistical course is a necessary pre-requisite.

Assessment

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Quizzes (2 x 10% assessment)	20%	Weeks 3 and 10. Quiz link opens at 2pm AEST Thursday and closes 2pm Friday.	1, 2, 3
2. Tutorial Group Exercises (2 x 15% assessment)	30%	Thursday 9am AEST in week 5 and week 7	1, 2, 3
3. Final Exam	50%	Exam Period	1, 2, 3

Assessment 1: Quizzes (2 x 10% assessment)

Start date: Weeks 3 and 10, Quiz link opens at 2pm AEST Thursday and closes 2pm Friday.

Assessment length: Approximately 10 questions

Due date: Weeks 3 and 10. Quiz link opens at 2pm AEST Thursday and closes 2pm Friday.

Two short Moodle quizzes will be available online via a link on the course Moodle page. Each quiz will consist of approximately 10 multiple choice, match-up, true false style questions covering the lecture content. The quiz link will be made available to students for 24 hours however, each student will be given only one attempt to start and complete the quiz within approximately 20 minutes.

Assessment 2: Tutorial Group Exercises (2 x 15% assessment)

Assessment length: No more than 5 pages

Submission notes: via Turnitin link

Due date: Thursday 9am AEST in week 5 and week 7

Two separate group-based exercises designed to solve a sensory objective will be conducted during week 5 and week 7. **Attendance is compulsory at both the online class on Tuesday 10am-12pm and the hybrid class on Thursday 9am-12pm.** During Tuesday's online class, students will be organised into groups. Each group will be given a sensory science problem and asked to collaborate together within your group to help solve it. These exercises are designed to help students understand the practicalities of developing and implementing basic sensory tests in a team setting. Each group will be asked to create a questionnaire (i.e. ballot paper) that answers the given sensory objectives. **Each student is responsible for uploading their own copy of the group's discrimination test and their individual peer evaluation form (see table 2 below) to Turnitin before the due date.** This laboratory exercise will then be put into practice during Thursdays 9am-12pm class.

This assignment is submitted through Turnitin and students do not see Turnitin similarity reports.

Assessment criteria

Table 1: Assessment Task Rubric

Maximum mark allocation	Task Aspect	Description
10	Ballot Paper and Sensory Test Description	A great ballot paper is a clear indication that you have understood the sensory objectives and its execution. Marks will be awarded for the quality of the ballot paper in terms of the following: Does the ballot paper work in a practical sense? Is it asking the correct questions? Is it using the correct scale? Will the data generated tell the client what they want to know? Have you presented the test product correctly? Is the type of panelist/ test conditions/ type of data analysis correct?
5	Peer Evaluation	It is expected that every group member will help contribute equally to the development of the ballot paper. To assess whether there has been an equal contribution and performance, every group member will fill out a peer evaluation (Table 2 below) that evaluates the other members in their group (please do not evaluate yourself, only evaluate the other group members). The peer evaluation is a confidential, individual exercise. A maximum of 5 marks will be awarded depending on how the other group members view your individual contribution and collaboration.

Table 2 Individual Peer Evaluation Form

In the table below, please write down the names of each person in your group where it says “member #”. Going down each column, please give **each** group member a mark out of 5 for each of the group-work attributes listed (1 to 5).

	Member 1	Member 2	Member 3	Member 4
Criteria (1-5) 0 = strongly disagree 5 = strongly agree N/A = not sure				
1. I felt that they put in a similar amount of effort as the rest of group.				
2. I felt that they tried to communicate with the other group members to either help and/or ask for help.				
3. I felt that their contributions to the group work were to the best of their ability.				
4. I felt that they were engaged in the group activities to a similar level as the other group members.				
5. On the whole, I was happy for them to be part of this group.				
AVERAGE MARK OUR OF 5				

Any other comments?

Additional details

PLEASE NOTE: Lack of submission will incur a zero mark (0%) unless appropriate special consideration is sort.

Assessment 3: Final Exam

Due date: Exam Period

A final 2-hour exam (longer answer questions) covering all topics presented during the course will be run during the exam period. This exam will be run online via the Inspera platform.

Additional details

The final exam will be conducted using the *Inspira* online digital assessment platform. Students will see Inspera as the platform for their final exam via the myUNSW Exam timetable. You can also access Inspera final exams at <https://unsw.inspera.com> using your zID and password.

More information will be provided to you by the course convenor closer to the end of session.

Additionally, the [Inspira Student Resources](#) on your Moodle course page can provide more information about the platform.

Attendance Requirements

Attendance is compulsory at the Group Assessment Lab Exercises in Week 5 and 7. These will be run in both week 5 and week 7 during the following times:

- Tuesday 10-12pm (online in BBCU) **AND**
- Thursday 9-12pm in either BBCU (online students) or Lab 123 SEB (in-person students).

Course Schedule

Recorded Lectures: can be accessed anytime in Weeks 1-4, 8 and 10 on your Moodle course page.

Hybrid Tutorials: Thursday 2-3pm in weeks 1-4, either online in Blackboard Collaborate or in-person in Matthews 101.

COMPULSORY ASSESSMENT Laboratory Group Exercises, Week 5 and Week 7: Tuesday 10-12pm in BBCU and Thursday 9-12pm in HYBRID i.e. online in BBCU or in-person in Lab 123 SEB.

Hybrid Flavour Profiling Exercise, Week 9: Tuesday 10-12pm in HYBRID either online in BBCU or in-person in Lab 123, SEB.

[View class timetable](#)

Timetable

Date	Type	Content
Week 1: 12 September - 16 September	Lecture	Recorded Lecture in Moodle: Sensory Function, Food Choice and The Principles of Good Practice.
	Tutorial	Hybrid Tutorial, Thurs 2-3pm: The Basics of Conducting Sensory Tests.
Week 2: 19 September - 23 September	Lecture	Recorded Lecture in Moodle: Discrimination Tests and Data Analysis.
	Tutorial	Hybrid Tutorial, Thurs 2-3pm: Analysing Discrimination Data.
Week 3: 26 September - 30 September	Lecture	Recorded Lecture in Moodle: Types of Scales, Hedonic Testing.
	Tutorial	Hybrid Tutorial, Thurs 2-3pm: Generating and Analysing Hedonic Data.
	Assessment	MOODLE QUIZ 1 (10%) on the lecture and tutorial content from weeks 1 & 2. The quiz link can be found under the "Week 3" tab on your Moodle course page. The quiz link will be

		open from Thursday 2pm AEST until Friday 2pm AEST.
Week 4: 3 October - 7 October	Lecture	Recorded Lecture in Moodle: Preference Testing
	Tutorial	Hybrid Tutorial, Thurs 2-3pm: Analysing Preference Data.
Week 5: 10 October - 14 October	Assessment	COMPULSORY GROUP ASSESSMENT (15%) on Discrimination Testing. This assessment will consist of a compulsory online class on Tuesday 10-12 in BBCU and a hybrid laboratory class on Thursday 9-12pm in either BBCU or in Lab 123, SEB.
Week 6: 17 October - 21 October	Homework	Flexibility Week: no formal classes.
Week 7: 24 October - 28 October	Assessment	COMPULSORY GROUP ASSESSMENT (15%) on Hedonic Testing. This assessment will consist of a compulsory online class on Tuesday 10-12 in BBCU and a hybrid laboratory class on Thursday 9-12pm in either BBCU or in Lab 123, SEB.
Week 8: 31 October - 4 November	Lecture	Recorded Lecture in Moodle: Descriptive Analysis, Evaluating Texture, Colour and Appearance.
	Tutorial	Hybrid Tutorial, Thurs 2-3pm: Lexicons and descriptive data
Week 9: 7 November - 11 November	Laboratory	Tuesday 10-12pm: Hybrid Group Exercise in either BBCU (online students) or Lab 123 SEB; Flavour Profiling.
Week 10: 14 November - 18 November	Lecture	Recorded Lecture in Moodle: Speciality Tests and Consumer Research.
	Assessment	MOODLE QUIZ 2 (10%) on the lecture and tutorial content from weeks 3-9. The quiz link can be found under the "Week 10" tab on your Moodle course page. The quiz link will be open from Thursday 2pm AEST until Friday 2pm AEST.

Resources

Prescribed Resources

Harry, T & Lawless, H. (2015) *Sensory Evaluation of Food: Principles and Practices*. Springer, New York.

This text is available as an ebook through the UNSW library website or using the Leganto link provided on the Moodle course page.

Recommended Resources

O'Mahony, M. (1986) *Sensory Evaluation of food: Statistical Methods and Procedures*. CRC Press.

Stone, H. & Sidel, J. (1993) *Sensory Evaluation Practices (2nd Ed)*. Taylor, S. (Eds.) Academic Press Ltd, London.

Other course materials will be made available via the Moodle course page. Students are advised to check regularly for updates.

Course Evaluation and Development

Student feedback is extremely valuable and you are expected to provide feedback on the course. A Moodle tool has been created on the course web page which will become visible late in the session and allow you to evaluate the course. Please let the course convenor know immediately if there is anything concerning you about the course e.g. how classes are run, assessment details etc.

Submission of Assessment Tasks

In the School of Chemical Engineering, all written work will be submitted for assessment via Moodle unless otherwise specified. Attaching cover sheets to uploaded work is generally not required; when you submit work through Moodle for assessment you are agreeing to uphold the Student Code.

Some assessments will require you to complete the work online and it may be difficult for the course coordinator to intervene in the system after the due date. You should ensure that you are familiar with assessment systems well before the due date. If you do this, you will have time to get assistance before the assessment closes.

All submissions are expected to be neat and clearly set out. Your results are the pinnacle of all your hard work and should be treated with due respect. Presenting results clearly gives the marker the best chance of understanding your method; even if the numerical results are incorrect.

Marking guidelines for assignment submissions will be provided at the same time as assignment details to assist with meeting assessable requirements. Submissions will be marked according to the marking guidelines provided.

Late penalties

Unless otherwise specified, submissions received after the due date and time will be penalised at a rate of 5% per day or part thereof (including weekends). For some activities including Moodle quizzes and Team Evaluation surveys, extensions and late submissions are not possible.

Special consideration

If you have experienced an illness or misadventure beyond your control that will interfere with your assessment performance, you are eligible to apply for Special Consideration prior to submitting an assessment or sitting an exam.

UNSW has a [Fit to Sit / Submit rule](#), which means that if you attempt an exam or submit a piece of assessment, you are declaring yourself fit enough to do so and cannot later apply for Special Consideration.

For details of applying for Special Consideration and conditions for the award of supplementary assessment, please see the information on UNSW's [Special Consideration page](#).

Note: UNSW does not require a medical certificate for COVID-related absences of 7 days or less, however you must provide formal evidence from your local/state health provider (e.g. NSW Health) that clearly states your name and the date you tested positive (i.e. confirmation of your RAT registration, PCR test result). Longer absences due to extended self-isolation or COVID-related illness will still need documentation such as a medical certificate.

Applications for special consideration **will still be required** for assessment and participation absences related to COVID-19. Special consideration requests should not be lodged for missing classes if there are no assessment activities in that class.

Academic Honesty and Plagiarism

Academic integrity is fundamental to success at university. Academic integrity can be defined as a commitment to six fundamental values in academic pursuits: honesty, trust, fairness, respect, responsibility and courage (International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013). At UNSW, this means that your work must be your own, and others' ideas should be appropriately acknowledged. If you don't follow these rules, plagiarism may be detected in your work.

Further information about academic integrity and plagiarism can be located at:

- The [Current Students site](#)
- The [ELISE training site](#)

The Conduct and Integrity Unit provides further resources to assist you to understand your conduct obligations as a student: <https://student.unsw.edu.au/conduct>.

Referencing is a way of acknowledging the sources of information that you use to research your assignments. You need to provide a reference whenever you draw on someone else's words, ideas or research. Not referencing other people's work can constitute plagiarism. Further information about referencing styles can be located at <https://student.unsw.edu.au/referencing>.

For assessments in the School of Chemical Engineering, we recommend the use of referencing software such as [Mendeley](#) or [EndNote](#) for managing references and citations. Unless required otherwise specified (i.e. in the assignment instructions) students in the School of Chemical Engineering should use either the APA 7th edition, or the American Chemical Society (ACS) referencing style as canonical author-date and numbered styles respectively.

Academic Information

To help you plan your degree, assistance is available from academic advisors in [The Nucleus](#) and also in the [School of Chemical Engineering](#).

Additional support for students

- [Current Student Gateway](#)
- [Engineering Current Student Resources](#)
- [Student Support and Success](#)
- [Academic Skills](#)
- [Student Wellbeing, Health and Safety](#)
- [Equitable Learning Services](#)
- [IT Service Centre](#)

Course workload

Course workload is calculated using the Units-Of-Credit (UOC). The normal workload expectation for one UOC is approximately 25 hours per term. This includes class contact hours, private study, other learning activities, preparation and time spent on all assessable work.

Most coursework courses at UNSW are 6 UOC and involve an estimated 150 hours to complete, for both regular and intensive terms. Each course includes a prescribed number of hours per week (h/w) of scheduled face-to-face and/or online contact. Any additional time beyond the prescribed contact hours should be spent in making sure that you understand the lecture material, completing the set assignments, further reading, and revising for any examinations.

On-campus class attendance

Physical distancing recommendations must be followed for all face-to-face classes. To ensure this, only students enrolled in those classes will be allowed in the room. Class rosters will be attached to corresponding rooms and circulated among lab demonstrators and tutors. No over-enrolment is allowed in face-to-face class. Students enrolled in online classes can swap their enrolment from online to a **limited** number of on-campus classes by Sunday, Week 1.

In certain classroom and laboratory situations where physical distancing cannot be maintained or the staff running the session believe that it will not be maintained, face masks will be designated by the course coordinator as **mandatory PPE** for students and staff. Students are required to bring and use their own face mask. Mask can be purchased from IGA Supermarket (Map B8, Lower Campus), campus pharmacy (Map F14, Middle Campus), the post office (Map F22, Upper Campus) and a vending machine in the foyer of the Biological Sciences Building (Map E26, Upper Campus).

Your health and the health of those in your class is critically important. You must stay at home if you are sick or have been advised to self-isolate by [NSW health](#) or government authorities. Current alerts and advice can be found [here](#). Do not come to campus if you have any of the following symptoms: fever (37.5 °C or higher), cough, sore throat, shortness of breath (difficulty breathing), runny nose, loss of taste, or loss of smell. If you need to have a COVID-19 test, you must not come to campus and remain in self-isolation until you receive the results of your test.

You will not be penalised for missing a face-to-face activity due to illness or a requirement to self-

isolate. We will work with you to ensure continuity of learning during your isolation and have plans in place for you to catch up on any content or learning activities you may miss. Where this might not be possible, an application for fee remission may be discussed. Further information is available on any course Moodle or Teams site.

For more information, please refer to the FAQs: <https://www.covid-19.unsw.edu.au/safe-return-campus-faqs>

Note: This course outline sets out description of classes at the date the Course Outline is published. The nature of classes may change during the Term after the Course Outline is published. Moodle should be consulted for the up to date class descriptions. If there is any inconsistency in the description of activities between the University timetable and the Course Outline (as updated in Moodle), the description in the Course Outline/Moodle applies.

Image Credit

Dr Peter Wich

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Acknowledgement of Country

We acknowledge the Bedegal people who are the traditional custodians of the lands on which UNSW Kensington campus is located.