FOOD1120

Food Science, Society and Sustainability

Term 1, 2022

Course Details

Units of Credit 6

Summary of the Course

These days everyone has an opinion on food - its health effects, its quality and taste, its environmental impact. In this course you will examine the development, the science, and the place of food in society so you can engage in these contemporary debates about the future of food.

Society's attitudes and understanding of the role that food plays in our health has been rapidly changing in the last decade. Existing food hierarchies have been overturned and diet orthodoxies disrupted. We are learning more and more how changes to diet can promote or discourage chronic disease like diabetes, osteoporosis, and Alzheimer's. At the same time, we are increasingly aware of the way that food production, packaging, and distribution is impacting the environment and contributing to climate change. This leads many to consider the ethics of food creation and consumption.

This course will give you insights into the breadth and depth of food science - a rapidly evolving discipline. The course will introduce you to some of the common scientific principles, practices, and challenges related to our food systems. You will examine the interactions between the food industry and consumer ethics, health, and behaviour. Finally, you will consider the arguments around food packaging and the role of innovation in food product development, food waste and sustainability.

Course Aims

This course aims to introduce students to the origins of our diets, food supply chains, and the connections between food and health. Further, the course will expose students to breadth and depth of food science and explore how a multi-disciplinary systems approach is addressing contemporary challenges to provide food that is cheap and nutritious, safe and sustainable.

Course Learning Outcomes

1. Define introductory concepts in food science, including the components, properties, and functions of foods
2. Explain how food science contributes to individual, societal, planetary, and economic health.
3. Apply systems thinking to current and future challenges in the supplying the world with sufficient, sustainable, and nutritious food.
4. Explain the contributions that people, professions, and food science disciplines can make to addressing current and future food challenges.
5. Critically analyse relevant material from a range of scientific and public information sources.
6. Explain scholarly and reflective perspectives through written and oral communication

This course is part of UNSW Food Science specializations approved (2021-2026) by the Institute of Food Technologists Higher Education Review Board (IFT HERB).

Teaching Strategies

As an Introductory Knowledge and General Education course, this course combines both didactic, deliberative and discursive learning activities to enable students achieve the course outcomes. The course will follow a semi-asynchronous format with students working through course content

Each topic will be introduced through a combination of weekly mini-lectures and online activities, where students will be encouraged to consider and debate the ethical considerations, social implications and technological challenges in delivering a safe, healthy, sustainable and affordable food supply globally. These self-directed online activities are also designed to inspire students on how they can make informed decisions regarding their food choices as well as considering ways to address global food issues such as climate change, poverty and increased population pressure on limited food resources.

Students will also be prepared to critically evaluate real-world issues via a series of self-directed online activities where they will draw on their prior knowledge and course learning to debate issues in a collaborative setting with their peers. Each student's general knowledge and understanding of the course content will be assessed via online quizzes. Students will demonstrate higher order learning through the portfolio task as collate readings from the scholarly and popular literature, and reflect on their connections course content, personal values and their broader program of study. Finally, the video presentation will develop peer learning communities as they work collaboratively to identify and evaluate solutions to current and future challenges in food production, composition, and consumption.

Assessment

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Quiz 1	35%	Not Applicable	2, 3, 4, 5, 6
2. Quiz 2	35%	Not Applicable	1, 2, 3, 4
3. Food science video	30%	26/04/2022 12:00 AM	2, 3, 4, 5, 6
4. Bonus assessment	5%	Not Applicable	1, 2, 3, 4, 5, 6

Assessment 1: Quiz 1

Start date: 09/03/2022 03:00 PM
Assessment length: 30 minutes
Submission notes: Moodle quiz will th g ‰

		safety; AL • Food Allergy - Public health and Food Safety; AL
Week 5: 14 March - 18 March	Lecture	Tu 15. Mar • Food engineering basics; ET Wed 16. Mar •

		Wed 20. Apr Quiz 2 • Foods for the future; JleC

Resources

Recommended Resources

There is no dedicated textbook for this course, though texts dealing with food science, and used in later courses, are available through the UNSW Bookshop and Library. You may consult or obtain these texts as references:

1. Hutton, T. (2004) Food Preservation: an introduction. Key Topics in Food Science and Technology, No. 9. Chipping Camden.
2. Vieira, E.R. (1996) Elementary food science. 4th ed. Chapman & Hall, New York.
3. Mark Wahlqvist (2011) Food and Nutrition. Food and Health Systems in Australia and New Zealand. 3rd Edition. ISBN: 9781741758979. A&U Academic, Australia.
4. Potter, N.N. and Hotchkiss, J.H. (1998) Food science. 5th ed. Chapman & Hall, New York.
5. Fellows, P.J. 1998, Food processing technology. Woodhead Publ. Ltd, London.
6. Excellent review articles summarising recent development and advances in areas of food science and technology are available from a range of journals. Students aiming for higher grades should get familiar with the recent literature. Some of the key journals are:

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.

Please note that students will need to provide some documentary evidence to support absences from any assessments missed because of COVID-19 public health measures such as isolation. UNSW will not be insisting on medical certificates for COVID-related absences of 7 days or less, with the positive PCR or RAT result being sufficient. Longer absences due to 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

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

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

Image Credit

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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.