School of Chemical Engineering

UNSW Engineering

FOOD4104, FOOD9104

Food and Health Security

Term 2, 2023

Course Overview

Staff Contact Details

Convenors

Name	Email	Availability	Location	Phone
Johannes le Coutre	johannes.lecoutre@unsw.edu.au	working hours	SEB 437	+61 (2) 9385 7195

Lecturers

Name	Email	Availability	Location	Phone
Jayashree Arcot	j.arcot@unsw.edu.au			
Andrew Dansie	a.dansie@unsw.edu.au			

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.

Questions about the this course should normally be asked during the scheduled class so that everyone can benefit from the answer and discussion.

Course Details

Units of Credit 6

Summary of the Course

The UN Sustainable Development Goals (SDGs) outline a call to action to promote global peace and prosperity, and end poverty and inequality while protecting the environment. In this course, you will directly address the UN SDGs in the context of Food and Health Security facing different populations in the world both at the micro (household) and macro (population, country) levels. Topics will cover sustainable agricultural systems/production to meet the food availability requirements for populations; nutrition sensitive agriculture, a food system approach to address undernutrition and achieve Zero Hunger; effects of climate change on food and nutrient availability, role of food science and technology in crisis scenarios such as natural disasters, civil war, and pandemics/epidemics.

Course Aims

This course will provide students with an appreciation of humanitarian work and analyse the various food and health issues in the world and how to address them within the UN SDG framework. It is expected that students will develop an understanding of the relevance of the UN SDGs and the cultural context in which they are applied. Students will gain skills in multi-disciplinary collaboration, effective communication, creative problem solving and reflection in the context of the SDG framework. Emphasis will be placed on ethical practice and social responsibility throughout the course.

Course Learning Outcomes

1. Explain the intent of the 17 UN Sustainability Development goals (SDGs).
2. Outline social and cultural impacts linked with geographical disparities of food security.
3. Decipher case study scenarios and provide meaningful data driven solutions for societal problem solving
4. Explain the impact of relationships in complex stakeholder environments using specific examples.
5. Conceptualise, quantify and improve global footprints based on case studies.

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

The course is based on a series of lectures related to topics directly related to the UN SDGs in the area of food and health security including challenges and problems to be addressed, community engagement and successful approaches and solutions. The UN SDGs are chosen as guiding principles throughout this course on food and health security as they encompass a range of competencies which scientists and engineers can harness to address global challenges.

Guest lecturers from international, governmental and nongovernmental organisations with experience in humanitarian projects will be invited to provide lectures with case studies. The assessments which combine individual presentations, group discussions, and team projects are chosen to allow you to gain a deep understanding of the impacts and mechanisms of the UN SDGs, expose you to a diversity of perspectives, and reflect on your own path in addressing SDGs. You will be encouraged to work within

teams and develop communication skills through presentations to maximise learning outcomes.

Additional Course Information

The course will be delivered *via* lectures, guest lectures, group work & seminars throughout term-2 2023

Course hours:

Mondays: 14:00-16:00

Wednesdays: 10:00-12:00

Assessment

Assessment task	Weight	Due Date	Course Learning Outcomes Assessed
1. Group Discussion and Debate	25%	19/06/2023 04:00 PM	1, 2, 4
2. Reflection	15%	02/08/2023 11:00 PM	1, 2, 5
3. Seminar Presentation	30%	02/08/2023	1, 3, 4
4. Group Report	30%	02/08/2023 11:00 PM	2, 3, 4

Assessment 1: Group Discussion and Debate

Due date: 19/06/2023 04:00 PM

Student represent views for and against approaches expressed in case studies of food and nutrition issues in different countries, and present solutions to various scenarios. Marks will be based on student's presentation and their ability to be critical in their arguments, presenting a critical evaluation of approaches used to address food and health security issues.

Assessment 2: Reflection

Due date: 02/08/2023 11:00 PM

Students to write an essay reflecting on the challenges and opportunities for food scientists and interdisciplinary teams to work in this space of humanitarian science and technology including the personal and professional skills required. Marks will be awarded by the lecturer with written feedback provided to students.

Assessment 3: Seminar Presentation (Group)

Due date: 02/08/2023

Students will present an aspect of importance/relevance from the case study in their group report. The grade will be a weighted combination of marks from peer and course lecturers. Feedback on presentation style will be provided to each student in written format following their presentation.

Assessment 4: Group Report (Group)

Due date: 02/08/2023 11:00 PM

Students write a group report critically analysing examples of case studies on topic relevant to the course. Marks will be awarded by the course lecturer, noting individual contributions, with written feedback provided to the students.

Attendance Requirements

Students are strongly encouraged to attend all classes and review lecture recordings.

Course Schedule

View class timetable

Timetable

Date	Type	Content
Week 1: 29 May - 2 June	Blended	**Mon 29. May:** Lecture / Group work **Wed 31. May:** Lecture / Group work
Week 2: 5 June - 9 June	Blended	**Mon 05. Jun:** Lecture / Group work **Wed 07. Jun:** Lecture / Group work
Week 3: 12 June - 16 June	Blended	**Mon 12. Jun:** Lecture / Group work **Wed 14. Jun:** Lecture / Group work
Week 4: 19 June - 23 June	Blended	**Mon 19. Jun:** Lecture / Group work **Wed 21. Jun:** Lecture / Group work
	Assessment	Group Discussion and Debate
Week 5: 26 June - 30 June	Blended	**Mon 26. Jun:** Guest Lecture - Dr Jayantha SELLAHEWA, Adjunct Senior Lecturer, UNSW, Sydney **"*The role of food science and nutrition in humanitarian response*"** **Wed 28. Jun:** Lecture / Group work
Week 6: 3 July - 7 July	Reading	**Flexibility week -** No scheduled activity.
Week 7: 10 July - 14 July	Blended	**Mon 10. Jul:** Guest Lecture - Frances Ann Warnock, Expert Food Safety Risk Assessments School Feeding Programmes · World Food Programme **title: "tbd"**

		Wed 12. Jul: Lecture - Prof. Jayashree Arcot **"Influence of environment on food consumption"**
Week 8: 17 July - 21 July	Blended	**Mon 17. Jul:** Lecture - Prof. Jayashree Arcot **"Climate Change and Food Security"** **Wed 19. Jul:** Student seminars / Group work
Week 9: 24 July - 28 July	Blended	**Mon 24. Jul:** Student seminars / Group work **Wed 26. Jul:** Student seminars / Group work
Week 10: 31 July - 4 August	Blended	**Mon 31. Jul:** Student seminars / Group work **Wed 02. Aug:** Student seminars / Group work
	Assessment	Reflection
	Assessment	Group Report

Resources

Prescribed Resources

https://sdgs.un.org/goals

Recommended Resources

Online reports and resources, i.e. UN-website, FAO-website.

Course Evaluation and Development

This course is in its third year and we aim to be connected to real world events. We will try to establish a strong rapport with the students and inquire about immediate feedback for short term improvements. This year we expect to have far reaching discussions about the impact of the war in Ukraine on global food systems. In addition, we will talk more about the Anthropocene and the Earth boundaries.

Laboratory Workshop Information

n.a.

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 not required unless specifically requested for an individual assessment task; 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 respect. Presenting results clearly gives the marker the best chance of understanding your method; even if the numerical results are incorrect. Please make it easy for the markers who are looking at your work to see your achievement and give you due credit.

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) and will not be accepted more than 5 days late. For some activities including Exams, Quizzes, Peer Feedback, 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 for **all** special consideration requests (including COVID-19-related requests), students will need documentary evidence to support absences from any classes or assessments.

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.

To help describe what we are looking for, here are some things that we consider to be quite acceptable (even desirable!) actions for many assessments, and some that we consider to be unacceptable in most circumstances. Please check with the instructions for your assessments and your course coordinator if you're unsure. As a rule of thumb, if you don't think you could look the lecturer in the eye and say "this is my own work", then it's not acceptable.

Acceptable actions	Unacceptable actions
✓ reading/searching through material we have given you, including lecture slides, course notes, sample problems, workshop problem solutions	✗ asking for help with an assessment from other students, friends, family
✓ reading/searching lecture transcripts	✗ asking for help on Q&A or homework help websites
✓ reading/searching resources that we have pointed you to as part of this course, including textbooks, journal articles, websites	✗ searching for answers to the specific assessment questions online or in shared documents
✓ reading/searching through your own notes for this course	✗ copying material from any source into your answers
✓ all of the above, for any previous courses	✗ using generative AI tools to complete or substantially complete an assessment for you
✓ using spell checkers, grammar checkers etc to improve the quality of your writing	✗ paying someone else to do the assessment for you
✓ studying course material with other students	

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.

Artificial intelligence tools such as ChatGPT, CodePilot, and built-in tools within Word are modern tools that are useful in some circumstances. In your degree at UNSW, we're teaching you skills that are needed for your professional life, which will include how to use AI tools responsibly plus lots of things that AI tools cannot do for you. AI tools already are (or will soon be) part of professional practice for all of us. However, if we were only teaching you things that AI could do, your degree would be worthless, and you wouldn't have a job in 5 years.

Whether the use of AI tools in an assessment is appropriate will depend on the goals of that assessment. As ever, you should discuss this with your lecturers – there will certainly be assessments where the use of AI tools is encouraged, as well as others where it would interfere with your learning and place you at a disadvantage later. Our goal is to help you learn how to ethically and professionally use the tools available to you. To learn more about the use of AI, see this discussion we have written where we analyse the strengths and weaknesses of generative AI tools and discuss when it is professionally and ethically appropriate to use them.

While AI may might provide useful tools to help with some assessments, UNSW's policy is quite clear that taking the output of generative AI and submitting it as your own work will never be appropriate, just as paying someone else to complete an assessment for you is serious misconduct.

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 for information about key dates, access to services, and lots more information
- Engineering Student Life - Current Student Resources for information about everything from getting to campus to our first year guide
- Student Support and Success for our UNSW team dedicated to helping with university life, visas, wellbeing, and academic performance
- Academic Skills to brush up on some study skills, time management skills, get one-on-one support in developing good learning habits, or join workshops on skills development
- Student Wellbeing, Health and Safety for information on the UNSW health services, mental health support, and lots of other useful wellbeing resources
- Equitable Learning Services for assistance with long term conditions that impact on your studies
- IT Service Centre for everything to do with computing, including installing UNSW licensed software, access to computing systems, on-campus WIFI and off-campus VPNs

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. Most 6 UoC courses will involve approximately 10-12 hours per week of work on your part. If you're not sure what to do in these hours of independent study, the resources on the UNSW Academic Skills pages offer some suggestions including: making summaries of lectures, read/summarise sections from the textbook, attempt workshop problems, reattempting workshop problems with some hints from the solutions, looking for additional problems in the textbook.

Full-time enrolment at university means that it is a *full-time* occupation for you and so you would typically need to devote 35 hours per week to your studies to suceed. Full-time enrolment at university is definitely incompatible with full-time employment. Part-time/casual employment can certainly fit into your study schedule but you will have to carefully balance your study obligations with that work and decide how much time for leisure, family, and sleep you want left after fullfilling your commitments to study and work. Everyone only gets 168 hours per week; overloading yourself with both study commitments and work commitments leads to poor outcomes and dissatisfaction with both, overtiredness, mental health issues, and general poor quality of life.

On-campus class attendance

In 2023, most classes at UNSW are running in a face-to-face mode only. Attendance is expected as is

participation in the classes. As an evidence-driven engineer or scientist, you'll be interested to know that education research has shown students learn more effectively when they come to class, and less effectively from lecture catch-up recordings. If you have to miss a class due to illness, for example, we expect you to catch up in your time, and within the coming couple of days.

For most courses that are running in an "in person" mode:

- Lectures are normally recorded to provide an opportunity to review material after the lecture; lecture recordings are not a substitute for attending and engaging with the live class.
- Workshops/tutorials are not normally recorded as the activities that are run within those sessions normally cannot be captured by a recording. These activities may also include assessable activities in some or all weeks of the term.
- Laboratories are not recorded and require in-person attendance. Missing laboratory sessions may require you to do a make-up session later in the term; if you miss too many laboratory sessions, it may be necessary to seek a Permitted Withdrawal from the course and reattempt it next year, or end up with an Unsatisfactory Fail for the course.
- Assessments will often require in-person attendance in a timetabled class or a scheduled examination.

This course outline will have further details in the Course Schedule and Assessment sections.

Class numbers are capped in each class to ensure appropriate facilities are available, to maintain student:staff ratios, and to help maintain adequate ventilation in the spaces. Only students enrolled in each specific 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 classes.

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 have COVID-19 or have been advised to self-isolate by NSW health or government authorities.

Asking Questions

Asking questions is an important part of learning. Learning to ask good questions and building the confidence to do so in front of others is an important professional skill that you need to develop. The best place to ask questions is during the scheduled classes for this course, with the obvious exception being questions that are private in nature such as special consideration or equitable learning plans. Between classes, you might also think of questions — some of those you might save up for the next class (write them down!), and some of them you might ask in a Q&A channel on Teams or a Q&A forum on Moodle. Please understand that staff won't be able to answer questions on Teams/Moodle immediately but will endeavour to do so during their regular working hours (i.e. probably not at midnight!) and when they are next working on this particular course (i.e. it might be a day or two). Please respect that staff are juggling multiple work responsibilities (teaching more than one course, supervising research students, doing experiments, writing grants, …) and also need to have balance between work and the rest of their life.

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

Please look at:

https://www.un.org/sustainabledevelopment/wp-content/uploads/2019/01/SDG_Guidelines_AUG_2019_Final.pdf

CRICOS

CRICOS Provider Code: 00098G

Acknowledgement of Country

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