FOOD3010, FOOD8010

Food Products and Ingredients Technology

Term 1, 2023
Course Overview

Staff Contact Details

Convenors

<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
<th>Availability</th>
<th>Location</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alison Jones</td>
<td><a href="mailto:alison.jones@unsw.edu.au">alison.jones@unsw.edu.au</a></td>
<td>Consultation via Email or MS Teams</td>
<td>Room 433</td>
<td>9385 5745</td>
</tr>
</tbody>
</table>

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

As modern consumers, we have come to demand easy access to a vast and continuous array of safe, nutritious and functional food, and yet, raw food materials are typically unpalatable and highly perishable. Understanding the best way to grow, process, preserve, package and distribute raw food ingredients is integral to ensuring that our future food supply is abundant, sustainable and safe to eat. Furthermore, as future food technologists, your understanding of how food ingredients behave physically, chemically, and microbiologically in their environment is crucial to understanding the best ways to transform raw food materials into safe and saleable food products.

This course is designed to teach you about the major raw food categories within our food industry; their physical and chemical characteristics, their preservation, and their common processing technologies. This course is presented in a series of weekly lectures and tutorials covering the main food categories, specifically: meat, cereals, milk, eggs, sugar, fish/seafood, fruit and vegetables, fats and oils, soy, coffee and tea. Furthermore, this course will also investigate the principles of some fundamental food preservation methods including thermal processing, freezing and chilling, dehydration, modified atmosphere and chemical preservation.

Course Aims

The overall aim of this course is to teach you about the common processes involved in the handling and preservation of raw food product within our food industry. More specifically the objectives of this course are to:

- Acquaint you with the properties and processing characteristics of the major food commodities;
- Acquaint you with the methods and techniques used by the food industry to extend the shelf-life of these commodities;
- Acquaint you with the methods and equipment used by the food industry for manufacturing food products based on these commodities such as butter, cheese and small goods.
- Investigate the factors influencing the organoleptic and keeping quality of the major food commodities and their products.

Course Learning Outcomes

1. Investigate and explain the major factors affecting the organoleptic properties and keeping quality of common food ingredients.
2. Analyse and explain the underlying food preservation principles at work in common food products.
3. Demonstrate the principles of major food preservation methods and apply them in real world examples.
4. Explain and/or predict some of the physical, chemical and biological characteristics of food products based on their constituent ingredients and product environment.
5. Critique scientific literature and effectively communicate scientifically supported arguments in a collaborative peer environment.
This course is part of UNSW Food Science specialisations approved (2021-2026) by the Institute of Food Technologists Higher Education Review Board (IFT HERB).

Teaching Strategies

FOOD3010/8010 is a core course to the various food science programs offered at both the undergraduate and postgraduate level. The primary objective is to help students become competent professionals with the capacity to synthesise and apply their technical knowledge using critical thinking and reasoned judgement to develop innovative and practical solutions to real world problems. The course involves a series of weekly technical lectures and readings followed by a 2-hour tutorial which covers the practical application of this technical knowledge through problem solving. The lecture recordings, required readings and tutorial problems will be made available to you through the Moodle course page. Students are further given the opportunity to practice critical thinking, problem solving, peer evaluation and scientific writing in tutorials and online forums where the class will discuss and critically evaluate solutions to industry issues.

Because the course covers such a diverse range of food commodities, the topics discussed in the tutorials will be selective and designed to help develop scientific literature retrieval, critical interpretation and problem-solving skills. Students are expected to deepen their understanding of the topics and further explore areas not discussed in detail by studying the reference materials and appropriate texts and in doing so, learn how to distil essential information from a large and diverse collection of references. These teaching strategies will help give you the necessary skills to become a lifelong learner who can continually add-to, develop and refine your knowledge, and thus allow you to tackle novel food issues and technology developments without having previous exposure or understanding. The discussion forum assessment is also part of this teaching strategy in assessing your ability to critically evaluate appropriate scientific literature and form practical and pragmatic solutions to current product quality and safety issues. Through these various learning and teaching strategies, students should strengthen a number of other crucial attributes, including: research and evaluation of scientific literature, formal scientific communication/ scientific writing, critical evaluation of peer work, peer collaboration and information literacy.

Additional Course Information

In designing this course, it is assumed that the student is familiar with the basic elements of food chemistry (e.g. structures and properties of protein, carbohydrate, and lipid), food microbiology (e.g. general understanding of food pathogens and spoilage organisms, exponential growth and death curves) and mass/ energy transfer (e.g. state diagrams, water activity). These concepts will be assumed knowledge, that is, frequently referred to, but not necessarily explained in more detail. If students encounter difficulties in assumed knowledge, they are advised to consult the course authority for appropriate texts.

This course has been designed to run concurrently with FOOD3020/8020 Food Properties and Functions Laboratory, in which students conduct weekly experiments on select food categories. While not compulsory, many students find it beneficial to take both courses at the same time as the FOOD3020/8020 laboratory allows you to observe the key principles taught in this course through “hands-on” experiences (e.g. egg candling and quality assessment, starch gelatinisation and freeze-thaw stability, flour suitability for different applications, chocolate tempering, sauerkraut fermentation, confectionary principles etc). If taking these two courses concurrently, it is recommended that you keep up do date with the readings, lectures and tutorial information in this course. By doing so, it will help reinforce the technical knowledge by putting them into a real-world context and, at the same time, develop a stronger understanding of the data and observations in the laboratory course.
Assessment

<table>
<thead>
<tr>
<th>Assessment task</th>
<th>Weight</th>
<th>Due Date</th>
<th>Course Learning Outcomes Assessed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Moodle Quizzes (3 x 10%)</td>
<td>30%</td>
<td>Link will close 9am Friday in Weeks 3, 5 and 9</td>
<td>1, 2, 3, 4</td>
</tr>
<tr>
<td>2. Online Forum Exercise</td>
<td>20%</td>
<td>Forum will close 5pm Friday of Week 10</td>
<td>1, 2, 3, 4, 5</td>
</tr>
<tr>
<td>3. Final Exam</td>
<td>50%</td>
<td>Exam Period</td>
<td>1, 2, 3, 4</td>
</tr>
</tbody>
</table>

**Assessment 1: Moodle Quizzes (3 x 10%)**

**Start date:** Link will open 9am Thursday in Weeks 3, 5 and 9  
**Assessment length:** Approximately 10 questions  
**Due date:** Link will close 9am Friday in Weeks 3, 5 and 9

There will be three Moodle quizzes (each 10% assessment, 30% in total) that will test each student's understanding of the key concepts from the lecture and tutorial content. Quizzes will consist of approximately 10 multiple choice and/or short answer style questions with roughly a 20 minute start to completion time limit. Quizzes will be open on the Moodle course page for a max. period of 24hrs and it is the student's responsibility to attempt and complete each quiz within the given time period. You will have only one quiz attempt available to you.

**Assessment 2: Online Forum Exercise**

**Start date:** Forum will open 9am Monday of Week 10  
**Assessment length:** Your initial opinion piece should be approximately 500 words. There is no word limit on your peer comments.  
**Due date:** Forum will close 5pm Friday of Week 10

An online forum will become available for live chat on the Moodle course page from 9am AEST Monday Week 10 until 5pm AEST Friday Week 10. Each student is required to read and research the following forum topic and post their own individual opinion piece (about 500 words) to the online forum before the due date of 5pm Friday Week 10.

- Forum Topic: A growing trend among Australian consumers is the demand for “organic” and "minimally processed" products and yet we are also under increasing pressure to minimise food waste. Do you think that the public’s desire for organic and minimally processed foods are hindering the food industry’s ability to reduce food waste? What future technologies do you think will make the greatest impact in reducing food waste given that this trend for pesticide-free and minimally processed food continues?

This forum exercise requires you to review and critique scientific literature and synthesise information into a scientifically backed argument and/or solution. Forum topics are designed to be multi-faceted and equivocal, so you should be ready to justify your opinions and standpoints to your peers who may have a contrary viewpoint. Once you have posted your opinion piece to the forum, you will be able to view all the comments posted to the forum by your peers. It is expected that you will read other student posts and comment on why you agree or disagree with them. The objective of this exercise is to showcase the
depth of your understanding while still being able to express your ideas in a respectful, concise and coherent manner. You will also be required to work respectfully and constructively in a collaborative setting with your peers. This includes how well you are able to offer constructive feedback, accept peer assessment, and/or respectfully justify your own standpoints using logic and academically backed arguments. It is also expected that you will be able to reference your sources if prompted or queried by other students. Students are reminded not to copy sections from books, reviews or other published sources. This is plagiarism and will result in penalty in accordance with the University's anti-plagiarism policy. The rubric for this assessment is in Table 1 below.

Additional details

Table 1: Rubric for Assessment 2, Online Forum Exercise (20%)

<table>
<thead>
<tr>
<th>GRADED ASPECT</th>
<th>ELEMENTS FOR A POOR GRADE (F/PS)</th>
<th>ELEMENTS FOR A SATISFACTORY GRADE (CR/D)</th>
<th>ELEMENTS FOR AN EXCELLENT GRADE (HD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer Review and Collaborative Skills*</td>
<td>There’s a strong imbalance in this student’s contribution to the forum discussion. They have offered little helpful and/or inciteful peer feedback or justification. There is little attempt to be respectful or constructive.</td>
<td>Discussion is respectful and constructive. However, there’s a moderate imbalance in this student’s contribution to the discussion. They may have offered much peer feedback but it is incorrect, unjustified or irrelevant.</td>
<td>Discussion is respectful, constructive and academic. They have offered helpful feedback to their peers which is scientifically sound, relevant and justified in the context given. They are able to accept judgement by their peers respectfully. They can justify their opinions with a logical academic argument.</td>
</tr>
<tr>
<td>Quality of Information Presented</td>
<td>Overall, the quality of the information presented is adequate but with several problems such as – lacks depth of knowledge, incorrect, poorly sourced, not coherently linked, illogical or unimportant to the argument or topic presented. The length of the opinion piece is inappropriate (it should be approx. 500 words).</td>
<td>Overall, the quality of the information presented is good but with some minor problems such as – some questionable sources of information, depth of knowledge in some areas is poor or incorrect, some concepts are not coherently linked, hard to follow and/or unimportant to the argument or topic presented.</td>
<td>Overall, the quality of the information presented is excellent – shows a sound knowledge of the issue, contains correct, important and high-quality sources of information, argument is convincing, coherent and easy to follow with a clear opinion.</td>
</tr>
</tbody>
</table>

* Being able to respectfully offer and accept constructive feedback is a very useful skill. Your peers may hold contrary views and you should try to refine, explain and/or justify your opinions rather than simply argue a point whether critiquing or responding to a critique. Try to back your opinions with scientific evidence rather than emotional standpoints and/or personal arguments.
Assessment 3: Final Exam

Due date: Exam Period

A final in-person 2-hour exam (longer paragraph style answers) covering all the lecture/tutorial content presented during weeks 1-10. The exam will be conducted during the end of session exam block. More information will be provided by the course convenor.

Additional details

Marks and general feedback for course assessments will be released through the Moodle course page. Students can request more specific feedback by contacting the course authority. Unless special consideration is sought and granted, any student who fails to attempt and complete assessments within the required time period will receive a ZERO mark.
Attendance Requirements

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

Course Schedule

This course will consist of roughly 4 hours of lecture recordings, online modules and required readings per week plus a 2-hour live tutorial with Dr Alison Jones (please refer to UNSW course timetables for tutorial times and rooms). This course is delivered in hybrid mode which means that tutorials can alternatively be attended via the BBUC virtual classroom link on the Moodle course page. Challenge questions will be posted on Moodle for consideration during the tutorials. The tutorial sessions are your time to ask questions and further explore concepts from the lecture and supplementary materials. The lecture recordings, lecture slides and tutorial questions will be made available to you at the beginning of the week through the Moodle course page.

View class timetable

Timetable

<table>
<thead>
<tr>
<th>Date</th>
<th>Type</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1: 13 February -</td>
<td>Lecture</td>
<td>Topic: Dairy (milk, butter, cheese and ice cream)</td>
</tr>
<tr>
<td>17 February</td>
<td>Tutorial</td>
<td>Topics: Introduction to the course, assessment requirements and dairy.</td>
</tr>
<tr>
<td>Week 2: 20 February -</td>
<td>Lecture</td>
<td>Topics: Fats and Oils, Sugar.</td>
</tr>
<tr>
<td>24 February</td>
<td>Tutorial</td>
<td>Topic: Fats and Oils, Sugar</td>
</tr>
<tr>
<td>Week 3: 27 February -</td>
<td>Lecture</td>
<td>Topic: Fruits and Vegetables</td>
</tr>
<tr>
<td>3 March</td>
<td>Tutorial</td>
<td>Topic: Fruits and Vegetables</td>
</tr>
<tr>
<td></td>
<td>Assessment</td>
<td>Moodle Quiz 1 (10%) will test the following topics: dairy, fats and oils, and sugar.</td>
</tr>
<tr>
<td>Week 4: 6 March - 10</td>
<td>Lecture</td>
<td>Topic: Cereals</td>
</tr>
<tr>
<td>March</td>
<td>Tutorial</td>
<td>Topic: Cereals</td>
</tr>
<tr>
<td>Week 5: 13 March - 17</td>
<td>Lecture</td>
<td>Topic: Meat and Smallgoods</td>
</tr>
<tr>
<td>March</td>
<td>Tutorial</td>
<td>Topic: Meat and Smallgoods</td>
</tr>
<tr>
<td></td>
<td>Assessment</td>
<td>Moodle Quiz 2 (10%) will test the following topics: cereals, fruits and vegetables.</td>
</tr>
<tr>
<td>Week 6: 20 March - 24</td>
<td>Homework</td>
<td>FLEXIBILITY WEEK (no classes). Please feel free to use this week to catch up on any outstanding course content or assessment</td>
</tr>
<tr>
<td>March</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Week</td>
<td>Dates</td>
<td>Lecture Topic</td>
</tr>
<tr>
<td>------</td>
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<td>---------------------------------------------------</td>
</tr>
<tr>
<td>7</td>
<td>27 March - 31 March</td>
<td>Fish/Marine Products, Eggs.</td>
</tr>
<tr>
<td>8</td>
<td>3 April - 7 April</td>
<td>Soybeans, Tea, Coffee and Chocolate.</td>
</tr>
<tr>
<td>9</td>
<td>10 April - 14 April</td>
<td>Thermal Processing, Chill-Freeze</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assessment: Moodle Quiz 3 (10%) will test the following topics: meat and smallgoods, fish/marine products, eggs, tea, coffee, soybeans and chocolate.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assessment: The Moodle Forum Activity (20%) will be open this week on your Moodle course page.</td>
</tr>
</tbody>
</table>
Resources

Recommended Resources

There is no single textbook that can adequately cover all the material given in this course. However, a number of different resources will be made available to you through the UNSW library’s Leganto link on your Moodle course page. While these texts are not necessarily "assessable content", one of the aims of this course is to help students understand the importance of researching and critiquing scientific literature throughout their career in order for their technical knowledge to stay up-to-date and well-rounded. Excellent research and review articles discussing many of the topics covered in this course are available from a range of peer-reviewed scientific journals. Some of the key journals are:

- Food Technology
- Trends in Food Science and Technology
- Journal of Cereal Science
- Journal of Food Science
- Journal of Meat Science
- Food Chemistry
- Postharvest Biology and Technology

All these journals can be accessed electronically through the UNSW Library website.

Course Evaluation and Development

General feedback from assessments will be given via Moodle. Challenge questions will be posted on Moodle for consideration in preparing for the final exam. Tutorial challenge questions are provided to help students test the depth of their topic understanding. Students are also given time during the tutorial sessions to ask questions and/or query any concepts that need clarification from the course material. If students have any specific problems or questions, meetings with the course conveyer can be requested via email or Microsoft Teams.

Student feedback is extremely valuable and students 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) to allow you to evaluate the course. Previous student feedback prompted the re-organization of the lecture topics to align with FOOD3020/8020 FST Laboratory as complementary courses. Appropriate alignment of the lecture and lab content has also helped assist student learning in the laboratory course.
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.

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

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 succeed. 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 fulfilling 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

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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.