

Unit Information

BIO681 | BIO688

Challenges in Food Security

Teaching Period: S2 2022

This guide should be used in conjunction with the [Handbook](#) as the official source of information about this unit.

Refer to [myMurdoch Learning](#) for on-going communication and your learning and assessment content.

Unit coordinator: Associate Professor Kirsty Bayliss

Murdoch Campus

Acknowledgement of Country

We acknowledge that Murdoch University is situated on the lands of the Whadjuk and Binjareb Noongar people. We pay our respects to their enduring and dynamic culture and the leadership of Noongar elders past and present. The *boodjar* (country) on which Murdoch University is located has, for thousands of years, been a place of learning. We at Murdoch University are proud to continue this long tradition.

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1 Unit information

Welcome to:

BIO681 | BIO688

Challenges in Food Security

1.1 Unit Overview

How will we feed the world when the global population is estimated to reach 9.5 billion by 2050? Food security is being impacted not only by population growth, but also climate change, uneven food distribution, nutritional security, volatile markets and degraded ecosystems. New innovations and ways of thinking are required to address these challenges. Through case studies, we will explore the four pillars of food security and the food system as a whole, and investigate new options to ensure global food security.

1.2 Learning outcomes

This unit enables you to demonstrate your achievement of the following unit learning outcomes.

Unit Learning Outcomes

1. Define food security and the four food security pillars (Availability, Access, Utilisation and Stability)
2. Articulate the magnitude and complexity of the food security issue
3. Communicate typical economic, social and environmental challenges of food security
4. Develop and analyse a contemporary solution to a global food security issue

1.3 Graduate attributes

This unit will contribute to the development of the following [Graduate Attributes](#):

- Communication
- Critical and creative thinking
- Social interaction
- Independent and lifelong learning
- Ethics
- Social justice
- Global perspective
- Interdisciplinarity
- In-depth knowledge of a field of study

1.4 General guidance and requirements

Please refer to Support & Advice via [myMurdoch](#) for all the information you need for your studies.

This includes:

- [Student admin](#), [Exams](#) and [Essentials](#), including [Policies](#) (refer to Assessment Policy and others), [Key dates](#), [Complaints and appeals](#)
- [Learning and study](#) support, including information about Academic Integrity and Murdoch Academic Passport
- [Health and wellbeing](#) information, including accessibility services, medical and counselling services, Aboriginal and Torres Strait Islander support, and sexuality, sex and gender diversity support

2 Contact details

Unit coordinator

Name:	Associate Professor Kirsty Bayliss
Discipline:	Agriculture
Campus:	Murdoch (South Street)
Email:	K.Bayliss@murdoch.edu.au
Phone:	9360 2814

Please be mindful that my emails **are not monitored** outside normal office hours.

3 How to study this unit

3.1 Approach to learning

3.1.1 Learning approach underpinning unit

The approach is to analyse key challenges impacting global food security. To this end the unit engages with a range of issues relating to food security that need to be addressed such as food production, food distribution, future foods, sustainability, water management, food politics, food habits, global food movements, globesity, biological and nutritional security, community engagement, globalisation, international trade networks, and trade and policy issues. This will allow students to develop the ability to integrate information across a broad range of disciplines to solve problems in applied situations.

An important element of this unit is its emphasis on self-directed and negotiated learning where students are actively involved in setting goals and assessing themselves.

Students are expected to research the literature and read widely to develop their understanding of the topic and to be able to summarise, critically analyse and communicate this information orally and in different written formats. Any materials provided prior to workshops should be read to ensure that you are familiar with the topics being discussed.

This unit requires: well developed critical thinking skills; application of theory and concepts; thorough understanding and recall of key knowledge; and the ability to integrate concepts.

3.1.2 Unit changes in response to student feedback

If you have any suggestions on how to improve this unit please email the Unit Coordinator directly, or via the end of semester teaching and unit surveys.

In response to previous surveys, in 2022 we have offered more individual teaching workshops, in place of a single week.

3.2 Learning activities & requirements

3.2.1 Overall expectations

It is recommended that all workshops are attended in person. Read the announcements page for any updates regarding the workshops. Please note:

- missing a workshop will not result in a fail, but you may lose marks for in-class assessments;
- with the exception of any field trips, any missed workshops can be viewed online once the recording is available;
- there are no penalties for non-attendance.

There is no exam for this unit.

Please note the Census date, and first date for Withdrawal (with fail recorded) on the University Calendar.

3.2.2 Learning activities and details

Workshops are delivered in short intensive format (6 workshops comprising 22 hours total contact time over the semester). Please check the teaching timetable for scheduled sessions and locations. External students will work through online workshops.

All students are expected to participate and to interact by asking questions and generating discussion.

There is no recommended study schedule for this unit, it is designed for you to engage at your own pace. However, you should complete the introductory lesson before our first workshop.

You should also work through the module of most relevance to your assessment topic, before the other modules.

3.3 Suggested time commitment

According to the Murdoch University Units Policy the average student workload is 50 hours for one credit point. If you are enrolled in the 3 point version of this unit you are expected to commit 150 hours to this unit, inclusive of learning materials and assessments. This equates to 10 hours per week. For the 6 point version of this unit, you need to double this time commitment.

4 Unit Schedule

See myMurdoch Learning for details of all learning activities and assessments.

Week	Date commencing	Topic	Assessment due
1	1 August	Introduction (4 hours)	
2	8 August		
3	15 August	Availability (3 hours)	
4	22 August		Oral Presentations (5h)
5	29 August		
6	5 September	Access (3 hours)	
7	12 September		Literature Reviews
	Study Break (2 weeks)		
10	3 October	Utilisation (3 hours)	
11	10 October		
12	17 October		Essays
13	24 October	Stability (2 hours)	
14	31 October		

Please check the teaching timetable for venues for classes.

5 Assessments

Assessment for this unit is conducted in accordance with the [Assessment Policy](#).

For the benefit of those who did not study at Murdoch previously, please be aware that you are expected to have a number of skills that you should have acquired during your undergraduate studies, which will assist you with your assessments. These include scientific/academic writing, correct referencing, academic integrity, research skills such as finding references that support your work, writing succinctly (within the word limit), critical thinking/reading/writing, and good communication skills. For those who did not study at Murdoch, or require a refresher, please contact the MyAdvice teams for assistance.

5.1 Assessment summary

No.	Assessment Name	Unit Learning Outcomes	Weight %	Individual / Group	Due Date and Time
1	Oral Presentation	1,2,3,4	30	Individual	Early
2	Literature Review	1,2,4	30	Individual	Middle
3	Essay	2,3,4	40	Individual	End

5.2 Assessment information

Your assessment for this unit is based on one food security challenge. Your aim is to develop a solution to this challenge, to help improve global food security and ensure 9 billion mouths receive food in 2050. Solutions may focus on any challenge including (but not limited to) production, processing, logistics (storage and transport) and waste minimisation.

Note that you will focus on the same challenge and solution for all assessment items, so please do not change topic halfway through the semester. If you are not certain if your selection is suitable, please see me to discuss. Remember, you are addressing ONE challenge with your solution, to help improve food security. You are NOT trying to feed 9 billion people with your solution, as this will require multiple strategies.

Please take the time to read through all instructions for your assignments carefully. Please pay particular attention to the word limits, as writing more than the required amount will lose you marks. The University has a strict policy on the total word limit allowed for unit assessments and this, together with the development of skills in writing clearly and concisely, is the reason why word limits are imposed.

Please also note the requirements for the unit that you are enrolled in, either **BIO681 or **BIO688**.**

5.2.1 Assessment 1 – Oral Presentation

ASSESSMENT DESCRIPTION

You will deliver an oral presentation to pitch your food security solution to a potential funding body (your peers).

- **BIO681** students have a time limit of **5 minutes**, and
- **BIO688** students have a time limit of **10 minutes**.

Contributions to discussions and questions/answers during the presentations will give you the opportunity to demonstrate your communication skills and share your knowledge and experience with other students.

If you are not able to attend for medical reasons, an alternative will need to be arranged, provided you have a valid medical certificate. Alternatives include an online presentation to the class via Teams, an individual presentation to the

Unit Coordinator, or uploading a recording of your presentation to the LMS. The format will be determined in discussion with the unit coordinator.

External students may complete an online presentation via Teams, or submit a recorded presentation if the time zone is an issue for online presentations.

PowerPoint files should be no more than **5 slides for BIO681 or 10 slides for BIO688**, and less than 10MB in size. Presentations will take place in Week 4 (a timetable will be posted on the Important Announcements forum). You must submit your slides via the assessment portal on the LMS prior to the presentations.

This assessment is the supervised component of your assessment. The assessment comprises 10% for the presentation, 5% for slides, 5% for chairing a talk, 5% for participation in discussion/questions, and 5% for peer assessment.

GUIDELINES for SUCCESS

You must choose **ONE** food security challenge, and develop **ONE** solution to that challenge. Do not try to present multiple challenges or multiple solutions as this is too difficult. Both your selected challenge, and your chosen solution must be clear to the audience.

Use clear, focussed, and relevant images on your slides, with the source acknowledged. Keep text to a minimum by using dot points. Ensure the font is easy to read and a reasonable size. Include your name on the title slide.

Please DO NOT submit a file that contains images of your slides, the plagiarism software will not read these and you will be asked to re-submit. You must type the text and add pictures directly into Powerpoint. References are NOT required.

Remember to breathe!

HOW TO SUBMIT

Your slides must be submitted by the due date, by uploading to the submission portal on MyMurdoch Learning (LMS). Do not email your submission to the Unit Coordinator.

Do not leave your submission in draft format. It is advisable to upload the submission, wait for the plagiarism score to be generated, and if the score is acceptable then proceed to full submission. Assessments left in draft format will not be graded.

HOW IT IS ASSESSED (summary)

You will be assessed on these key criteria:

- Presentation of a clearly defined challenge and well articulated solution
- Relevant slide content and confident delivery within time limit.
- Chairing another speaker
- Asking questions of other speakers
- Peer assessment

Please refer to MyMurdoch Learning for a copy of the peer assessment marking guide.

Your assessment outcome will be provided to you via MyMurdoch Learning.

FEEDBACK FOR LEARNING

Feedback will be provided following completion of all oral presentations.

FURTHER DETAILS

See myMurdoch Learning for further details.

5.2.2 Assessment 2 – Literature Review

ASSESSMENT DESCRIPTION

You will critically review a minimum number of peer-reviewed journal articles relevant to your chosen challenge. Please DO NOT review websites or non peer-reviewed reports. You will synthesise these sources (compare, contrast and critique) and identify gaps in the literature, to highlight the need for your solution. At the conclusion of your literature review you will need to provide 3 to 4 succinct points that describe the main aims of your solution and how it will help to solve your chosen challenge, in the context of food security.

Your review should be **1500 words maximum**, with a minimum of **five reviewed articles for BIO681** or **2500 words** and a minimum of **10 reviewed articles for BIO688**. Word limits exclude any tables or figures and the reference list. Please use the **APA referencing style** for in text citations and your reference list, as per the guidelines provided [here](#).

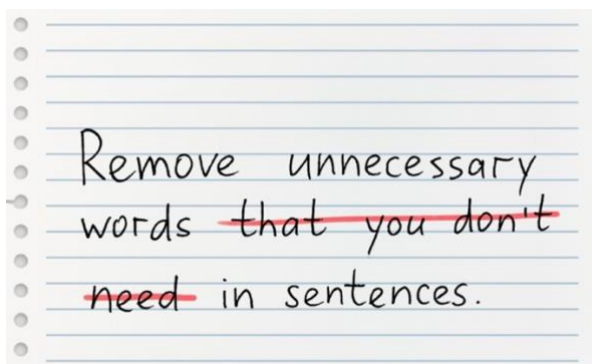
GUIDELINES for SUCCESS

It is expected that you will have used the articles to prepare your oral presentations, so therefore you should also be reviewing them at the same time.

Do not try to write a generic literature review or essay about food security, this is not the aim. Your focus should be the work has already been conducted (past research) to try to solve your selected challenge, and where gaps still exist (which thereby justifies the need for your solution).

Please make sure that you support all statements with evidence (citations). This is not an opinion piece, so you must provide examples and references of relevance. Avoid orphan references that are not connected to any sentence.

Please stay within the word limit. **Do NOT include your word count** in the document that is submitted – the software will calculate this and it is often different to what you say your word count is.



Please check your spelling and grammar carefully before submission. Make use of support services such as Studiosity and Grammarly, both of which are provided free to enrolled students. Seek assistance from the MyAdvice team if you would like more information on how to access these, or would like feedback on drafts before submission.

HOW TO SUBMIT

Your assessment must be submitted via the submission portal within MyMurdoch Learning. Do not email your submission to the Unit Coordinator.

Do not leave your submission in draft format. It is advisable to upload the submission, wait for the plagiarism score to be generated, and if the score is acceptable then proceed to full submission. Assessments left in draft format will not be graded.

HOW IT IS ASSESSED (summary)

You will be assessed on these key criteria:

- Introduction provides a clear background to the *challenge*, and ends with a statement of purpose.
- Demonstration of synthesis of the literature sources (compared, contrasted and critiqued).
- Gaps are identified in the literature, highlighting the need for your *solution*.
- Conclusion describes the *main aims of your solution* in the context of your food security challenge.
- Compliance with requested citation format, in text and in the reference list, and minimal use of websites.
- Correct spelling and grammar, use of relevant sub-headings to structure the review, correct labelling of tables/figures, and evidence of proof reading.

Your assessment outcome will be provided to you via MyMurdoch Learning.

FEEDBACK FOR LEARNING

Feedback will be written on the document returned to you. Please check this carefully.

FURTHER DETAILS

See myMurdoch Learning for further details.

5.2.3 Assessment 3 – Essay

ASSESSMENT DESCRIPTION

You are expected to write a carefully structured and coherently argued essay on your chosen **solution**, supported by reliable sources of information. You will begin by presenting a thesis statement, and then provide the argument for your solution in the content of your essay. You will need to consider the economic, social and environmental benefits that will arise if your solution is successfully developed, and conclude with the impact that your solution might have on your challenge, and global food security.

Your essay should be **2500 words maximum** for **BIO681** students or **4500 words maximum** for **BIO688** students, excluding the reference list. Please refer to the referencing style guide provided for assessment two for correct citations and referencing format (APA style).

GUIDELINES for SUCCESS

As with the second assessment, do not try to write a generic essay about food security, this is not the aim. Your focus in this assessment is your **solution**, and the likely benefits it would have if it was implemented. You should also consider the broader impact on food security, keeping in mind that your solution alone will not solve the food security problem, but it may help reduce it.

Please make sure that you support all statements with evidence (citations). This is not an opinion piece, so you must provide examples and references of relevance. Avoid orphan references that are not connected to any sentence.

Please stay within the word limit. **Do NOT include your word count** in the document that is submitted.

Please check your spelling and grammar carefully before submission. Make use of support services such as Studiosity and Grammarly. Seek assistance from the MyAdvice team if you would like feedback on drafts before submission.

HOW TO SUBMIT

Your assessment must be submitted via the submission portal within MyMurdoch Learning. Do not email your submission to the Unit Coordinator. Do not leave your submission in draft format. It is advisable to upload the submission, wait for the plagiarism score to be generated, and if the score does not indicate any breaches then proceed to full submission. Assessments left in draft format will not be graded.

HOW IT IS ASSESSED (summary)

You will be assessed on these key criteria:

- Thesis Statement (5%) - What is the purpose of your essay? Clear statement of your proposed solution to a food security challenge
- Benefits (10%) – The social, economic, and environmental benefits of your solution
- Impact (10%) – Likely impact of your solution on your challenge, and food security more broadly.
- Argument (10%) – A coherent overall argument for your solution.
- Evidence of Research (5%) - Clear evidence of research using peer-reviewed journal articles, limited use of websites; evidence of wide reading beyond learning materials.

Your assessment outcome will be provided to you via MyMurdoch Learning.

FEEDBACK FOR LEARNING

Feedback will be written on the document returned to you. Please check this carefully.

FURTHER DETAILS

See myMurdoch Learning for further details.

5.3 Academic integrity

Murdoch University expects students and staff to pursue the highest standards of integrity in all academic activity. Academic integrity involves behaving ethically and honestly in scholarship and relies on respect for others' ideas through proper acknowledgement and referencing of publications.

Academic misconduct is treated seriously and penalties may apply.

More information about academic integrity can be found at <https://goto.murdoch.edu.au/learningstudy>. To help you learn about academic integrity practices, all students are required to complete the [Murdoch Academic Passport \(MAP100\)](#). Please also note the [library citation guide](#).

Murdoch University makes use of content matching software to detect submitted work that is not original. When you submit an assessment to myMurdoch Learning, it is checked by this software. Your Unit Coordinator may apply other processes to verify that your submitted assessment is your own work.

In this unit, we undertake these practices to assure academic integrity:

- Workshops to discuss assessment topics, including sourcing information
- Use of plagiarism checking software
- Promotion of the MyAdvice support services
- Encouraging the use of resources such as Grammarly
- Providing timely feedback

5.4 Extensions and late submissions

In this unit, extensions and late submissions follow these requirements:

- Late submissions without an approved extension will be penalised 10% per day, or part thereof. "Day" refers to all days, not just University Business days.
- Assessments submitted more than 7 days after the deadline will be given a mark of zero.
- Extension requests will not be considered less than 48 hours before an assessment deadline.
- Extension requests on or after the assessment deadline will only be considered with a medical certificate or other evidence of extenuating circumstances.
- The latest date to which an extension may be granted will be no later than the day before assignments submitted on time are to be returned.
- Taking holidays during semester is not a valid reason for requesting an extension.
- Losing work through computer or internet failure is not accepted as a reason for late submission of an assessment.
- Re-submissions are not accepted after the assessment deadline.

This unit follows Murdoch policies and procedures with regards to extensions and late submissions, supplementary and deferred assessment.

Students who feel that their disability, medical condition or disability caring responsibilities may impact on their capacity meet assessment submission are strongly advised to visit [Access and Inclusion](#) as early as possible to discuss potential needs and assistance.

5.5 Determination of the final grade

All of the assessments in this unit are cumulative, with the total being combined for your final mark. There are no compulsory assessments, however if you do not submit an assessment, you may significantly reduce your final mark and subsequent overall grade for the unit.

Refer to Reporting of Results in the [Assessment Policy](#) for information about marks and grades.

6 Learning resources

6.1 All learning resources

Your learning resources and any updates are provided through myMurdoch Learning (LMS) in the [myMurdoch portal](#).

Learning resources within the myMurdoch Learning online environment for this unit will be

1. integrated within the sections and learning activities
and
2. through tools such as:
 - My Unit Readings
 - Teams
 - Echo360

To study this unit you will need reliable internet access. There are no compulsory textbooks and all recommended reading is available from the library or online.

The following will be provided during the teaching period:

- electronic learning materials
- lecture recordings (if applicable)
- audiovisual/digital media
- workshop handouts (if applicable)
- electronic library material
- articles on the web.

6.2 Essential learning resources

There are no compulsory textbooks and all recommended reading is available from the library or online.

Other resources and further recommended resources are in myMurdoch Learning.

7 Academic Advice and Student Support

**Need guidance on study related issues?
Use this flowchart or seek direct assistance from
Student Support Services or MyMurdochAdvice.**

If you have...?

- Questions about content covered in workshops.
- General questions about completing assessments.
- Concerns about another student or your learning needs.
- Positive and constructive feedback.

➡ **Unit
Coordinator**

-
- Questions about unit content, assessments, attendance or tutorial times.
 - Questions on marked assessments.
 - Academic issues with your learning in this unit.
 - Positive and constructive feedback.

➡ **Unit
Coordinator**

-
- Academic issues that haven't been adequately addressed by the unit coordinator.
 - Academic issues relating to progression through your degree, withdrawal from a unit or intermission.
 - Positive and constructive feedback.

➡ **Academic
Chair**

-
- Academic or other issues that haven't been adequately addressed by your academic chair or you aren't comfortable discussing with your academic chair.
 - Request to re-mark an assessment.
 - Complaints or appeals relating to your studies that haven't been adequately addressed. Visit Complaints and Appeals for more advice.
 - Positive and constructive feedback.

➡ **Head of
Discipline**

To further escalate an appeal or complaint, contact the Dean Learning and Teaching and/or see Complaints and Appeals for formal appeals procedures.

STUDENT SUPPORT SERVICES: <https://goto.murdoch.edu.au/supportservices>

LEARNING AND STUDY SUPPORT: <https://goto.murdoch.edu.au/learningstudy>

MYMURDOCH ADVICE: <https://goto.murdoch.edu.au/mymurdochadvice>

COMPLAINTS AND APPEALS: <https://goto.murdoch.edu.au/ComplaintsAppeals>

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