



CLIM2002

RISKS AND IMPACTS OF A CHANGING CLIMATE

BEES

FACULTY OF SCIENCE

T3, 2020

Draft Course Outline

# 1. Staff

Position	Name	Email	Consultation times and locations	Contact Details
Course Convenors	Dr. Angela Maharaj  Dr Sarah Perkins-Kirkpatrick  Dr. Laurie Meviel	<a href="mailto:a.maharaj@unsw.edu.au">a.maharaj@unsw.edu.au</a>  <a href="mailto:sarah.kirkpatrick@unsw.edu.au">sarah.kirkpatrick@unsw.edu.au</a>  <a href="mailto:l.menviel@unsw.edu.au">l.menviel@unsw.edu.au</a>	By appointment, either virtually or in person.  By appointment, either virtually or in person.	Room 444, CCRC, Level 4 Mathews Building (F23),  9385 0593
Lecturers	All material is delivered online via course Moodle site.			Use discussion boards on Moodle for all enquiries regarding lecture content.
Tutors	T.B.A  (Note there are no face-to-face tutorials. Check each week's material on Moodle for activities).		By appointment, either virtually or in person.	
Other support staff	BEES admin (for non-course specific issues)	<a href="mailto:beesinfo@unsw.edu.au">beesinfo@unsw.edu.au</a>	BSB Student office Room G27 Biological Science Building	9:00am- 4:30pm

## 2. Course information

Units of credit: 6UOC

Pre-requisite(s): 24 units of credit completed, with exceptions by negotiation

Teaching times and locations: This is an online only course. The official timetable can be found at <http://timetable.unsw.edu.au/2020/CLIM2002.html>.

### 2.1 Course summary

As global warming nears 1.5°C and tracks towards 2°C, broad sectors across government, non-government and industry must consider and plan for climate change impacts. This course will present the essentials of understanding and managing climate risk. Material will be presented in a manner that is accessible to students from all backgrounds and disciplines, demonstrating how climate risk may manifest as a challenge in a wide range of sectors (e.g., built environment, health, and economics). This course requires no prior knowledge of the science or public policy aspects of climate change but if students wish to begin with a sound understanding climate change then CLIM1001 provides excellent preparation for this course.

## 2.2 Course aims

This course aims to give students an understanding of climate change risk within various sectors and to engage them in an emerging issue that they will encounter in business, industry or government.

## 2.3 Course learning outcomes (CLO)

At the successful completion of this course the student should be able to:

1. Apply scientific principles to evaluate claims about the impacts of anthropogenic climate change
2. Discuss the anticipated impacts of natural and anthropogenic climate changes and risks to natural and human systems
3. Explain and be able to apply basic quantitative risk assessment and cost-benefit analysis under uncertainty
4. Apply appropriate frameworks and resources to evaluate risks and possible adaptations to environmental changes and threats caused by climate changes
5. Evaluate and articulate solutions and management strategies for climate-related impacts.
6. Identify approaches to risk assessment and management that are appropriate to different sectors

## 2.4 Relationship between course and program learning outcomes and assessments

CLIM2002 is currently a science elective course and not required for any major or minor. Therefore, it does not have prescribed Program Learning Outcomes (PLOs).

Course Learning Outcome (CLO)	LO Statement	Program Learning Outcome (PLO)	Related Tasks & Assessment
CLO 1	Apply scientific principles to evaluate claims about the impacts of anthropogenic climate change		Online quizzes Discussion forum
CLO 2	Discuss the anticipated impacts of natural and anthropogenic climate changes and risks to natural and human systems		Practical assessments Discussion forum
CLO 3	Explain and be able to apply basic quantitative risk assessment and cost-benefit analysis under uncertainty		Online quizzes Practical assessments
CLO 4	Apply appropriate frameworks and resources to evaluate risks and possible adaptations to environmental changes and threats caused by climate changes		Online quizzes Practical assessments Discussion forum
CLO 5	Evaluate and articulate solutions and management strategies for climate-related impacts.		Practical assessments Discussion forum
CLO 6	Identify approaches to risk assessment and management that are appropriate to		Online quizzes Practical

	different sectors	assessments Discussion forum
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### 3. Strategies and approaches to learning

#### 3.1 Learning and teaching activities

We intend to use online strategies that enable the synchronous and asynchronous engagement of students in both individualised and collaborative learning experiences. Some of the online tools that will be utilised include Moodle lessons, discussion forums, industry webinars and google docs. Real world, industry provided online tools will be integrated into the practical work to ensure an authentic learning experience.

#### 3.2 Expectations of students

This is an online only course and therefore there are no physical attendance requirements. However, the course requires regular and consistent online participation including online group work with other students. Students are expected to familiarise themselves with the course documentation and spend around 6 hours per week on the course. This includes going through lesson content, online practical activities, participating in course discussion forums.

Students are expected to complete all relevant lessons in a timely manner and participate in online discussions through the course's Moodle website. Students are expected to participate in and submit all assessments except in the event of extenuating and unforeseen circumstances (see below).

Students are expected to conduct themselves in an ethical and professional manner at all times. Students can also expect this of all teaching and support staff and their peers. Students can expect their inquiries to staff to be answered in a timely fashion (1-2 business days). Students can also expect inclusion and equity measures to be applied where they can make a case for this through academic adjustments. Students can expect their personal details and circumstances to be kept in the strictest of confidence.

Academic misconduct will not be tolerated in any form in this course. Substantiated instances of cheating or plagiarism may result in a failure grade. Please go to <http://www.lc.unsw.edu.au/plagiarism/> and see Section 11 below if you are in any way unsure of what constitutes plagiarism.

### 4. Course schedule and structure

[This course consists of 0 hours of class contact hours. You are expected to take an additional 6 hours of non-class contact hours to complete assessments, readings and exam preparation.]

Week [Date/Session]	Topic [Module]	Activity [Learning opportunity]	Related CLO
Week 1	Introduction- climate change, extremes, risk and decision making	Online lessons and practicals Topic-specific moderated discussion board	CLO1 CLO2
Week 2	Heat, health and cities	Online lessons and practicals Topic-specific moderated discussion board	CLO1 CLO3
Week 3	Agriculture and fresh water	Online lessons and practicals Topic-specific moderated discussion board	CLO1 CLO2

		<b>Practical assessment 1 (10%)</b>	CLO3 CLO4 CLO5
<b>Week 4</b>	Ecosystems and knock on effects: Tourism and Fisheries	Online lessons and practicals Topic-specific moderated discussion board <b>Multiple choice quiz 1 (10%)</b>	CLO1 CLO5
<b>Week 5</b>	Infrastructure and sea level rise	Online lessons and practicals Topic-specific moderated discussion board <b>Practical assessment 2 (10%)</b>	CLO1 CLO2 CLO3 CLO4 CLO5
<b>Week 6</b>		No new lessons or assessments due this week <b>Staff assess weeks 1-5 forum posts (10%)</b>	CLO1
<b>Week 7</b>	Insurance	Online lessons and practicals Topic-specific moderated discussion board <b>Multiple choice quiz 2 (10%)</b>	CLO1 CLO2 CLO3 CLO5
<b>Week 8</b>	Economics and finance	Online lessons and practicals Topic specific moderated discussion board <b>Practical assessment 3 (10%)</b>	CLO4
<b>Week 9</b>	Geo-ethics: geopolitics, social change and climate litigation	Online lessons and practicals Topic-specific moderated discussion board	CLO2 CLO3 CLO4 CLO5
<b>Week 10</b>	Risks from technological solutions for mitigation and adaptation	Online lessons and practicals Topic-specific moderated discussion board <b>Multiple choice quiz 3 (10%)</b>	CLO4 CLO5
<b>Week 11 (exam week)</b>		<b>Practical assessment 4 due during exam week (20%)</b> <b>Staff assess forum posts weeks 6-10 (10%)</b>	CLO2 CLO3 CLO4

## 5. Assessment

### 5.1 Assessment tasks

Assessment task	Length	Weight	Mark	Due date (normally midnight on due date)
<p><b>Assessment 1:</b> Three online multiple choice tests based on weekly online lessons.</p>		30% (10% each)	30	<p>Quiz 1 Sunday of week 4</p> <p>Quiz 2 Sunday of week 7</p> <p>Quiz 3 Sunday of week 10</p>
<p><b>Assessment 2:</b> Climate Conundrums: Weekly Discussion board discussion mark</p>	<p>Contributions to class discussions around major topics of interest and relevance. Linked to independent research, critical analysis and persuasive writing skills.</p> <p>Driving discussion and responding to other's discussions on weekly forum (approx. short 1-3 paragraphs)</p>	20%	20	Staff will assess in weeks 6 and 11
<p><b>Assessment 3:</b> Four online practicals</p>	<p>Students will do a series of online practicals where they will engage with course materials and use them to investigate climate change, assess climate risks and impacts, evaluate solutions and management strategies and promote sustainable management.</p> <p>Students will answer questions</p>	50%	50	<p>Prac 1: Sunday of week 3</p> <p>Prac 2: Sunday of week 5</p> <p>Prac 3: Sunday of week 8</p> <p>Prac 4: Sunday of week 11</p>

	with immediate feedback as part of a familiarisation exercise followed by a Moodle assignment submission to be marked and returned within two weeks of submission.			
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### Further information

UNSW grading system: <https://student.unsw.edu.au/grades>

UNSW assessment policy: <https://student.unsw.edu.au/assessment>

## 5.2 Assessment criteria and standards

The **online multiple choice tests** are aimed at reinforcing key ideas from lesson material. They are taken from the each week's lesson material (not the additional material). There are three of them, each covering material from the preceding few weeks of lesson material. Note that rules regarding plagiarism are strictly enforced. They must be your answers. Marks will be awarded and available immediately post attempt.

The **discussion board participation** mark is based on your engagement in online discussions in Moodle. For the weekly discussion forum, marks are not awarded for knowing a lot about a topic nor are they lost for being wrong about anything in particular. Students who constructively and critically engage in discussions regularly can expect to do well (see rubric further below). Students must drive discussions AND respond to other people's posts.

**Online practicals:** Students will do a series of online practicals where they will engage with course materials and use them to investigate climate change, assess climate risks and impacts, evaluate solutions and management strategies and promote sustainable management.

Students will answer questions with immediate feedback as part of a familiarisation exercise followed by a Moodle assignment submission to be marked and returned within two weeks of submission.

### Forum participation rubric

	<b>4- Excellent</b>	<b>3 - Good</b>	<b>2 - Fair</b>	<b>1 - Poor</b>	<b>0 - Did not attempt</b>
<b>Leadership</b>	Consistently posed challenging, thoughtful and critically engaged questions and opinions	Posed some clearly challenging, thoughtful and critically engaged questions and opinions	A little evidence of critical thought or potentially challenging ideas	Almost no evidence of challenging or critical engagement	No attempt at all
<b>Constructiveness and helpfulness</b>	Consistent effort to be sensitive to others (mis)understandings, polite, and helpful	Sometimes sensitive to others (mis) understandings, polite, and generally helpful	One or two instances of helpfulness	No attempt to help others	No attempt at all
<b>Consistency</b>	Consistent engagement throughout course period, posting in relevant week (rather than retrospectively), including following up on questions or responses to previous discussions	Engagement in 5 or more weeks, including following up on questions or responses to previous discussions, mostly in current week	engagement over only a few periods, with consistent engagement in at least one discussion thread	engagement almost entirely in one period	No attempt at all
<b>Research and accountability</b>	Responses consistently used reliable range of sources and gave references	some posts gave references and detailed researched information	posts were mostly personal thoughts, with some external sources	posts were typically short, personal thoughts	No attempt at all

## 5.3 Submission of assessment tasks

All assessments in this online only course are to be submitted online via the course Moodle page. See the course Moodle page for instructions.

In the event of illness or misadventure please contact the course coordinator as soon as possible in the first instance. Special consideration information can be found at <https://student.unsw.edu.au/special-consideration>

The BEES administration staff can also provide valuable information and assistance (contact details provided earlier).

The course coordinator should be alerted to any academic adjustments as soon as the student has the formal letter from the university stating what the adjustments are. This is to ensure that the adjustments are set in place before assessments are due.

## 5.4. Feedback on assessment

*Moodle quizzes:* marks will be awarded and answers available immediately post attempt

*Online practicals:* marks will be awarded within two weeks of submission with feedback on Turnitin

*Forum posts:* marks will be awarded with feedback in weeks 6 and 11.

## 6. Academic integrity, referencing and plagiarism

**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>

**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.<sup>1</sup> 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 <https://student.unsw.edu.au/plagiarism>, and
- The *ELISE* training site <http://subjectguides.library.unsw.edu.au/elise/presenting>

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>.

## 7. Readings and resources

Reading material will be prescribed for each week on Moodle, from online material. As students in this course are from a wide range of academic backgrounds, some students will require more background reading in particular areas than others. Each week's material has core lessons that utilise a glossary, and also has additional reading material for those that want more detail and those needing further explanation. Please check Moodle regularly as updates to additional content may be posted throughout the course.

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<sup>1</sup> International Center for Academic Integrity, 'The Fundamental Values of Academic Integrity', T. Fishman (ed), Clemson University, 2013.



## 8. Administrative matters

See staff information provided in 1. Staff.

## 9. Additional support for students

- The Current Students Gateway: <https://student.unsw.edu.au/>
- Academic Skills and Support: <https://student.unsw.edu.au/academic-skills>
- Student Wellbeing, Health and Safety: <https://student.unsw.edu.au/wellbeing>
- Disability Support Services: <https://student.unsw.edu.au/disability-services>
- UNSW IT Service Centre: <https://www.it.unsw.edu.au/students/index.html>