



ENVS8229

Sustainable Cities

Session 2, In person-scheduled-weekday, North Ryde 2024

School of Natural Sciences

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General Information

Unit convenor and teaching staff

Convenor

Katherine Dafforn

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By appointment

Lecturer

Peter Davies

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Lecturer

Michael Chang

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Credit points

10

Prerequisites

Admission to MEnv or MSc or GradDipEnv or GradCertEnv or MEnvPlan or MPlan or MConsBiol or MPH or MMarScMgt or MScInnovationEnvSc or MSusDev

Corequisites

Co-badged status

Unit description

This unit examines scientific and technical principles related to the management of sustainable cities. Major themes include city biodiversity and blue-green infrastructure (e.g. green walls and living seawalls), waste management (e.g. scientific innovation to support a circular economy and smart sensing technologies), air, land and water pollution (e.g. regulation and reduction through water sensitive urban design), and resource management (e.g. urban agriculture and vertical farming). The challenges for sustainable cities in a changing climate will be explored through each major theme. Different local, national and international case studies will be explored to demonstrate key concepts in the science and management of sustainable cities. The unit includes a field trip where students will apply their knowledge to enhance sustainability in an urban context.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at <https://www.mq.edu.au/study/calendar-of-dates>

Learning Outcomes

On successful completion of this unit, you will be able to:

ULO1: demonstrate an understanding of the socio-technical principles affecting the planning and management of sustainable cities

ULO2: apply your understanding of sustainable cities to critically evaluate relevant case studies

ULO3: identify and assess the interests, roles and responsibilities of stakeholders involved in making cities sustainable

ULO4: demonstrate individual and group writing and research skills for different target audiences

General Assessment Information

Assessment Criteria

Assessment at Macquarie University is standards-based, as outlined in the [Assessment Policy](#). This means that your work will be assessed against clear criteria, and these criteria (e.g. in a rubric) will be made available when the assessment tasks are released to you on iLearn.

Submission of Assessments

All assessments must be submitted online through [Turnitin](#) unless otherwise indicated. Links for the submission of each assessment will be available on [iLearn](#).

You should always check that you have uploaded the correct file. If you have a problem, please email the Unit Convenor with your correct file. You must also keep a copy of your assessments until the end of semester in case there is a problem with your submission. It is your responsibility to ensure that you can provide a copy of your assessment if requested.

Marking of Assessments

Assignments will usually be marked through Turnitin with grades provided through Gradebook on iLearn. Please do not submit your assessments via email or in hard copy unless requested (e.g. a sketch or drawing).

We aim to return your assessment grades and feedback within two to three weeks of the date that you submitted it. We appreciate your patience and will advise you through iLearn when your marked assessments and feedback are available for viewing.

Late Assessment Submission Penalty

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the

total possible mark of the task) will be applied for each day a written report or presentation assessment is not submitted, up until the 7th day (including weekends). After the 7th day, a grade of '0' will be awarded even if the assessment is submitted. The submission time for all uploaded assessments is **11:55 pm**. A 1-hour grace period will be provided to students who experience a technical concern. For any late submission of time-sensitive tasks, such as scheduled tests/exams, performance assessments/presentations, and/or scheduled practical assessments/labs, please apply for [Special Consideration](#).

Assessments where Late Submissions will be accepted

- Sustainability plan evaluation – YES, Standard Late Penalty applies
- Sustainability index and data report - YES, Standard Late Penalty applies
- In class quizzes - NO, unless Special Consideration is Granted

Extensions for Assessments

To obtain an extension for an assessment task, you will need to follow the formal process as outlined in the [Special Consideration Policy](#), and you must provide appropriate supporting evidence (e.g. medical certificate - see advice for [Special Consideration](#) requests). The final decision regarding the granting of an extension lies with the unit convenor. Permission for extensions must be sought **before the due date** unless there are exceptional circumstances. Please let us know of problems in advance or as soon as possible, not after the event. We are likely to be much more sympathetic and able to accommodate your circumstance if you follow this advice.

Special Consideration

The [Special Consideration Policy](#) aims to support students who have been impacted by short-term circumstances or events that are serious, unavoidable and significantly disruptive, and which may affect their performance in assessment. If you experience circumstances or events that affect your ability to complete the assessments in this unit on time, please inform the convenor and submit a Special Consideration request through ask.mq.edu.au.

Requirements to Pass this Unit

To pass this unit you should attempt all assessments, and must achieve a total aggregated mark equal to or greater than 50%

Assessment Tasks

Name	Weighting	Hurdle	Due
Sustainability plan evaluation	50%	No	2024-09-13
In class quizzes	10%	No	Weeks 6 and 10
Sustainability index and data report	40%	No	2024-11-01

Sustainability plan evaluation

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 35 hours

Due: **2024-09-13**

Weighting: **50%**

Critically evaluate sustainable city plans or strategies drawing on both theory and practice.

On successful completion you will be able to:

- demonstrate an understanding of the socio-technical principles affecting the planning and management of sustainable cities
- apply your understanding of sustainable cities to critically evaluate relevant case studies
- identify and assess the interests, roles and responsibilities of stakeholders involved in making cities sustainable
- demonstrate individual and group writing and research skills for different target audiences

In class quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 13 hours

Due: **Weeks 6 and 10**

Weighting: **10%**

Multiple-choice quizzes and short answer questions in class to assess knowledge of theoretical frameworks and current policy and practical approaches in sustainable cities.

On successful completion you will be able to:

- demonstrate an understanding of the socio-technical principles affecting the planning and management of sustainable cities

Sustainability index and data report

Assessment Type ¹: Report

Indicative Time on Task ²: 25 hours

Due: **2024-11-01**

Weighting: **40%**

Develop a sustainability index and collect physical or social science data during a fieldtrip to evaluate the sustainability performance of a local urban area or precinct. This will have individual and group contribution with group work moderated via Sparkplus

On successful completion you will be able to:

- demonstrate an understanding of the socio-technical principles affecting the planning and management of sustainable cities
- apply your understanding of sustainable cities to critically evaluate relevant case studies
- demonstrate individual and group writing and research skills for different target audiences

¹ If you need help with your assignment, please contact:

- the academic teaching staff in your unit for guidance in understanding or completing this type of assessment
- the [Writing Centre](#) for academic skills support.

² Indicative time-on-task is an estimate of the time required for completion of the assessment task and is subject to individual variation

Delivery and Resources

The content is based on a fortnightly workshop program that commences in Week 2 and is supported by core readings.

There is a mandatory full day field trip in the Sydney area. An exemption for attendance may be granted to students due to COVID or other exceptional reasons. Approval must be sought and is to be granted in advance of Week 4.

The unit is delivered with a mixture of lectures and workshops. The teaching process includes:

- Background reading by the students
- Lectures to introduce basic concepts
- Interactive group sessions to provide opportunities for experiential learning on tasks and through discussion with other class members (preparation is essential)
- Talks from guest lecturers that introduce innovations in science and technology used to make cities sustainable and the policy and planning to facilitate change
- A field trip to appreciate the practical, technical and socio-ecological aspects of sustainable cities.

- Assignments that require students to practice key skills, including critical and integrative thinking and communicating through diverse forms including writing and presenting in a logical and clearly argued manner.
- Assignments provide opportunities for presenting in different formats, working with people of different skills and cultural perspectives.

Students are expected to:

- Participate in group activities;
- Read set readings in advance for classes; and
- Follow current developments about sustainable cities in the media/ internationally.

Methods of Communication

We will communicate with you via your university email and through announcements on iLearn. Queries to convenors can either be placed on the iLearn discussion board or sent to the unit convenor via the contact email on iLearn.

Unit Schedule

Date	Date	Fri Workshop 12-3pm	Fri Workshop 3-6pm	Assessment and due date
1 (30)	26 Jul	No class		
2 (31)	2 Aug	Introduction to Sustainable Cities and sustainability ranking tools (PD)	Urban ecology, green infrastructure and green city planning approaches (PD)	
3 (32)	9 Aug	No class		
4 (33)	16 Aug	Open space, recreation and placemaking for cities. Sustainability indices (PD)	Community empowerment and action, developing a community survey (PD)	
5 (34)	23 Aug	No class		
6 (35)	30 Aug	Cities and wellbeing. Sustainability indices (PD)	Nature-based solutions and blue infrastructure. Blue policy and sustainable blue infrastructure (KD)	Assessment 1: Quiz 1 (5%) 30th August
7 (36)	6 Sep	Fieldtrip 9am-4pm (KD, PD)		

8 (37)	13 Sep	Energy resources, Smart buildings and renewable energy (KD)	Pollution control, waste recycling (KD)	Assessment 2: Plan evaluation (50%) Due 13th September
RECESS				
9 (40)	4 Oct			
10 (41)	11 Oct	Urban climate, nearmap and land surface temperature (MC)	Transport and mobility, accessibility (PTAL) and socio-economic (dis)advantage (SEIFA index) (MC)	Assessment 1: Quiz 2 (5%) 11th October
11 (42)	18 Oct	No class		
12 (43)	25 Oct	Waste recycling and the circular economy (KD)	Future cities (KD)	
13 (44)	1 Nov	No class		Assessment 3: Sustainability index and data report (40%) Due 1st November

Policies and Procedures

Macquarie University policies and procedures are accessible from [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au). Students should be aware of the following policies in particular with regard to Learning and Teaching:

- [Academic Appeals Policy](#)
- [Academic Integrity Policy](#)
- [Academic Progression Policy](#)
- [Assessment Policy](#)
- [Fitness to Practice Procedure](#)
- [Assessment Procedure](#)
- [Complaints Resolution Procedure for Students and Members of the Public](#)
- [Special Consideration Policy](#)

Students seeking more policy resources can visit [Student Policies \(https://students.mq.edu.au/support/study/policies\)](https://students.mq.edu.au/support/study/policies). It is your one-stop-shop for the key policies you need to know about throughout your undergraduate student journey.

To find other policies relating to Teaching and Learning, visit [Policy Central \(https://policies.mq.edu.au\)](https://policies.mq.edu.au) and use the [search tool](#).

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of

Conduct: <https://students.mq.edu.au/admin/other-resources/student-conduct>

Results

Results published on platform other than [eStudent](#), (eg. iLearn, Coursera etc.) or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in [eStudent](#). For more information visit ask.mq.edu.au or if you are a Global MBA student contact globalmba.support@mq.edu.au

Academic Integrity

At Macquarie, we believe [academic integrity](#) – honesty, respect, trust, responsibility, fairness and courage – is at the core of learning, teaching and research. We recognise that meeting the expectations required to complete your assessments can be challenging. So, we offer you a range of resources and services to help you reach your potential, including free [online writing and maths support](#), [academic skills development](#) and [wellbeing consultations](#).

Student Support

Macquarie University provides a range of support services for students. For details, visit <http://students.mq.edu.au/support/>

The Writing Centre

[The Writing Centre](#) provides resources to develop your English language proficiency, academic writing, and communication skills.

- [Workshops](#)
- [Chat with a WriteWISE peer writing leader](#)
- [Access StudyWISE](#)
- [Upload an assignment to Studiosity](#)
- [Complete the Academic Integrity Module](#)

The Library provides online and face to face support to help you find and use relevant information resources.

- [Subject and Research Guides](#)
- [Ask a Librarian](#)

Student Services and Support

Macquarie University offers a range of [Student Support Services](#) including:

- [IT Support](#)
- [Accessibility and disability support](#) with study
- Mental health [support](#)
- [Safety support](#) to respond to bullying, harassment, sexual harassment and sexual

assault

- [Social support including information about finances, tenancy and legal issues](#)
- [Student Advocacy](#) provides independent advice on MQ policies, procedures, and processes

Student Enquiries

Got a question? Ask us via [AskMQ](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the [Acceptable Use of IT Resources Policy](#). The policy applies to all who connect to the MQ network including students.

Unit information based on version 2024.01R of the [Handbook](#)