



ENVS8229

Sustainable Cities

Session 2, In person-scheduled-weekday, North Ryde 2022

School of Natural Sciences

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General Information

Unit convenor and teaching staff

Co-convenor and Lecturer

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By appointment

Co-convenor and Lecturer

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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

Assignments are the means used to assess if you have reached the learning outcomes for the unit. The criteria by which the assignment will be marked are made clear in each case. **As a rough guide, 10 marks is equivalent to about 10 hours of quality work.**

Evidence of wide and comprehensive reading is required, drawing on journals, international examples, thought pieces, and reports. All ideas must be cited inclusive of the source/author. Unless otherwise stated in the detailed assessment guide, any recognised referencing style may be used so long as it is consistent and accurate.

Detailed information on the assessments tasks, marking criteria, and supporting resources will be provided via the iLearn site.

Submitting assignments

All assignments must be submitted electronically on the iLearn site.

Each assignment has a separate upload site. The assignment site will usually be a 'Turnitin', where your work is reviewed for similarity to websites, articles or other students' work. If you have not given credit for ideas used to the author or source you will be penalised (failure of the assignment and reporting to a disciplinary committee to determine whether you have breached the University's Academic Integrity Policy: <https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/academic-integrity>). See information on academic honesty on the iLearn site and techniques on how to avoid common plagiarism errors (<https://www.students.mq.edu.au/public/download.jsp?id=201272>).

You do not need an assignment cover sheet for electronic submission to ENV58229, it is understood that you are signing a declaration of honesty. Be sure to add your name, title of work and unit to your work.

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.

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 four 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

From 1 July 2022, Students enrolled in Session based units with written assessments will have the following university standard late penalty applied. Please see <https://students.mq.edu.au/study/assessment-exams/assessments> for more information.

Unless a Special Consideration request has been submitted and approved, a 5% penalty (of the total possible mark) will be applied each day a written 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. Submission time for all written assessments is set at **11:55 pm**. A 1-hour grace period is 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, students need to submit an application for [Special Consideration](#).

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.

Assessment Tasks

Name	Weighting	Hurdle	Due
In class quizzes	10%	No	Weeks 5 and 12
Group practical exercise	50%	No	Week 7
Data report	40%	No	Week 11

In class quizzes

Assessment Type ¹: Quiz/Test

Indicative Time on Task ²: 13 hours

Due: **Weeks 5 and 12**

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

Group practical exercise

Assessment Type ¹: Practice-based task

Indicative Time on Task ²: 35 hours

Due: **Week 7**

Weighting: **50%**

In groups, critically evaluate sustainable city plans or strategies drawing on both theory and practice and develop a sustainable city plan. 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
- 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

Data report

Assessment Type ¹: Report

Indicative Time on Task ²: 25 hours

Due: **Week 11**

Weighting: **40%**

Collection and evaluation of physical or social science data related to 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
- 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 weekly lecture program and tutorial activities 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 6.

The unit is delivered with a mixture of lectures and tutorials. 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.

Unit Schedule

NB. Lecture and practical topics may be subject to small changes during the session, and we may add guest lecturers.

Week	Date	Lecture topic Weds 11am-12pm	Tutorial topic Weds 12pm-2pm
1	27 Jul	Introduction to sustainable cities (PD)	Plan evaluation
2	3 Aug	Urban ecology and green infrastructure (PD)	Introduction to green city planning approaches
3	10 Aug	Open space, recreation and placemaking for cities (PD)	Sustainability indices Part 1: Critical review and designing a framework of your index
4	17 Aug	Community empowerment and action (PD)	Developing a community survey

5	24 Aug	Cities and wellbeing (PD)	Sustainability indices Part 2: Data and evaluation
6	31 Aug	Nature-based solutions and blue infrastructure (KD)	Blue policy and sustainable blue infrastructure
7	7 Sep	Urban climate (MC)	Near map and land surface temperature
9am-4pm 10th September Fieldtrip - Evaluation urban sustainability			
Recess			
8	28 Sep	Transport and mobility (MC)	Transport accessibility (PTAL) and social (dis)advantage (SEIFA index)
9	5 Oct	Energy resources, distribution and usage (KD)	Smart buildings and renewable energy
10	12 Oct	Pollution control for air, soil and water (KD)	Nature trail walk (MQ campus) and exercise
11	19 Oct	Waste recycling and the circular economy (KD)	Circular economy
12	26 Oct	Future cities (KD)	Unit reflection and consolidation
13	No class in lieu of fieldtrip		

KD - Katie Dafforn; PD - Peter Davies; MC - Michael Chang

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)

[du.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 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.