



INTS1001

Grand Challenges and Systems Thinking

Session 2, In person-scheduled-weekday, North Ryde 2026

School of International Studies

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General Information

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Credit points

10

Prerequisites

Corequisites

Co-badged status

Unit description

This foundational unit in the Bachelor of International Studies immerses students in the real-world challenges that societies and industries will face in the coming decade. Through an interdisciplinary lens, it introduces 'grand challenges' - complex global problems marked by ambiguity and interconnectedness that can't be addressed through siloed thinking. Students begin developing core skills in systems thinking, exploring how cultural, political, historical, and ethical factors intersect to shape global issues. Students examine recurring patterns and drivers of change and learn to understand complex systems, while engaging with live challenges facing industry, government, and community partners. Interactive and scenario-based activities provide hands-on experience in scoping problems, breaking them into components, and understanding their wider context. This experiential, exploratory environment fosters creativity, critical thinking, and multidisciplinary collaboration. By the end of the unit, students will have started developing foundational capabilities in analysing complex systems, and a human-centred, adaptive mindset for tackling global challenges.

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: Apply foundational systems thinking concepts to complex global challenges.

ULO2: Map the interconnected social, cultural, historical, and ethical factors shaping contemporary global problems using system mapping techniques.

ULO3: Identify patterns and dynamics to understand drivers of societal change.

ULO4: Collaborate on scenario-based activities that address ambiguous and multifaceted global issues.

General Assessment Information

LATE SUBMISSION OF ASSESSMENT TASKS

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 mark of '0' (zero) will be awarded even if the assessment is submitted. Submission time for all written assessments is set at 11.55pm. A 1-hour grace period is provided to students who experience a technical issue.

This late penalty will apply to non-time-sensitive assessments (including essays, reports, posters, portfolios, journals, recordings, etc.). Late submission of time-sensitive tasks (such as tests/exams, performance assessments/presentations, scheduled practical assessments/labs, etc.) will only be addressed by the unit convenor in a Special consideration application. Special Consideration outcome may result in a new question or topic.

The granting of extensions is subject to the university's Special Consideration Policy. Extensions will not be granted by unit conveners or tutors, but must be lodged through Special Consideration: <https://students.mq.edu.au/study/assessment-exams/special-consideration>

GRADE APPEAL POLICY

Macquarie University operates a Grade Appeal Policy: <https://students.mq.edu.au/study/assessment-exams/appeals/grade-appeal>

Assessment Tasks

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Viva Voce	25%	No	Week 7	Individual	No	Observed
Systems Thinking Learning Portfolio	40%	No	16/10/2026	Individual	Yes	Open

Name	Weighting	Hurdle	Due	Groupwork/Individual	Short Extension	AI Approach
Reflective essay: Adaptive problem-solving	35%	No	06/ 11/ 2026	Individual	Yes	Open

Viva Voce

Assessment Type ¹: Examination

Indicative Time on Task ²: 25 hours

Due: **Week 7**

Weighting: **25%**

Groupwork/Individual: Individual

Short extension ³: No

AI Approach: Observed

Explain and reflect on your group's analysis of a global challenge, demonstrating your understanding of systems thinking concepts and your individual contribution.

On successful completion you will be able to:

- Apply foundational systems thinking concepts to complex global challenges.
- Identify patterns and dynamics to understand drivers of societal change.
- Collaborate on scenario-based activities that address ambiguous and multifaceted global issues.

Systems Thinking Learning Portfolio

Assessment Type ¹: Portfolio

Indicative Time on Task ²: 25 hours

Due: **16/10/2026**

Weighting: **40%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

Create a series of systems maps and reflective commentaries addressing real-world Grand Challenges.

On successful completion you will be able to:

- Apply foundational systems thinking concepts to complex global challenges.
- Map the interconnected social, cultural, historical, and ethical factors shaping contemporary global problems using system mapping techniques.
- Identify patterns and dynamics to understand drivers of societal change.

Reflective essay: Adaptive problem-solving

Assessment Type ¹: Reflection task

Indicative Time on Task ²: 30 hours

Due: **06/11/2026**

Weighting: **35%**

Groupwork/Individual: Individual

Short extension ³: Yes

AI Approach: Open

Reflect on personal development in systems thinking and problem-solving, drawing on concrete examples from unit activities, readings, and discussions.

On successful completion you will be able to:

- Apply foundational systems thinking concepts to complex global challenges.
- Map the interconnected social, cultural, historical, and ethical factors shaping contemporary global problems using system mapping techniques.
- Identify patterns and dynamics to understand drivers of societal change.
- Collaborate on scenario-based activities that address ambiguous and multifaceted global issues.

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
- [Academic Success](#) 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.

³ An automatic short extension is available for some assessments. Apply through the [Service Connect Portal](#).

Delivery and Resources

CLASSES

Weekly lectures will be recorded and made available in Echo360 within 48 hours of the scheduled class time.

For current updates, lecture and tutorial times and classrooms, please consult the MQ Timetables website: <http://www.timetables.mq.edu.au>.

UNIT REQUIREMENTS AND EXPECTATIONS

You should spend an average of 12 hours per week on this unit. This includes watching or attending lectures prior to seminars or tutorials, reading weekly required materials as detailed in iLearn/Leganto, participating in iLearn discussion forums and preparing assessments.

Internal students are expected to attend all seminars or tutorial sessions, and external students are expected to make significant contributions to the online discussion forums/activities.

In most cases, students are required to attempt and submit all major assessment tasks to pass the unit.

REQUIRED READINGS

The citations for all the required readings for this unit are available to enrolled students through the unit iLearn site, and the Leganto site. Electronic copies of required readings may be accessed through the library or will be made available by other means.

TECHNOLOGY USED AND REQUIRED

This unit has an online presence. Login is via: <https://ilearn.mq.edu.au/>

Students are required to have regular access to a computer and the internet. Mobile devices alone are not sufficient. Basic computer skills and word-processing skills are also required.

Information about IT used at Macquarie University is available at http://students.mq.edu.au/it_services/

Unit Schedule

Week 1 (27/07 – 02/08)	Understanding grand challenges through systems thinking	
Week 2 (03/08 – 09/08)	Stocks and flows in action: Understanding Australian bushfires and climate dynamics	
Week 3 (10/08– 16/08)	Feedback loops, causal structures, and the challenge of disruptive technologies	
Week 4 (17/08 – 23/08)	Delays and lags in action: Understanding the Australian nuclear debate and energy transition challenges	
Week 5 (24/08 – 30/08)	Boundaries and Stakeholders: Understanding Global Refugee Crises	
Week 6 (31/08 – 06/09)	System Archetypes: Global Inequality, Discrimination and Human Rights	
Week 7 (07/09 – 13/09)	Resilience, Tipping Points, and Adaptation: Understanding Global Health	Viva Voce

Week 8 (14/09 – 20/09)	Emergence and Leverage Points: Understanding Global Education and Systemic Change	
(21/09 – 05/10)	RECESS	
Week 9 (05/10 – 11/10)	Mental Models and Paradigms: Linguistic Justice and Cultural Survival in a Globalised World	
Week 10 (12/10 – 18/10)	Systems Mapping in Practice: Globalisation, Security, and Interconnected Threats	16/10/2026 Systems Thinking Learning Portfolio
Week 11 (19/10 – 25/10)	Scenario Planning and Modelling: Peacebuilding and Post-Conflict Reconstruction	
Week 12 (26/10 – 01/11)	Polycrisis and Systemic Transformation: Designing a Better World	
Week 13 (02/11 – 06/11)	No lecture or tutorial	06/11/2026 Reflective Essay: Adaptive problem-solving

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 connect.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/>

Academic Success

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

- [Ask a Study Coach](#)
- [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 the [Service Connect Portal](#), or contact [Service Connect](#).

IT Help

For help with University computer systems and technology, visit <https://students.mq.edu.au/support/technology/service-desk>.

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 2026.04 of the [Handbook](#)