The University of Sydney

# GEOS1001/1901
# Earth, Environment & Society

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**Classes:** Lectures: 11:00 Mondays & Tuesdays in Carslaw 273
Repeat lectures: 15:00 Mondays & Tuesdays in Farrell
Practical Classes: See individual schedule

**Objectives**
The objective of this Unit of Study is to get you thinking about the big questions relating to the origins and current state of the planet. During the semester you will be introduced to knowledge, theories and debates about how the world's physical and human systems operate.

It provides an entry-level introduction to the two disciplines of Geography and Geology & Geophysics. After completing GEOS1001/1901, you may wish to continue your studies in the July semester by enrolling in (either or both) Introduction to Geography (GEOS1002/1902) or Introduction to Geology (GEOS1003/1903). In successive years there are further Geography and Geology & Geophysics units of study for you to take, and we also offer attractive Honours and Post-graduate programs. In short, GEOS1001/1901 provides the starting point for a degree and professional career in our disciplines.

Additionally, GEOS1001/1901 is structured to be a stand-alone unit. Topics on Earth's physical and human systems provide an important, relevant and interesting set of issues in their own right. Accordingly, GEOS1001/1901 is ideal for students who are taking it as a 'one semester' unit within other disciplinary or degree requirements.

**Assessment**

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|---|---|
| Practical & Field Assignments | 40% |
| Online Quizzes | 20% |
| Final Exam | 40% |

**Fieldwork**

A Field Trip for GEOS1001 will be held in Weeks 6, 7 & 8 of the semester (note: multiple trips will run, you need only attend a single field trip in one of these weeks). Students are encouraged to attend the field trip, which will form the basis for Assignment 2. However, field trip participation is not compulsory, and students who do not attend will be provided with an alternative assignment.

A dedicated trip will be organized for the advanced component of the Unit of Study (GEOS1901). This trip will also run during Weeks 6, 7 or 8 but at a time that suits all students enrolled in GEOS1901.

**Lecture Outline**

| | **Topics (subject to modification)** | |
|---|---|---|
| Week 1 | Introduction to the UoS | MN, ET, BP |
| | Structure and function of the atmosphere | MN |
| Week 2 | Solar energy & Earth | MN |
| | Atmospheric & oceanic circulations | MN |
| Week 3 | Atmospheric pollution | MN |
| | Temperature change over time | MN |
| Week 4 | Causes & consequences of recent climate changes | MN |
| | Predicting climate change | MN |
| Week 5 | Global warming vs climate change | MN |
| | Is Earth a safe place? | ET |
| Week 6 | Geological change and deep time | ET |
| | Plate tectonics and the carbon cycle | ET |
| Week 7 | Solar forcing of climate change | ET |
| | The oceans and climate change | ET |

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|---|---|---|
| Week 8 | Icehouse or greenhouse? | ET |
| | Geological crises and evolution | ET |
| Week 9 | The Permo-Triassic crisis | ET |
| | (Over-) populating the world? | BP |
| Week 10 | Is there enough food to go around? | BP |
| | Food security and famine | BP |
| Week 11 | Producing slums | BP |
| | Globalizing and global cities | BP |
| Week 12 | Over-urbanization and globalization in India | BP |
| | Slum ecology: the global urban water crisis | BP |
| Week 13 | Mapping our futures | BP |
| | What does it all mean? | MN, ET, BP |

**Practical Outline**

| | **Topics (subject to modification)** |
|---|---|
| Week 1 | No Prac |
| Week 2 | Assessing trends in temperature and precipitation |
| Week 3 | No Prac |
| Week 4 | The impact of ENSO on precipitation |
| Week 5 | Library skills |
| Week 6 | Field trip |
| Week 7 | Field trip |
| Week 8 | Field trip |
| Week 9 | No Prac |
| Week 10 | Trends in world population growth |
| Week 11 | Urbanisation trends in population growth |
| Week 12 | Project presentations |
| Week 13 | No Prac |