FIRST YEAR GEOSCIENCES UNITS OF STUDY 2011

SEMESTER 1

GEOS1001
Earth, Environment and Society

Credit points: 6 Teacher/Coordinator: Dr Tom Hubble, Dr Jody Webster, A/Prof Bill Pritchard
Session: Semester 1 Classes: Two 1 hour lectures and one 2 hour practical per week.
Prohibitions: GEOS1901, GEOG1001, GEOG1002, GEOL1001, GEOL1002, GEOL1902
Assessment: One 2 hour exam, 2000 word essay, field and prac reports (100%)
Campus: Camperdown/Darlington Delivery Mode: Normal (lecture/lab/tutorial) Day

This is the gateway unit of study for Human Geography, Physical Geography and Geology. Its objective is to introduce the big questions relating to the origins and current state of the planet: climate change, environment, landscape formation, and the growth of the human population. During the semester you will be introduced to knowledge, theories and debates about how the world's physical and human systems operate. The first module investigates the system of global environmental change, specifically addressing climate variability and human impacts on the natural environment. The second module presents Earth as an evolving and dynamic planet, investigating how changes take place, the rate at which they occur and how they have the potential to dramatically affect the way we live. Finally, the third module, focuses on human-induced challenges to Earth's future. This part of the unit critically analyses the relationships between people and their environments, with central consideration to debates on population change and resource use.

GEOS1901
Earth, Environment and Society Advanced

Credit points: 6 Teacher/Coordinator: Dr Tom Hubble, Dr Jody Webster, A/Prof Bill Pritchard
Session: Semester 1 Classes: Two 1 hour lectures and one 2 hour practical per week.
Prerequisites: Departmental permission is required for enrolment. An ATAR above 93 is normally required for admission. This requirement may be varied and students should consult the unit of study coordinator.
Prohibitions: GEOS1001, GEOG1001, GEOG1002, GEOL1001, GEOL1002, GEOL1902
Assessment: One 2 hour exam, 2000 word essay, field and prac reports (100%)
Campus: Camperdown/Darlington Delivery Mode: Normal (lecture/lab/tutorial) Day

Note: Department permission required for enrolment.

Advanced students will complete the same core lecture material as for GEOS1001, but will be required to carry out more challenging practical assignments.
SEMESTER 2

GEOS1002

Introductory Geography

Credit points: 6  Teacher/Coordinator: Dr Kurt Iveson and others  Session: Semester 2  Classes: Two 1 hour lectures and one 2 hour practical per week.  Prohibitions: GEOS1902, GEOG1001, GEOG1002  Assessment: One 2 hour exam, one 1000 word essay, two online quizzes, one practical report (100%)  Campus: Camperdown/Darlington  Delivery Mode: Normal (lecture/lab/tutorial) Day

This Unit of Study provides an introductory geographical analysis of the ways in which people and physical processes/features are produced, behave and interact. The Unit focuses on the physical and human processes that generate spatial variation and difference, as well as tracing the interactions between these processes. It includes an investigation of Earth’s surface features, exploring the distribution of select landforms across Earth and interpreting their evolutionary histories. Several landscapes will be examined, such as those formed by rivers, wind, and glaciers. But physical landscapes evolve under the influence of and affect human operations. Therefore, the Unit of Study will also consider the political, economic, cultural and urban geographies that shape contemporary global society. Each of these themes will be discussed with reference to key examples (such as Hurricane Katrina, the Kashmir Earthquake, the conflict in Darfur, and sea-level rise in the Pacific), in order to consider the ways in which the various processes (both physical and human) interact. The Unit of Study will also include a short field trip to localities surrounding the university to observe processes of spatial change and conflict. The Unit of Study is designed to attract and interest students who wish to pursue geography as a major within their undergraduate degree, but also has relevance to students who wish to consider the way geographers understand the contemporary world.

GEOS1902

Introductory Geography (Advanced)

Credit points: 6  Teacher/Coordinator: Dr Kurt Iveson  Session: Semester 2  Classes: Two 1 hour lectures and one 2 hour practica per week.  Prerequisites: Departmental permission is required for enrolment. A UAI (or ATAR equivalent) above 93 is normally required for admission. This requirement may be varied and students should consult the unit of study coordinator.  Prohibitions: GEOS1002, GEOG1001, GEOG1002  Assessment: One 2 hour exam, one 1000 word essay, two online quizzes, one practical report (100%)  Campus: Camperdown/Darlington  Delivery Mode: Normal (lecture/lab/tutorial) Day

Note: Department permission required for enrolment.
Advanced students will complete the same core lecture material as for GEOS1002, but will be required to carry out more challenging practical assignments.

**GEOS1003**

**Introduction to Geology**

**Credit points:** 6  
**Teacher/Coordinator:** Dr Tom Hubble, Prof Geoff Clarke  
**Session:** Semester 2, Summer Late  
**Classes:** Three 1 hour lectures and one 1 hour practical per week.  
**Prohibitions:** GEOS1903, GEOL1002, GEOL1902, GEOL1501  
**Assessment:** One 2 hour exam, practical reports, field report (100%)  
**Campus:** Camperdown/Darlington  
**Delivery Mode:** Normal (lecture/lab/tutorial) Day  

The aim of this unit of study is to examine the chemical and physical processes involved in mineral formation, the interior of the Earth, surface features, sedimentary environments, volcanoes, and metamorphism. Lectures and laboratory sessions on mountain building processes and the formation of mineral deposits will lead to an understanding of the forces controlling the geology of our planet. Processes such as weathering, erosion and nature of sedimentary environments are related to the origin of the Australian landscape. In addition to laboratory classes there is a one-day excursion to the western Blue Mountains and Lithgow to examine geological objects in their setting.

**Textbooks**


**GEOS1903**

**Introduction to Geology (Advanced)**

**Credit points:** 6  
**Teacher/Coordinator:** Dr Tom Hubble, Prof Geoff Clarke  
**Session:** Semester 2  
**Classes:** Three 1 hour lectures and one 1 hour practical per week.  
**Prerequisites:** Departmental permission is required for enrolment. A UAI (or ATAR equivalent) above 93 is normally required for admission. This requirement may be varied and students should consult the unit of study coordinator.  
**Prohibitions:** GEOL1002, GEOL1902, GEOS1003  
**Assessment:** One 2 hour exam, practical reports, field report (100%)  
**Campus:** Camperdown/Darlington  
**Delivery Mode:** Normal (lecture/lab/tutorial) Day  

*Note: Department permission required for enrolment.*

This unit has the same objectives as GEOS1003 and is suitable for students who wish to pursue aspects of the subject in greater depth. Entry is restricted and selection is made from the applicants on the basis of their ATAR or UAI and/or their university performance at the time of enrolment. Students that elect to take this unit will participate in alternatives to some aspects of the standard unit and will be required to pursue independent work to meet unit objectives. This unit may be taken as part of the BSc (Advanced).

**GEOL1501**

**Engineering Geology 1**
Credit points: 6 Teacher/Coordinator: Dr Tom Hubble Session: Semester 2 Classes: 39 hours lectures, 26 hours laboratory. Field excursions in the Sydney region, as appropriate. Prohibitions: GEOL1002, GEOL1902, GEOS1003, GEOS1903 Assumed knowledge: No previous knowledge of Geology assumed Assessment: Practical laboratory work, assignment, and a combined theory and practical exam (100%) Campus: Camperdown/Darlington Delivery Mode: Normal (lecture/lab/tutorial) Day

Course objectives: To introduce basic geology and the principles of site investigation to civil engineering students. Expected outcomes: Students should develop an appreciation of geologic processes as they influence civil engineering works, acquire knowledge of the most important rocks and minerals and be able to identify them, and interpret geological maps with an emphasis on making construction decisions. Syllabus summary: Geological concepts relevant to civil engineering and the building environment. Introduction to minerals; igneous, sedimentary and metamorphic rocks, their occurrence, formation and significance. General introduction to physical geology and geomorphology, structural geology, plate tectonics, and hydrogeology. Associated laboratory work on minerals, rocks and mapping.

Textbooks
Approved readings will be provided via WebCT