



FACULTY OF SCIENCE

School of Biological, Earth and Environmental
Sciences

GEOS2291

Earth's Systems and Sustainability



Term 1
2022

Table of Contents

| | |
|---|--------|
| 1. Information About the Course | 3 |
| 2. Staff involved in the Course | 4 |
| 3. Course Details | 4 |
| 4. Rationale and Strategies Underpinning the Course | 6 |
| 5. Course Timetable | 6 & 12 |
| 6. Assessment Tasks and Feedback | 7 & 12 |
| 7. Additional Resources and Support | 8 |
| 8. Required Equipment, Training and Enabling Skills | 8 |
| 9. Course Evaluation and Development | 9 |
| 10. Administrative Matters | 10 |
| 11. UNSW Academic Honesty and Plagiarism | 11 |

Faculty of Science - Course Outline

1. Information about the Course

NB: Additional course information can be found in the UNSW Handbook: <https://www.handbook.unsw.edu.au>

| | |
|------------------------------------|---|
| Year of Delivery | 2022 |
| Course Code | GEOS2291 |
| Course Name | Earth's Systems and Sustainability |
| Academic Unit | Biological, Earth and Environmental Science |
| Level of Course | |

Graduate Attributes Developed in this Course⁴

Graduate Attribute

**Select the
level of
FOCUS**
0 = NO FOCUS

4. Rationale and Strategies Underpinning the Course

| | |
|--|--|
| Teaching Strategies | <p>Interactive lectures – engaging discussion forums that place the learning goals and presented information in the context of scientific analysis, societal goals and environmental management.</p> <p>Observations and measurements, report writing.</p> <p>Computer laboratories – problem-based learning (a toolbox of methods for data analysis).</p> |
| Rationale for learning and teaching in this course. | <p>Environmental careers are often multidisciplinary and require knowledge from many fields of</p> |

6. Assessment Tasks and Feedback

Assignment 1 - worth 20%

7. Additional Resources and Support

| | |
|--|--|
| Recommended Reading and Viewing | <p>The reading material at the links below provide useful background knowledge, and provide context about the content taught in the course:</p> <p>Cohen, A. and Ray, I. 2018. The global risks of increasing reliance on bottled water. <i>Nature Sustainability</i>, 1, 327-329. https://www.nature.com/articles/s41893-018-0098-9</p> <p>Al Atawneh, D. et al 2021. Climate change and its impact on the projected values of groundwater recharge: A review. <i>Journal of Hydrology</i>, 601, 126602 https://www.sciencedirect.com/science/article/pii/S0022169421006508</p> <p>Bladon, K.D. et al 2014. Wildfire and the Future of Water Supply. <i>Environmental Science and Technology</i>, 48, 8936-8943. https://pubs.acs.org/doi/full/10.1021/es500130g</p> <p>Groundwater https://iah.org/wp-content/uploads/2017/04/IAH-Groundwater-SDG-6-Mar-2017.pdf</p> <p>Air Quality https://www.euro.who.int/_data/assets/pdf_file/0012/385959/fs-sdg-3-9-air-eng.pdf</p> <p>Soil https://www.youtube.com/watch?v=AY9YVwJZDvw</p> <p>William Schlesinger - "New Perspectives on Biogeochemical Cycles" https://www.youtube.com/watch?v=IU8DjoRlug0</p> |
| | <p>In Moodle there is a link to all lectures on MS Stream.</p> |
| Required Readings | <p>Web links to required reading will be provided at the end of each set of lecture slides.</p> |
| Additional Readings | <p>Web links to additional reading will be given on the lecture slides.</p> |
| Recommended Internet Sites | <p>Links to internet sites will be provided in the lecture slides.</p> |
| Societies | <ul style="list-style-type: none"> - International Association of Hydrogeology (IAH; http://www.iah.org.au) - American Geophysical Union (AGU; http://sites.agu.org) - European Geosciences Union (EGU; https://www.egu.eu) |
| Computer Laboratories or Study Spaces | <p>Computer Laboratory will be run online in MS Teams. Much of the data analysis will be done in Excel. There are comprehensive introductory tutorials on Excel here: https://support.microsoft.com/en-us/office/excel-video-training-9bc05390-</p> |

9. Course Evaluation and Development

10. Administrative Matters

| | |
|---------------------------------|---|
| Expectations of Students | Attendance at 80% of lectures and laboratories is expected. Both Moodle and MS Teams keep a log of student access. |
| Assignment Submissions | |

11. UNSW Academic Honesty and Plagiarism

What is Plagiarism?

Plagiarism is the presentation of the thoughts or work of another as one's own.

*Examples include:

direct duplication of the thoughts or work of another, including by copying material, ideas or concepts from a book, article, report or other

