FACULTY OF SCIENCE

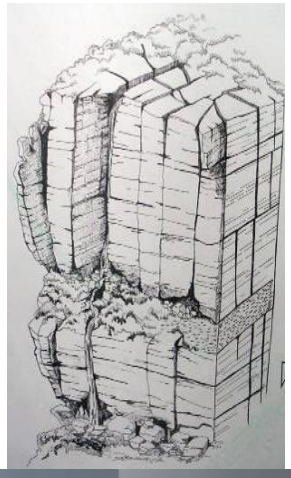
SCHOOL OF BIOLOGICAL, EARTH AND ENVIRONMENTAL SCIENCES

GEOS1211
Environmental Earth Science

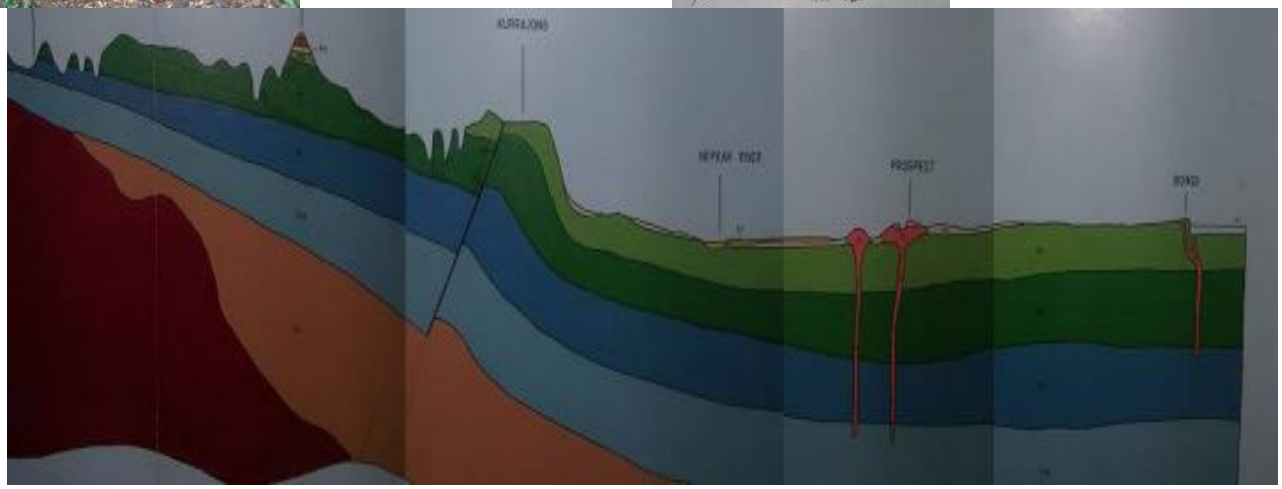
GEOS1211

Highlights and Student Comments

"The field trip was really well organised and very helpful to consolidate everything I had learnt throughout the semester. I like the ongoing assessment tasks …that kept me motivated and to do the work regularly."



"The field trip was a valuable resource and allowed for experience that could not be achieved in the lab or lectures."



"The lectures were excellent. The use of visual aids in a subject such as this with significant visualisation required is essential and was achieved in the lectures."

"The wide variety of geoscience covered was good for an overall introduction. The labs were really helpful for developing a greater understanding. The field trip was actually very helpful for giving a practical understanding of what was introduced in lectures and labs."

GEOS1211
Course Contents @ a glance

CLASS	DAY	TIME	VENUE
LECTURES	Monday	10.00 AM - 11.00 AM	Ritchie Theatre
	Thursday	1.00 PM – 2:00 PM	CLB8
LABORATORIES	Monday	2.00 PM – 4:00 PM	BioScience Lab G12
	Tuesday	10:00 AM – Noon	BioScience Lab G12
	Tuesday	1.00 PM – 3:00 PM	BioScience Lab G12
FIELD TRIP	**SATURDAY**	**5 September**	**Katoomba/Mt Tomah**
EXAMINATION	**TBA**	**TBA**	**TBA**

Prof James Goff
Course Coordinator GEOS1211
Biological Sciences Building
Room: 637
Email: j.goff@unsw.edu.au
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Dr Ian Graham
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Biological Sciences Building
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GEOS1211
Course Outline

1. Information about the Course

NB: Some of this information is available on the http://www.handbook.unsw.edu.au/undergraduate/courses/2015/GEOS1211.html

Year of Delivery	**2015**
Course Code	**GEOS1211**
Course Name	**Environmental Earth Science**
Academic Unit	**School of Biological Earth and Environmental Sciences**
Level of Course	**1**
Units of Credit	**6UOC**
Session(s) Offered	**S2**
Assumed Knowledge,	**Either GEOS1701 or GEOS1111**
Hours per Week	**4**
Number of Weeks	**12 Weeks (Week 1-12)**
Commencement Date	**Monday, July 27 (Week 1)**

Summary of Course Structure (for details see 'Course Schedule')

Component	HPW	Time	Day	Location
e.g. Lectures	**2**			
Lecture 1		Monday	10.00 AM – 11.00 AM	Ritchie Theatre
Lecture 2		Thursday	1:00 PM – 2:00 PM	CLB8
Laboratory	**2**			
Lab – Option 1		Monday	2:00 PM – 4:00 PM	BioScience Lab G12
Lab – Option 2		Tuesday	10.00 AM – Noon	BioScience Lab G12
Lab – Option 3		Tuesday	1:00 PM – 3:00 PM	BioScience Lab G12
Examination	***2 hours***			**TBA**
Online				
Other activities, e.g., field trips	***12***	**Saturday**	**September 5**	**Katoomba/Mt Tomah**
TOTAL	**4**			
Special Details	• There is limited disabled access at Katoomba			

2. Staff Involved in the Course

Staff	Role	Name	Contact Details	Consultation Times
Course Coordinator GEOS1211		*Prof James Goff*	Bioscience Rm 637 j.goff@unsw.edu.au 9385 8431	*By appointment*
Teaching Staff	Sydney Basin/Soils	*Dr John Triantafilis*	Bioscience Rm 639 j.triantafilis@unsw.edu.au 9385 8087	*By appointment*
	Plate Tectonics	*AProf David Cohen*	Bioscience Rm 609 d.cohen@unsw.edu.au 9385 8084	*By appointment*
	Lachlan Fold Belt/Sydney Basin	*Dr Ian Graham*	Bioscience Rm 635 i.graham@unsw.edu.au 9385 8720	*By appointment*
	Biogeography	*Dr Malte Ebach*	Bioscience Rm 646 mcebach@unsw.edu.au 9385 2008	*By appointment*
	Tectonic and Volcanic Hazards, Wetlands	*Dr Catherine Chagué-Goff*	Bioscience Rm 569A c.chague-goff@unsw.edu.au 9385 8921	*By appointment*
	Demonstrators (Biogeography only) (Palaeontology only)	*Geordie Donaldson* *Elizabeth Dowding* *Anna Gillespie* *Jingyi Huang* *Claire Kain* Mukhlis Mah *Len Martin* *Mira van der Ley*	z3418962@student.unsw.edu.au z3331271@unsw.edu.au a.gillespie@unsw.edu.au jing.y.huang@student.unsw.edu.au c.kain@unsw.edu.au m.mah@unsw.edu.au lennard@student.unsw.edu.au m.vanderley@unsw.edu.au	*By appointment*
	Palaeontology	*Prof Michael Archer*	Bioscience Rm 565 m.archer@unsw.edu.au 9385 3446	*By appointment*
	Palaeontology	*AProf Darren Curnoe*	Bioscience Rm 552C d.curnoe@unsw.edu.au 9385 8929	*By appointment*
	Hydrogeology	*Prof Andy Baker*	Building G17 Rm 407 a.baker@unsw.edu.au	*By appointment*
	Technical & Laboratory Staff	*Ms Kate Stuart*	Bioscience Rm 531 k.stuart@unsw.edu.au 9385 2192	*By appointment*

3. Course Details

Course Description[1] (Handbook Entry)	This course takes a modern approach to studying the history of change on planet Earth. The origins of the continents, oceans, atmosphere and the planet itself are considered. The beginnings of life and evolution of selected fauna and flora are investigated from genetic and fossil evidence. The relationships between Earth's geological environments and their associated life forms are explored. The effects of change both natural and induced by humans on soil, water and the landscape are examined. The tools required for the investigation of Earth's environments are introduced. Skills in environmental earth science will be acquired through problem solving laboratory tutorials and a 1-day field trip. The course is delivered by experts from across the range of earth and environmental sciences.
Course Aims[2]	In the first part of the course the focus is on learning and understanding the evolution of the Universe, the Solar System and planet Earth. This leads onto the module on what makes up the lithosphere, how it was formed and the theory of plate tectonics and mountain building. The study of intrusive (plutonic) and extrusive (volcanic) rocks and associated minerals is studied next. The focus here is primarily on differentiating between basalts and granites and understanding their spatial extent and distribution. Students are also introduced to the history and significance of sedimentary rocks in the context of the formation of the Sydney Basin. In the second part of the course, the processes involved in the formation of the pedosphere (*i.e.* soil) are studied. This includes, understanding of the physical, chemical and biological weathering of rocks (*i.e.* consolidated and unconsolidated) and minerals as a function of interactions with other geospheres (*e.g.* biosphere, atmosphere and hydrosphere). In this section the land degradation issue of soil salinisation is also introduced along with its management. During the course students will be introduced to new methods of remotely sensed data acquisition and applications in geological mapping and natural resource management. This includes the theory of electromagnetic induction, gamma ray spectrometry and hyperspectral image analysis. In addition, the discipline area of palaeontology is introduced along with biological extinction events. The main aim of the course is to introduce theoretical concepts which will be reinforced by field and laboratory based work, enabling students to develop skills in describing and interpreting Earth surface processes, landforms, surface deposits and soils.
Student Learning Outcomes[3]	Fundamental principles → Data collection → Data interpretation → Environmental management *Acquisition of knowledge* → *Application to theory* → *Application to practice* → *Communication to others* Laboratory and field work will provide practical skills in a range of geological, geomorphological and soil laboratory methods. The course also emphasises the development of: • Project planning and management, including data collection and interpretation • Group working, co-ordination and delegation The various assignments will test the knowledge and understanding of geological processes, palaeontology and pedology in the surficial environment, with a focus on landforms and the processes that shape them. Practical skills in conducting field work, laboratory tests and data analysis will also be developed and tested in the course, as well as writing skills at communicating the results. The course will emulate the type of professional activities that students might be expected to undertake on graduation.

3. Course Details (cont.)

[1] UNSW Virtual Handbook: http://www.handbook.unsw.edu.au/2015/index.html
[2] Learning and Teaching Unit: http://www.ltu.unsw.edu.au
[3] Learning and Teaching Unit – Learning Outcomes: http://www.ltu.unsw.edu.au/content/course_prog_support/outcomes.cfm?ss=0

Graduate Attributes Developed in this Course[4]		
Science Graduate Attributes[5] (maybe replaced by UNSW, School or professional attributes)	**Select the level of FOCUS** *0 = NO FOCUS* *1 = MINIMAL* *2 = MINOR* *3 = MAJOR*	**Activities / Assessment**
Research, inquiry and analytical thinking abilities	3	Design, conduct and interpretation of results of field and laboratory work
Capability and motivation for intellectual development		
Ethical, social and professional understanding	3	Role of palaeontology, geomorphology, geology, biogeography and pedology in describing and understanding natural resources and application of knowledge to environmental sustainability and natural resource management
Communication	3	Quizzes on laboratory work and field trip
Teamwork, collaborative and management skills	2	Laboratory work and field trip
Information literacy	2	Use of online information resources

Syllabus Outline	
Major Topics	The course covers the major syllabus topics of Evolution of Life, Sedimentary Environments, Igneous (Plutonic and Volcanic), Glacial, Solar System and Universe and Remote Sensing, Primary and Secondary Minerals and processes and soil forming factors and processes.
Relationship to Other Courses within the Program	The course is an option within the earth science program, with particular relevance to students undertaking environmental science or geology. The course is supported by level 1, 2 and 3 courses in GEOS. GEOS1211 follows on and is complimentary with: GEOS1701 Environmental Systems and Processes GEOS1111 Fundamentals of Geology GEOS1211 will be useful to students who are considering enrolment in any of the following 2nd year courses: GEOS2291 Ground and Surface Water GEOS2181 Earth Materials GEOS2711 Australian Climate and Vegetation GEOS2071 Life Through Time GEOS2721 Australian Surface Environments and Landforms GEOS2101 Sedimentary Environments and 3rd year courses: GEOS3071 Life on a Dynamic Earth GEOS3281 Environment and Contaminant Geochemistry GEOS3621 Natural Hazards and Their Management (Field course) GEOS3711 Biogeography and Human Impact in Australia GEOS3721 Australian Soil Use and Management GEOS3761 Environmental Change GEOS3911 Environmental Impact Assessment

[4] Access the contextualised Science Graduate Attributes and your mapped courses:
http://www2.science.unsw.edu.au/guide/slatig/sciga.html
(Mapped courses are available at this site)

4. Rationale and Strategies Underpinning the Course

Teaching Strategies	The structure of the course is built around the lectures and weekly laboratory classes as well as associated readings. The concepts introduced and discussed in the lectures are reinforced through the self-guided and self-paced wet and computer laboratories and the field trip. **The field trip is compulsory and will be undertaken at the end of Week 5 (Saturday 29th August). Students will incur costs of $100 for the field trip. It is a BEES School Policy that field trip payment is received in advance. Payment is due by Friday 14th August. Preferred payment is by the School of BEES internet site. Further details will be provided early in Session 2. The refund cut-off date is Friday 21st August and will only be considered in the event of a serious documented misadventure.** The theme of the field trip will be to investigate the changes in the landforms and sedimentary environments and soil types in the Central West of New South Wales (e.g. Katoomba, Mt Tomah).	
Rationale for learning and teaching in this course[5],	**Guidelines on teaching:**	***Application to course:***
	1. A climate of enquiry should be developed where students feel challenged	*1. Emphasis of the complexity of geochemical systems – what is known and what is not known*
	2. Activities should be interesting and challenging	*2. Field and laboratory work involves students in planning and experiences*
	3. Material must be perceived as relevant to future study or professional practice	*3. Laboratory and field exercises are based on typical projects that young professionals would undertake.*
	4. There must be dialogue/interaction between lecturers and students	*4. Some of the teaching (especially laboratories) will follow a classical Greek dialectic approach*
	5. There should be multiple teaching methods	*5. Lectures, laboratories, fieldwork and readings*
	6. Goals, outcomes and requirements of the course must be clearly articulated	*6. The relevance of each topic and the purpose and outcomes of the laboratory work will be discussed*
	7. Students are to be encouraged to take responsibility for own learning	*7. Field trips require students to undertake largely undirected note taking; students to interpret nature of data collected during laboratory classes and field trip*
	8. Broad graduate attributes must be developed	*8. See above*
	9. Co-operative work with peers assists learning	9. *Much of the work is group-based,* though reporting is individual
	10. There must be informative and timely feedback to students on progress	10. *Weekly quizzes will be used to assess student learning and build learning outcome*

[5] LTU – Teaching Philosophy: http://www.ltu.unsw.edu.au/content/teaching_support/teaching_portfolio.cfm?ss=0#putting

5. Course Schedule

Some of this information is available on the Virtual Handbook[6] and the UNSW Timetable[7].

Wk	Date	Monday 10-11 am Ritchie Th. *Topic*	*Staff*	*Form*	*Rm*	Date	Thursday 1-2 pm CLB8 *Topic*	*Staff*	*Form*	*Rm*
1	27 Jul	**L1:** Course Outline (FT1) Overview and Introduction	JT	Lect	Ritchie Th.	30 July	**L2:** How did the Earth's Crust Form?	DRC	Lect	CLB8
2	3 Aug	**L3:** The wonder of minerals	ITG	Lect	Ritchie Th.	6 Aug	**L4:** Sedimentary Processes and Products	ITG	Lect	CLB8
3	10 Aug	**L5:** The Sydney Basin	ITG	Lect	Ritchie Th.	13 Aug	**L6:** The Lachlan Fold Belt	ITG	Lect	CLB8
4	17 Aug	**L7:** Anatomy of a volcano: Mt Canobolas	JT	Lect	Ritchie Th.	20 Aug	**L8:** Anatomy of a batholith: Icely/Bathurst	JT	Lect	CLB8
5	24 Aug	**L9:** Rock and Mineral Weathering – Chemical	JT	Lect	Ritchie Th.	27 Aug	**L10:** Rock and Mineral Weathering – Chemical	JT	Lect	CLB8
!!!!!	**29 Aug**	**Sydney, Katoomba, Hartley, Mt Tomah**	**JG, JT, MVDL**	**Field Trip**	**!!!!!**	**!!!!!**	**!!!!! !!!!!**	**!!!!!**	**!!!!!**	**!!!!!**
6	31 Aug	**L11:** The Solar System; Earth and its Place in the Universe	DRC	Lect	Ritchie Th.	3 Sep	**L12:** Geochemistry	DRC	Lect	CLB8
7	7 Sep	**L13:** Biogeography I	ME	Lect	Ritchie Th.	10 Sep	**L14:** Biogeography II	ME	Lect	CLB8
8	14 Sep	**L15:** Palaeontology I	DC	Lect	Ritchie Th.	17 Sep	**L16:** Palaeontology II	DC	Lect	CLB8
9	21 Sep	**L17:** Exploring the 6 great extinctions	MA	Lect	Ritchie Th.	24 Sep	**L18:** Fossils of Riversleigh & Cape York tell us…	MA	Lect	CLB8
	26 Sep	**to 5 Oct Mid Semester Break**								
10	**5 Oct**	**Labour Day Holiday NO LECTURE**	-	-	-	8 Oct	**L19:** The Role of Wetlands	CCG	Lect	CLB8
11	12 Oct	**L20:** Natural Hazards – Volcanoes	CCG	Lect	Ritchie Th.	15 Oct	**L21:** Natural Hazards – Tsunamis	CCG	Lect	CLB8
12	19 Oct	**L22:** Managing Coal Seam Gas in the Sydney Basin	AB	Lect	Ritchie Th.	22 Oct	**L23:** Course Close – VERY IMPORTANT LECTURE	JT/JG	Lect	CLB8

[6] UNSW Virtual Handbook: http://www.handbook.unsw.edu.au/2008/index.html
[7] UNSW Timetable: http://www.timetable.unsw.edu.au/

6. Assessment Tasks and Feedback

Week	Task	Knowledge & abilities assessed	Assessment Criteria	% of total mark	Date of		Feedback	
					Release	Submission BE AWARE: Timing may change!	WHO	HOW
2	Lab Assignment #1	Plate Tectonics	Laboratory Report	5	**In lab**	Week 2	**Cohen**	Moodle
3	Lab Assignment #2	Sedimentary Rocks and Minerals	Practical Test	5	**In lab**	Week 4	**Graham**	Moodle
4	Lab Assignment #3	Igneous Rocks	Practical Test	5	**In lab**	Week 5	**Graham**	Moodle
5	Lab Assignment #4	Laboratory description of soil monoliths Sodosol	Multiple Choice Quiz	5	**In lab**	Moodle time	**Triantafilis**	Moodle
!!!!!	**29 Aug**	**Sydney, Katoomba, Hartley, Mt Tomah**	**JG, JT, MVDL**	20		Moodle time	**Goff, Triantafilis, van der Ley**	Moodle
6	Lab Assignment #5	Laboratory description of soil monoliths Ferrosol	Multiple Choice Quiz	5	**In lab**	Moodle time	**Triantafilis**	Moodle
7	Lab Assignment #6	Biogeography	Laboratory Report	5	**In lab**	Week 8	**Ebach**	Moodle
8	Lab Assignment #7	Palaeontology 1	Laboratory Report	5	**In lab**	Week 8 (end of lab)	**Gillespie**	Moodle
9	Lab Assignment #**8**	Palaeontology 2	Laboratory Report	5	**In lab**	Week 9 (end of lab)	**Gillespie**	Moodle
	No more labs	**No more labs**	**No more labs**					
Final	Final Examination			40				

7. Additional Resources and Support

Text Books	***Earth Science***
Recommended **Recommended**	Branagan, D.F., Packham, G.H. (2000). Field Geology of New South Wales. New South Wales Department f Mineral Resources, Sydney, Australia. Chernicoff, S., Fox, H.A. and Tanner, L.H. (2002). *Earth: Geologic Principles and History*. Conte, D.J., Thompson, D.J. Moses, L.L. (1997). *Earth Science: An Integrated Perspective.* Wm. C. Brown Publishers. Marshak, S. (2005). *Earth: Portrait of a Planet*. WW Norton and Company. **Marshak, S. (2007). *Essentials of Geology*. W.W. Norton and Company, NY** **Marshak, S. (2009). *Essentials of Geology*. W.W. Norton and Company, NY** Marshak, S. (2012). Earth Portrait of a Planet.+Geotours Workbook Norton Lutgens, K. and Tarbuck, E.J. (2003). *Essentials of Geology*. Prentice Hall. Skinner, B.J., Porter, S.C. (2000). *The Dynamic Earth.* John Wiley and Sons. Stanley, S.M. (1999). *Earth Systems and History.* W.H. Freeman and Company. Tarbuck, E.J., Lutgens, K. (2005) *Earth: An Introduction to Physical Geology*. International Edition. Prentice Hall.
Text Books	***Geophysics***
	Reynolds, J.M. (1997). *An Introduction to Applied and Environmental Geophysics*. John Wiley and Sons. Mussett, A.E., Aftab Khan, M. (2000). *Looking into the Earth*. Cambridge University Press.
Text Books	***Biogeography***
Recommended	**Parenti, L.R. & Ebach, M.C. (2009). Comparative Biogeography: Discovering and Classifying Biogeographical Patterns of a Dynamic Earth. University of California Press, Berkeley.**
Text Books	***Soil***
Recommended	Sharman, M.R., Puri, G (2002) *Essential Soil Science*, Blackwell Publishing, Oxford. Brady, N.C., Weil R.R. (2002). *Elements of the Nature and Properties of Soil*. Prentice Hall. Charman, P.E.V., Murphy, B.M. (eds.) (2000). *Soils, Their Properties and Management, 2nd Edition*, Sydney University Press, Sydney. Gerrard, J. (2003). Fundamentals of Soils. Routledge. London, UK. **McKenzie, N.J., Jacquier, D., Isbell, R., Brown, K. (2004). *Australian Soils and Landscapes: An Illustrated Compendium*. CSIRO, Canberra.** Singer, M.J. and Munns, D.N. (2006). Soils: an Introduction. Prentice Hall.

7. Additional Resources and Support (cont.)

Additional Readings	Course lectures will include any additional readings suggested by academics
Recommended Internet Sites	*terra***GIS**: A web-based GIS for Natural Resource Management in cotton growing areas (http://www.terragis.bees.unsw.edu.au/) Australian Collaborative Land Evaluation Program (http://www.clw.csiro.au/aclep/) The Australian Soil Classification (http://www.clw.csiro.au/aclep/asc_re_on_line/soilhome.htm) United States Geological Survey (Hazards) (http://www.usgs.gov/hazards/) Geoscience Australia (Hazards) (http://www.ga.gov.au/hazards/)
Societies	Australian Soil Science Society (http://www.asssi.asn.au/) Geological Society of Australia (http://www.gsa.org.au/) Geological Society of Australia (NSW Division) (http://www.gsa.org.au/divisions/nsw.html)

8. Required Equipment

Equipment Required **PURCHASE:**	**Students are required to wear protective footwear (i.e. closed toe shoes) in all laboratory classes held in the Biosciences laboratory Room G12 (i.e. See 6: Assessment Tasks and Feedback) and during the field trip held to Katoomba, Mt Tomah). This includes casual and sports shoes but excludes sandals, thongs, etc.**
• **LAB COAT**	**A laboratory coat is necessary in laboratory classes held in the Biosciences laboratory (i.e. See 6: Assessment Tasks and Feedback).** **A data stick may be required to download powerpoint presentations used as laboratory templates for electronic tutorials (i.e. See 6: Assessment Tasks and Feedback).**
• **HAND LENS**	**A hand lens is needed for some of the laboratory assignment (i.e. See 6: Assessment Tasks and Feedback).**

9. Course Evaluation and Development

Student feedback is gathered periodically by various means. Such feedback is considered carefully with a view to acting on it constructively wherever possible. This course outline conveys how feedback has helped to shape and develop this course.

Mechanisms of Review	Comments or Changes Resulting from Reviews
CATEI[8]	Form A: Course Evaluation - Summary Report

Faculty : Science
School : Sch Biol, Earth and Environ Sci
Course : GEOS1211-Environmental Earth Science
Survey Description : Evaluate the Course GEOS1211
Survey Alternative : Evaluate the Course GEOS1211
Session : 2014 Teaching Period - T2
Enrolled : 76
Repondents : 27
Survey Type : ONLINE (06 Oct 2014 - 06 Nov 2014)
Administration Date : 07 Nov 2014

Mode of Study:			Gender:			Residency Group:		
Full Time	26	96%	Male	10	37%	Local	22	81%
Part Time	1	4%	Female	17	63%	International	5	19%

		SA	A	MA	MD	D	SD	NA	L&T Agree			GCA scale	Mean Rating	Response Rate
		%	%	%	%	%	%	%	C	S	F			
Q1.	The aims of this course were clear to me	22	52	22	4	0	0	0	96	90	93	63	4.93	100%
Q2.	I was given helpful feedback on how I was going in the course	15	33	26	19	4	0	4	77	77	83	39	4.38	100%
Q3.	The course was challenging and interesting	33	48	15	4	0	0	0	96	90	93	69	5.11	100%
Q4.	The course provided effective opportunities for active student participation in learning activities	33	56	7	0	4	0	0	96	92	90	71	5.15	100%
Q5.	The course was effective for developing my thinking skills (e.g. critical analysis, problem solving).	19	59	22	0	0	0	0	100	86	91	66	4.96	100%
Q6.	I was provided with clear information about the assessment requirements for this course.	41	33	15	7	4	0	0	89	86	92	63	5	100%
Q7.	The assessment methods and tasks in this course were appropriate given the course aims	19	52	15	7	4	0	0	88	88	93	55	4.77	96%
Q8.	The integration of the different components of the course (e.g. laboratory, tutorials and lectures) was useful	33	52	11	4	0	0	0	96	86	91	71	5.15	100%
Q9.	I learnt a lot from this course	30	63	7	0	0	0	0	100	89	92	74	5.22	100%
Q10.	Overall, I was satisfied with the quality of this course	22	48	30	0	0	0	0	100	89	91	64	4.93	100%

Other

Student comments:

"The field trip covered a variety of interesting sedimentary environments and the sequence was well developed in order to develop an understanding of the depositional environment. Overall it was a very good field trip."

"The diversity of topics studied, which kept it interesting and provided a good base of knowledge for more specialised upper level courses. Also the practical elements; laboratories, field trip. They weren't too difficult but reinforced the material well."

"The integration of different teaching mediums (i.e. computer and soil laboratories). The field trip was also useful in developing the knowledge and skills acquired in lectures and laboratory classes."

[8] Science CATEI procedure: http://www2.science.unsw.edu.au/guide/slatig/catei.html

10. Administration Matters

Expectations of Students	**Attendance at lectures, laboratories, field trip and final exam is compulsory.** Bioscience laboratories Room G12 are available for student use whenever the laboratories are not being used for teaching. www.bees.unsw.edu.au/current/studentoffice.html and www.bees.unsw.edu.au/current/ugradguidelines.html
Assessment components	**Laboratory exercises (8) 40%** **Field tutorial quizzes (2) 20%** **Final Examination 40%**
Assignment Submissions **PENALTIES**	• **Assignments and reports must be submitted on time. No extensions will be permitted (apart from the normal provisions in the University calendar).** **Penalties for late submission – 10% per day up to 5 days, then mark is 0%** • **Completed laboratory exercises and assignments with cover sheet must be submitted to a laboratory demonstrator no later than the start of the next laboratory session** **DO NOT SUBMIT YOUR ASSIGMENT TO THE BEES OFFICE ON THE GROUND FLOOR, WE DO NOT CHECK FOR ASSIGMENTS THERE SO IF YOU SUBMIT THERE YOU WILL RECEIVE 0%** • • **Note again, the Field Trip is COMPULSORY!!!** a) **If you do not pay for the Field Trip and do not go on it = FAIL** b) **If you do not pay for the Field Trip and go on it = FAIL** c) **If you pay for the Field Trip but do not go on it = FAIL** • **Note - The FINAL EXAM is COMPULSORY. Failure to attend = FAIL**
Occupational Health & Safety[9]	**See Section 11.**
Travel	**Students will need to arrange their own food for the field trip on Saturday, Saturday 29th August. Field trip costs usually amount to $100. This needs to be paid NO LATER THAN two weeks prior using BEES web payment pages.**
Assessment Procedures	**Normal UNSW rules apply to illness, misadventure or other situations which affect attendance at class or submission of assessment tasks.**
Equity and Diversity	**Students who have a disability that requires some adjustment in their teaching or learning environment are encouraged to discuss study needs with the course Coordinator prior to the course commencing, or with the Equity Officer (Disability) in the Equity and Diversity Unit (9385 4734 or www.equity.unsw.edu.au/disabil.html). Issues to be discussed may include access to materials, signers or note-takers, the provision of services and additional exam and assessment arrangements. Early notification is essential to enable any necessary adjustments to be made. Information on designing courses and course outlines that take into account the needs of students with disabilities can be found at:** www.secretariat.unsw.edu.au/acboardcom/minutes/coe/disabilityguidelines.pdf

[9] UNSW Occupational Health and Safety: www.riskman.unsw.edu.au/ohs/ohs.shtml

Grievance Policy[10]	School Contact	Faculty Contact	University Contact
	Dr Jess Sammut School of BEES Tel: 9385 8281	A/Prof Julian Cox Associate Dean (Education) julian.cox@unsw.edu.au Tel: 9385 8574 or Dr Gavin Edwards Associate Dean (Undergraduate Programs) g.edwards@unsw.edu.au Tel: 9385 4652	Compass University Counselling Services[11] Tel: 9385 5418

[10] UNSW Grievance Policy: http://www.infonet.unsw.edu.au/poldoc/student_grievance_resolution.pdf
[11] Compass – University Counselling Service http://www.counselling.unsw.edu.au/compass_programs/

11. OH&S OBLIGATIONS

The School of BEES recognises its obligations to provide a safe working environment for all persons involved in School-related activities. To achieve this goal with regards to teaching and learning, the School adopts the UNSW Occupational Health and Safety Policy (2001) and the UNSW OH&S Responsibility and Accountability Document (2001). These documents stipulate that everyone attending a UNSW workplace must ensure their actions do not adversely affect the health and safety of others. This outcome is achieved through the establishment of a documented chain of responsibility and accountability for all persons in the workplace, extending from the Head of School through to the students undertaking courses offered.

As part of this chain of responsibility and accountability, the Course Authority is responsible for ensuring all activities associated with this course are safe. The Course Authority has undertaken detailed risk assessments of all course activities and identified all associated potential hazards. These hazards have been minimised and appropriate steps taken to ensure your health and safety. For each activity, clear written instructions are given and appropriate hazard warnings or risk minimisation procedures included for your protection.

It is the student's responsibility to prepare for all practical work. Students should be familiar with the written procedures scheduled for the practical class and identify all personal protection requirements needed to complete the exercise in a safe manner. Students must comply with all safety instructions given by the Course Authority and/or Laboratory/Field Demonstrator, and observe the Safety Information located outside or within teaching rooms. If you are unsure of any safe operating procedures or written instruction regarding safety, you should seek further information from the Course Authority and/or Laboratory/Field Demonstrator before attempting the task. Failure to comply with safety instructions may, in the first instance, be considered as a form of academic misconduct. If the outcome of a student's failure to comply with safety instructions results in personal injury, or endangers the health and safety of others, then the matter may be dealt with by WorkCover as a breach of the NSW OH&S Act (2000).

Conditions Of Entry To Courses

To abide with **Section 10 OCCUPATIONAL HEALTH AND SAFETY ACT** of the **N.S.W. Occupational Health & Safety Act (2000):**

Duties of controllers of work premises, plant or substances

(1) A person who has control of premises used by people as a place of work must ensure that the premises are safe and without risks to health.

(2) A person who has control of any plant or substance used by people at work must ensure that the plant or substance is safe and without risks to health when properly used.

(3) The duties of a person under this section:

(a) do not apply to premises, plant or substances used only by employees of the person, and

(b) do not apply to premises occupied only as a private dwelling or to plant or substances used in any such premises, and

(c) extend to the means of access to or exit from a place of work, and

(d) apply only if the premises, plant or substances are controlled in the course of a trade, business or other undertaking (whether for profit or not) of the person.

(4) In this section, a person who has control of premises, plant or substances includes:

(a) a person who has only limited control of the premises, plant or substances (in which case any duty under this section applies only to the matters over which the person has control), and

(b) a person who has, under any contract or lease, an obligation to maintain or repair the premises, plant or substances (in which case any duty under this section applies only to the matters covered by the contract or lease).

ENTRY TO SCHOOL BUILDINGS, AND ATTENDANCE ON FIELD EXCURSIONS, WILL BE DENIED TO STUDENTS WHO DO NOT ABIDE BY THESE CONDITIONS.

A/Prof D. R. Cohen, Head of School of BEES

12. 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 written document (whether published or unpublished), composition, artwork, design, drawing, circuitry, computer program or software, web site, Internet, other electronic resource, or another person's assignment without appropriate acknowledgement;
- paraphrasing another person's work with very minor changes keeping the meaning, form and/or progression of ideas of the original;
- piecing together sections of the work of others into a new whole;
- presenting an assessment item as independent work when it has been produced in whole or part in collusion with other people, for example, another student or a tutor; and
- claiming credit for a proportion a work contributed to a group assessment item that is greater than that actually contributed.†

For the purposes of this policy, submitting an assessment item that has already been submitted for academic credit elsewhere may be considered plagiarism.

Knowingly permitting your work to be copied by another student may also be considered to be plagiarism.

Note that an assessment item produced in oral, not written, form, or involving live presentation, may similarly contain plagiarised material.

The inclusion of the thoughts or work of another with attribution appropriate to the academic discipline does *not* amount to plagiarism.

The Learning Centre website is main repository for resources for staff and students on plagiarism and academic honesty. These resources can be located via:

www.lc.unsw.edu.au/plagiarism

The Learning Centre also provides substantial educational written materials, workshops, and tutorials to aid students, for example, in:

- correct referencing practices;
- paraphrasing, summarising, essay writing, and time management;
- appropriate use of, and attribution for, a range of materials including text, images, formulae and concepts.

Individual assistance is available on request from The Learning Centre.

Students are also reminded that careful time management is an important part of study and one of the identified causes of plagiarism is poor time management. Students should allow sufficient time for research, drafting, and the proper referencing of sources in preparing all assessment items.

* Based on that proposed to the University of Newcastle by the St James Ethics Centre. Used with kind permission from the University of Newcastle
† Adapted with kind permission from the University of Melbourne