

School of GeoSciences

Minutes for the Earth Science Student Staff Liaison Meeting, Wednesday 25th March 2015

Cockburn Museum, Grant Institute

Staff Present: Linda Kirstein (Chair); Alex Thomas; Andrew Curtis; Anton Ziolkowski; Bryne Ngwenya; Dan Goldberg; David Stevenson; Emma Latto (SSC); Godfrey Fitton; Greg Cowie; Hugh Pumphrey; Ian Main; Jenny Tait; Ken O'Neill (Minutes); Mark Wilkinson; Mikael Attal; Rachel Wood; Raja Ganeshram; Richard Essery; Simon Harley; and Stuart Gilfillian.

Students Present: Beth Hadley; Bobi Archer; Bria Steven; Christopher Wright; Elizabeth Balmer; Elliot Noble; James Murphy; Julia Ziemann; Lucia Andreattiova; Margot Debyser; Matthew Downie; Megan Rogers; Mihai Cimpoiasu; Nandini Nagra; Nina Kahr; Parissa Kohabi; Paul McLachlan; Raphael Say; Ross Mclean; Tasmin Fletcher; Vlad Macovei; and Will Moody.

Apologies: Alastair Robertson; Chris McDermott; Eliza Calder; Florian Fuisseis; Geoff Bromiley; Jenny Tait; Kate Saunders; Kathy Whaler; Liz Elphick; Noel Gourmelen; Rebecca Astbury; Ruth Doherty; Simon Jung; and Wyn Williams.

Introduction

Linda Kirstein (LK) welcomed everyone to the meeting and explained that the meeting was in two parts, with the Honours courses first and then the Pre-Honours ones.

Honours Courses

FIFTH YEAR

Fifth Year Geology and GPG

Lucia Andreattiova said that all the students were happy with the courses and that their dissertations were going well. However, she said it was not clear what was expected of them for Frontiers in Earth Science's assessments.

Simon Harley (SH) said the assessment details were in the course's EUCLID entry and that staff planned to go through the essay assignment with students shortly.

THIRD YEAR

Third Year Geology

The reps said the feedback for **Geochemistry (EASC09050)** was mixed but tended towards positive. While the students were unsure of the exam's format they liked the course material, although there were concerns that one person's presentation counted for 10% of the course mark for four people. They asked that the course's labs were in the KB Centre in future.

Alex Thomas (AT) said that they will try to have the labs in the KB Centre and that the staff thought the presentation assignment worked well and expected the students to work together in its production and presentation style. One member of the group was chosen at random to do the presentation and all students were given the marking

scheme for the assessment, with marks awarded for the structure, the presentation and keeping to the time limit.

The reps said the feedback for **Geology and Landscapes (EASC10079)** was positive in general. They found the ArcGIS work useful, described the assessment as good and found the cross-section work informative.

LK asked whether there was a clear link between the course and the programme's dissertation, which Mikael Attal (MA) and the students agreed with.

The reps said the students enjoyed **Dynamic Stratigraphy (EASC10097)** but that the course covered a lot of material. The field trip was good. However, they said that they were not clear what was needed for the rock relations diagram assessment as they had not done anything similar previously. They admitted that Introduction to the Geological Record had helped in this regard but felt that they needed a better grounding in the matter.

ACTION: Stuart Gilfillan to respond.

Response: I am glad to hear that students enjoyed the course and particularly the fieldtrip which I was very keen to introduce as part of the extensive revision of the course. I am aware that it covers a lot of material, and some of this was due to the unfortunate timetable compression due to providing it to both 3rd and 4th years students at the same time. The course is under constant review and I will take on board the comments regarding the rock relation diagram and will provide an example for next year's students. However, as far as I am aware students have completed similar rock relation diagrams in both Spain and Mull in the 3rd year, so should be familiar with the concept.

The reps said that all the students were enjoying **Igneous Petrogenesis (EASC10095)** and had no other comments regarding the course.

The reps report that the students were enjoying **Volcanology (EASC10091)**, found the practicals useful and informative. They described the course's project as a good idea.

The reps said students were positive about **Quantitative Methods in Earth Sciences (EASC09047)** overall. While they liked the link between lectures and practical, they would like to see more practical lectures. One student thought the course should have more spread out assignments.

Richard Essery said he was thinking of including more practical lectures in the course. He would like to move towards a workshop approach but finding a suitable location is an issue.

The reps said students like **Hydrocarbons and Geophysical Exploration (EASC10093)**, adding that the link between lectures and workshops was good, as were the computer labs. They felt that more practice questions were needed for the assessed practicals, with two students finding the second one rushed.

Mark Wilkinson (MW) said this was the first time the second practical had been assessed; and that next year the second of the two seismic interpretation exercises would be used instead.

There was no feedback for **Ore Mineralogy, Petrology and Geochemistry (EASC10094)**.

The students have enjoyed the **Spain Field course (part of Geology field courses EASC09029)** but suggested putting rock relations diagrams into Introduction to the Geological Record.

SH pointed out that rock relations diagrams forms part of Field Skills for Geologists Inchnadamph field trip.

Third Year Environmental Geoscience

Bria Steven (BS) said the students were not fond of **Geochemistry (EASC09050)**, although they did come round to the presentation assignment. They thought that the coursework should have a higher percentage of the overall weighting. They found the lectures boring plus it was hard to connect and relate to the 'geology' issues. They described the machine lecture as very in-depth and detailed, but added that the practicals were useful. They like the course's assignments.

AT said they had run a stop-start review during the course and agreed about the need to re-balance the course weighting but explained this was the first time it had run. While he accepted the issue of a Geology- Environmental Geoscience balance, he explained that a lot of material was needed as a grounding for the high temperature geochemistry discussions.

BS said students had enjoyed **Environmental Techniques and Applications (EASC09045)** and found it very useful. They described the assessment as hard but good and enjoyed the lab work in small groups. The students commented that Raja Ganeshram should check his email more often but appreciated he had set office hours, which was useful.

ACTION: Raja Ganeshram to respond to the students' comments.

RG Response: I checked the response time of my emails. I have had 22 emails from students of which 14 were responded to on the same day, another 6 the next day and 2 answered before 3 days. Most this email traffic was during the last few weeks of the report deadline during this time I also ran office hrs Tuesdays and Thursdays to help with interpretation and writing. I have also instructed the students to have ETA as subject line when they email me so the emails are not lost in the volume of email traffic.

BS said students had learned a lot from the Literature Reviews for **Field Course in Tropical Marine and Terrestrial Geoscience (EASC09036)**. However, they suggested that it would help to have one of the reviews earlier so that the feedback could help with writing the next two. All the students were looking forward to the field trip.

Greg Cowie said that if the first assignment was set earlier in the semester students would panic but that he would consider it. Greg appreciated that the reviews were a learning curve but students' inexperience at writing them was taken into account when marking them.

Third Year Geophysics

Mihai Cimpoiasu (MC) said that the students felt the courses were going well but suggested that more tutorials were needed for exam-only courses, such as **Fields and Waves (EASC09033)**. MC added that having sessions that were half lecture and half tutorial would help. He added that this was the first year of the programme that there were no courses from the School of Physics. MC finished by saying that the lectures do not ask if students understand the issues.

*Anton Ziolkowski said that there are two tutorials after the lectures finished where he goes over previous exam questions. He said that these sessions also include a Q&A session. Andrew Curtis (AC) added that he runs similar sessions for **Exploration Geophysics (EASC09040)**, which allows him to focus on areas the students feel they need work on.*

MC said students were unhappy with the balance of coursework in Semester One and Two, with lots of assignments in the first half of the year and few in the second half. He also said that there was considerable overlap between Exploration Geophysics and Fields and Waves.

Hugh Pumphrey (HP) said that this was the first time the issue was raised, adding that it was hard to tell when timetabling courses the balance of coursework. However, he said that he would look into the issue and discuss it with the Geophysics Course Organisers.

*HP said he felt that there was extra time during **Geophysical Inverse Theory (EASC09038)**, which he could make use of. MC said the students were happy with the course's content level.*

HP asked MC whether Fields and Waves would work better with a two-hour lecture or two one-hour lectures.

MC said the latter and HP agreed, saying it allowed students to better digest the content.

David Stevenson said that he asks staff for Geophysics projects early in the Summer and generally only receives them two or three weeks before the start of Semester 1. He added that supervisors tend to pick projects based on how keen students appear about the subject. HP added that students should approach staff early and register their interest in the subject area.

Third Year GPG

The reps said students found **Quantitative Methods in Earth Sciences (EASC09047)** good but the lectures were not always relevant to the practicals.

The reps described **Geology and Landscapes (EASC10079)** as aimed at their degree programme and thought the course's project was perfect.

The reps said that some of the 20 credits Geography Level 10 courses featured a strong human geography element, which they were not prepared for.

LK responded that some courses had indeed a strong 'human' component which some students do like, but discussions with the PT when selecting option choices can highlight which courses these are.

The reps described **Ice and Climate (GEGR10119)** as vague in terms of the assessments and the exam. They also said that the course, which is running for the first time, felt like it was made up as it progressed, with no mention of mock exam questions.

AT responded that they were planning on providing mock exam questions since no previous ones were available.

**ACTION: Comment to be passed to the Geography SSLC.
LK has forwarded to NH.**

The reps said students enjoyed **Volcanology (EASC10091)** and found it a good course.

The reps raised that there was a course work imbalance between Semester One and Two, citing **Structural Geology (EASC09002)** and **Volcanology (EASC10091)**.

SH asked whether this was down to the students adjusting to the demands of Honours work but both reps said it was due to the volume of work.

The reps said that the dissertations were fine but they had problems finding and contacting advisors. They suggested running a networking meeting would help with this.

MA said that the call for GPG projects was led by students input.

FOURTH YEAR

Fourth Year Geophysics

Nina Kahr (NK) said the students are generally happy with the feedback they have received to date for the projects courses, **Geophysics Project (EASC10065)**, **Geophysics Project 1 (EASC10052)** and **Geophysics Project 2 (EASC10053)**. However, she did raise the time it took to receive feedback, which HP said was down to the individual members of staff.

NK said that **Global Geophysics (EASC10037)** could benefit from more visuals in the lecture slides. She added that it was not clear what was expected of students during the course's seminars.

ACTION: Kathy Whaler to respond.

NK said students thought that **Exploration Geophysics (EASC09040)** would benefit from additional teaching hours, specifically at the start of the course and during the introduction to topics, such as inverse theory.

NK said students thought **Frontiers in Geophysics (EASC10070)** featured excellent teaching and had a good structure, although they did feel that the time was not used wisely. However, they felt that the course would benefit from some short coursework exercises and including more group discussions for the projects would improve the course.

ACTION: Wyn Williams to respond.

Response: The course currently has three group project discussions over three weeks. We could include more, but it certainly would not benefit the students to extend the discussions beyond 3 weeks. During the course this year, in response to student requests, I gave additional lectures on how to write reports and abstracts, and how to do critical reviews of scientific articles. I think the course has been improved from the student feedback this year. Much of this feedback was addressed during the course and so was implemented for the current cohort. The course is meant to be student led, with a light-touch direction and supervision from staff. I would be hesitant to give so much direction that critical scientific judgement is replaced by formulaic literature reviews. The course has undergone significant change over the last few years, and I would like to strike a balance between change requested by the students and what I think maybe difficult but beneficial learning activities.

Overall, students were satisfied with the degree programme but felt there was not enough focus on data processing, in particular seismic data. They also wanted to see computer methods discussed earlier.

HP said following the switch to using the Python programming language, staff were discussing introducing it in Physics of the Earth.

NK said students would also welcome introducing computer programming during Second Year.

*AC said it was possible to introduce programming practicals and data processing into **Exploration Geophysics** and could do the same for **Exploration Seismology (EASC10038)**. However, he agreed with the students that something was also need during Second Year.*

Fourth Year Environmental Geoscience

Vlad Macovei (VM) said that students enjoyed **Global Environmental Change (EASC10050)** and thought that the presentations were a good feature. He added that they felt confident about the subjects covered.

VM said that students enjoyed **Earth Surface Processes (EASC10084)** but that the essay topics were released very late.

Bryne Ngwenya (BN) said this was due to an issue with an individual staff member and TO were aware.

VM said that there was an imbalance of coursework in the second half of Fourth Year, with the dissertation submitted in early January and then no assignments for four to six weeks. He said the students found that First and Second Year were too focussed on Geology and described **Geomaterials** as a difficult course.

VM also said that there is an uneven balance of optional courses in Fourth Year, with most in Semester 1 and most of the Semester 2 courses not appealing to Environmental Geoscience students. He added that most of the options were Geology-based courses. However, they were happy that not all the courses were exam based. VM added that not all the course work submissions were anonymous but that the students wanted them to be. He added that practical work was the most important aspect of the degree programme and that more field trips were needed. VM described the Jamaica field trip as the highlight of their studies.

VM said the students wanted to see a greater amount of time spent on career options, saying that the consultancy was the only option explored during the talk at the beginning of Fourth Year. VM said the Environmental Geoscience students had enjoyed the Inchnadamph field trip, especially the first week. Lastly, he asked if Environmental Geoscience could have an integrated Masters programme.

BN said there were plans to move the Environmental Geoscience dissertation deadline to Week 5 of Semester 2. He added that the School was planning to run a Masters programme and would seek the views of current students shortly. BN said they would ensure that coursework submissions were anonymous in the future but that students needed to play their part as well by not putting their names on the assignments. He also said they would discuss moving the Oban field trip to the Fourth Year. LK said the School was aware of the lack of career options discussed and were hoping to have more structured options for students.

Fourth Year Geology

The reps said that students liked the Week 1 meeting on the course outline for **Frontiers in Research (EASC10089)**. They said having the seminars running throughout the academic year would be better, that they should include the Hutton Club lectures and they would appreciate seeing a table of seminar attendance on Learn. They said students would also like to see the course feature more on scientific writing styles. The reps added that there was confusion re the course's timetabling and that the coursework submission dates were very close to the dissertation's. They said that people disliked the 24-hour essay but understood its inclusion, while the Enterprise Initiative was enjoyed by all.

The reps said students wanted the dissertation to allow for more than just mapping projects. Students also wanted to have a greater choice of optional courses and commented on the contradictory information they received from lecturers regarding writing styles.

SH said that students needed this experience earlier in their careers, suggesting having a formative 24-hour essay.

HP said the focus on mapping projects for the dissertation was an accreditation issue. FF has added Hutton Club lectures to the seminar list.

Fourth Year GPG

The reps said the students would appreciate more information on what was covered by the School's contribution to printing the dissertations, such as including a pocket for materials at the back. They also wanted to have group discussions with the dissertation advisers, plus scrapping the October presentation but keeping the meeting with the supervisors. Lastly, the reps asked that the dissertation's deadline was brought forward in line with the other degrees.

The reps said students would like to see better communications between Drummond Street and Grant, as well as having the Environmental Geoscience options available to GPG students.

The reps said students wanted **Cyprus Excursion and Synoptical Practical for Geologists (EASC10068)** to feature more information earlier on in the course. They also asked if it was possible to have Alastair Robertson's slides with the voice recording.

LK commented that communication between Grant and Drummond is an ongoing issue but has been trying to raise awareness with the TO in both locations to be considerate of the GPG programme.

ACTION: MA to discuss with current year 3 students re deadline.

Pre-Honours Courses

Global Tectonics and the Rock Cycle (EASC08020)

James Murphy (JM) said the students found that cog books were better as a revision tool rather than helpful for teaching theories. He said there was an improvement in the correlation and connection between lectures and practicals, although these were less obvious with Jenny Tait's section. JM said that students appreciated the School acting on the suggestion in Semester 1 of having the practicals include introductions and conclusions. He said students found the first part of the course less interesting and wanted to learn more directly applicable subjects so that they were prepared when it came to the field trips. The students described HS as a very good lecturer who provides comprehensive notes and was keen to make sure they all understood the subject.

MA said that people discover the techniques by using them in the field having learned the theory during the lectures. He added that this develops over the course of the field trips, with more field work leading to an increased knowledge base. Rachel Wood (RW) added that the lab class sizes were disproportionate in the alternative sessions due to timetable constraints although students may also be unwilling to attend the Friday afternoon session. This made it hard to teach in the labs. She suggested introducing a maximum number for each lab to create a better spread, with preference given to students with timetable clashes. More demonstrators may be requested.

Meteorology: Weather and Climate (METE08002)

The rep, Aleksandra Zaforemska, was not present and the students who were present commented on her lack of visibility and not seeking feedback. They said that course had a good structure and there were no major problems, although they would prefer more preparation before the first lab report.

ACTION: HP to pass on the comments to the Course Organiser, Ruth Doherty.

Response HP: The lab book already states how long the report should be and provides a set of section headings with a sentence stating what should go into each. It is important that students read the information provided.

Introduction to Geophysics (EASC08008)

The reps said students like the course's content and the range of topics covered, adding they had learned a lot from the lecturers and the lectures. The students like the link between lectures and labs, with the former making it easier to understand the latter. However, some students found some of the practicals hard to follow. They appreciated the background reading but said that the cog books were better used as revision tools than an introduction to subjects.

The reps said students were unsure what was important. They added that most felt the course needed more structure. While students felt the labs were good, the reps said they felt some tutorials would help improve the courses. However, they said the lectures were well organised and lecturers distinguished between background information and examinable subjects. The reps also said that the demonstrators were helpful.

Ian Main (IM) said that the School of Physics delivers their lectures using cog books, as well as mini-quizzes and clickers.

Earth Modelling and Prediction 2 (EASC08018)

Bobi Archer (BA) said students thought the course had a positive structure and the coursework was good, as well as having real-life applications. However, they did think a greater cross-reference to **Earth Modelling and Prediction (GESC08002)** was needed. They also thought that some of the more complex issues were dealt with overly quickly in tutorials and think they would benefit from group exercises. BA also said that the large tutorial groups were intimidating and the students would like them to include some group work, as the School of Maths does. They also thought that more tutorials with greater structure were needed, commenting that the current ones feel like supervised revision sessions. BA also reported that there were mistakes in the lectures and tutorials.

Dan Goldberg (DG) said that the course did not have enough demonstrator to include group exercises. He agreed with the need for more tutorials but said that more staff resources were required to do so. DG also said that he gave three lectures and felt that students had missed the key points discussed so highlighted them again at the end. He added that the course was covering a lot more material than Maths courses do. However, he suggested making tutorials mandatory.

LK said that Course Organisers were responsible for asking the Teaching Organisation for additional resources.

Introduction to the Geological Record (EASC08017)

Margot Debyser (MD) said students were happy with the course's structure, describing it as well organised. They found the lectures interesting and the practicals were co-ordinated. MD said students also found the Innovative Learning Week tutorial sessions very useful. However, MD reported there were not enough tutors in the lab sessions and found the two-person labs frustrating. They also wanted the course to include more mapping exercises and clearer instructions, adding that it was not always clear what students needed to do. Students felt that the labs needed some knowledge not taught in the lectures, with MD citing work on geological history areas. MD added that if students have no geological background it made this aspect hard. Students felt that the timing of the course's first field trip was inconvenient as it left on Easter Monday.

MA said that this was an area they were planning on improving but added that staff do not expect students to know all areas. AT added that Evolution of the Living Earth (EASC08023) and Global Tectonics and the Rock Cycle cover this area as well. RW said the School designed the mapping work to be progressive with a deliberately steep learning curve. LK highlighted that Easter Monday was not a bank holiday for the University.

LK also raised the forthcoming Enhancement-Led Institutional Review, due in 2016.

Oceanography (EASC08004)

The reps said that only three students responded to the course survey. Those who responded said they enjoyed AT's satirical delivery and preferred his approach to the

more serious Simon Jung (SJ). The students said SJ's lectures did not flow and featured lots of questions they did not know the answers to. The reps said this led SJ to staring at the students in silence while he waited for an answer. There was a mixed view of the practicals, describing them as relevant to the course but needing to be streamlined, highlighting the amount of graph drawing done. The reps said the introduction to the practicals were not always relevant and often were over long. The students appreciated the stop-start and Q&A sessions in the course but felt that it should include tutorials.

AT agreed that the practical introductions needed improving but said the amount of graph work was because students kept doing the work wrong. He added that the lecturers had posted exam-style and tutorial questions on the course's Discussion Forum. However, none of the students responded to them despite staff highlighting them in lectures.

Physics of the Earth (EASC08016)

Nandini Nagra (NN) said the students enjoyed the courses content and the practicals. However, the times of the practicals on the timetable and in Learn did not match what the lecturers said. The students enjoyed the formative practical and thought it was good to have it in the first week. They found the feedback session helpful. NN said that introducing computer programming would fit well in the course's curriculum.

IM said Learn and the timetable was correct but that other staff on the teaching team thought the practical times were the same as last year, hence the confusion. He said they planned to re-introduce holistic timetables next year, saying that the new handbook format did not include as much information as the previous one. IM agreed the course was the right place to include programming.

A.O.B

Linda Kirstein encouraged all students to complete the National Student Survey (NSS) and to encourage their peers to do so also.