

Minutes of 2018 Earth Science Articulation Meeting



John Greenough photo

Hosted by UBC Vancouver, May 23 to 25th, 2018

Meeting called to order at 9:20 AM, May 24th

Chair: Mary Samolczyk

Attendance: Sarah Thornton (U.Vic), Mary Samolczyk (Yukon), Steve Earle (TRU-OL), Derek Turner (Douglas), Terrence Day (Okanagan), Tark Hamilton (Camosun), Meg Stainsby (BCCAT), Deirdre Hopkins (Selkirk), Gordon Weary (NWCC), Nancy van Wagoner (TRU), Brett Gilley (UBC), John Greenough (UBC-O), Katie Burles (COTR), Kevin Cameron (SFU), Jerome Lesemann (VIU), John Martin (KPU), Mark Smith (Langara)

Absent: Terry Neufeldt (TWU), Russel Hartlaub (BCIT), Dileep Athaide (Corpus Christi)

(Contact information for committee members is provided at the bottom of the document)

1) Approval of the agenda: carried

2) Approval of the minutes from 2017 meeting: carried

3) Matters arising from 2017 minutes:

- i. Xenolith award: awarded to Steven Earle for no apparent reason
- ii. Identification of a new System Liaison Person (SLP): Brett and Kevin will ask prospective people at UBC and SFU. If neither is successful both of them will ask Meg to speak to someone at the Deans of Arts and Science committee.

- iii. High school curriculum change outreach: Jerome reported that VIU has reached out to schools in SD 68 and was told that they lack supplies to teach Earth Science. They have applied to Canadian Geoscience Foundation for a \$10,000 grant to purchase materials for schools. VIU is working on a pre-entrance Earth Science credit for high school students. Gord reports that this is now being done in Terrace with a summer program that gives them a high school credit and a post-secondary credit. Tark stressed the importance of getting students interested in Earth Science at this critical age. Meg spoke about a K-12 PD event. Details will be sent to the Google Groups site. Minerals Ed BC will fund outreach. Tark suggested inviting high school teachers to our articulation field trips. **Motion** (Gord/Brett): That we all report back next year about our high school outreach initiatives. (carried)
- iv. Land access issues: Sarah reports that U. Victoria does field trips in parks around Victoria and have been confronted by a Friends of Uplands Parks member about their group use of a Capital Regional District park. They were asked if they have a permit to use the park for education. Committee members are asked to keep track of issues encountered related to access to field sites.
- v. Shared space for committee materials: BCCAT will create a Moodle site for us to use for committee-related materials. **Motion** (Mark/Sarah): The committee agrees that John (with help from Sarah) will migrate content on Google and the old SFU-hosted website to Moodle and that henceforth we will use Moodle for communication. (carried)

4) Institution reports

NWCC (Gord): Rebranding (by “Academia”) of NWCC to Coast Mountain College (motto: “Adventurous Education”). Numbers are down because of depopulation of the northwest region, especially young people. Focusing on international enrolments. Many coming from Mexico because they are no longer going to the USA. Numbers are down in Earth Sciences courses. Field courses are filling and more are being offered. Nursing students are taking field courses as electives.

UBC-V (Brett): There are 588 students in all programs (not including 1st year). 57 faculty members, looking for 5 more, including a sedimentologist. Brett suggests a discussion next year on teaching international students. There are grad-students that can work as sessionals in other institutions. UBC uses the museum for K-12 outreach. There is a half-time union employee who organizes outreach.

COTR (Katie): Increased enrolments (cap is 36 but some are being expanded). Huge international spike. 250 international students (most from India) especially for 2-year diploma programs. International students make up 40 to 60% of some classes. Looking at capping the number of international students in a section to spread them out. An indigenous language course is offered and may become required in some programs.

UVic (Sarah): There are around 50 students/year in Earth Science major. Field school is being offered twice a year with 20 to 25 students. There are several combined degrees, such as

Oceanography and Chemistry. New tectonics and climate science faculty have been hired. Field school is getting more and more expensive (accommodation, fuel, access fees etc.) and students are picking up the costs.

VIU (Jerome): Just finished a program review for BSc Major in Geoscience (now 5 years old). Students have been having trouble completing in time because the bi-faculty arrangement (Science/Social Science) makes scheduling difficult. 50 to 52 students are combined program. 10 to 15/year will be graduating over next few years. Upper-level courses are full. Have path for Forestry Diploma students to move into Geoscience. Geoscience students also are able to take relevant Forestry courses, such as road engineering. Working also with Environmental Chemistry. Working on a “big-data” course with Geography and Math departments. Team Based Learning is widely used in the department and the boundary between labs and lectures is becoming blurred.



Sarah Thornton photo

TRU-OL (Steve): 7 GEOL courses are offered. Overall enrolments are up by about 60% for two possible reasons (1) the use of the open text has made the Physical Geology courses less expensive than they were, and (2) there has been an increase in the number of students needing a science prerequisite for teaching programs.

Douglas (Derek): Exciting couple of years. There are now 4.5 faculty members plus 3 lab facilitators. 6 new courses this coming year, mostly in support of the Geological Resources Diploma program (75% transferable to universities). Most courses have been offered even though student numbers aren't as high as they should be. Students are transferring from geography. Derek is working on virtual-reality field trips.

Camosun (Tark): Nothing new. Still teaching Physical Geology and Earth Systems Science. Mineralogy in the spring term was cancelled because the enrolment (16) didn't suit the dean's budget model. More foreign students than normal – several failed to show up for classes. Students aren't able to do physical tasks (e.g., stirring a beaker).

TRU (Nancy): Enrolments may be up a little. Strong focus on international students at TRU. Working on geology BSc with a focus on applied geology. Working with colleges to facilitate transfer. Looking at building a digital imaging capability for research. Planning to acquire a desk-top SEM. Working on mapping a municipal park in Kamloops and getting lots of cooperation from parks people.

Okanagan (Terence): Massive increase in international enrolments. Physical Geology has always filled, but Historical Geology not so. Have removed Physical Geology prerequisite for Historical Geology. Lab sizes were raised from 20 to 24 by the institution. Now being asked to reduce labs to 2 hours but are fighting against it. In the context of geography, Terence is working with colleagues in the US and UK on creating a "value proposition" for field work. Recognizing that different types of fieldwork have different value.

SFU (Kevin): Numbers are decreasing in 2nd-year courses, perhaps because of expansion at colleges, and the difficulty of Kevin's mineralogy course. 110 declared majors in 2017/18. 10 MSc and 4 PhD. New Dean of Science Paul Kench will be allowed into Earth Sciences as a faculty member. New 400-level courses: Isotope geochemistry and Groundwater modelling. Students transferring in need to get their foundation courses finished at their home institution.

KPU (John M.): 11 sections of first-year geology almost full. No historical geology. 11 sections of Atmospheric Science. Some courses have 70 to 90% international students. Institution wants to increase class-size to 33, but the union is fighting it. There is a push to combine Atmospheric Science with Earth Science.

Langara (Mark): Status quo. Intro geology (up to 6 sections), hazards, geography/geomorphology. Wrapping up a departmental review. Biology is piloting a course called introduction to post-secondary education in Canada (no fee, non-credit). May become required for all students.

Selkirk (Deirdre): Physical and Historical only geology courses offered. Enrolment is 8 in both classes (compared with 20 to 25 in earlier years). Rossland Mining Museum is being used for field trips.

UBC-O (John G.): Incoming students need to make sure that all of their courses are being transferred. Now it is the Department of Earth, Environmental and Geographical Sciences. There is a rumor that arts students will not have to do a lab science. Working closely with EGBC to ensure that their requirements are met. Fipke Lab for Trace Element Research (FILTER) is now fully functional.

Yukon College (Mary): Geological Technology 2-year program. Almost 30 had registered by the start of last term, but they ended up with only 4. Not sure what happened. Employment in the exploration sector is strong. Some students discover that they don't have prerequisites.

Program is 3rd-party funded and there is funding for at least one more year. Looking at options for students to register in the program and then take their prerequisites. They now have national accreditation as a 2-year diploma program. Just partnered with a drilling company and Yukon Govt. to drill two monitoring wells on campus. Had 2 students from U. of Regina in field school.

5) Chair's report, Mary: Nothing to report. Brett will be chair for next year. JAM 2018 will be at Pinnacle Hotel in Vancouver on Friday Nov. 16th.



Earth Science articulation committee members at Davis Bay on the Sunshine Coast (Gord Weary photo)

6) BCCAT update (Meg Stainsby)

- The Indigenous Education Pathways project report is now available on the website (http://www.bccat.ca/pubs/Indigenous_Pathways.pdf). Phase II of this project will focus on the experience of indigenous students in BC.
- International transfer credit assessment request project. The goal is to provide best practices and showcase various ways in which institutions are coping with international transfers.
- The transfer of interdisciplinary courses projects looked at 9 interdisciplinary fields and will showcase best practices for allowing credits to transfer.
- A co-op student has reviewed lists of block transfer pathway agreements and found many discrepancies. BCCAT is working to coordinate these agreements.

- Upcoming projects: (a) Environmental scan of transfer system look for pathways between trades and academic programs (in both directions). (b) Research into mid-program transfer of students between institutions (e.g., to take a single course at another institution) (c) Looking at English language proficiency standards for students for whom English is not their first language.
- BCCAT is willing to come to institutions to give a 1/2-day workshop on articulation processes. Anyone interested should e-mail Meg (mstainsby@bccat.ca).
- Articulation committees can apply for \$15k funding from the Transfer and Articulation Fund.
- A secondment to do research in the BCCAT office has been posted.
- High school curriculum updates. MoE links are on the BCCAT website. Grade 10 implementation is mandatory this fall. Grades 11 and 12 will become mandatory in September 2019.

8) New Business

- a) Indigenizing the curriculum Steve: This topic was a big part of the JAM in 2017, and there may be ways that we can change our curriculum to create conditions that make it easier for First Nations students to do well in our courses. It was suggested (Brett) that we add examples in our institutional reports for next year of how we include indigenous knowledge and ideas in our teaching.
- b) Textbook research: Steve is a BCCampus Open Education Research Fellow for 2018/19 and is doing research into ways that students use open textbooks. He is developing an on-line survey and will be asking faculty using the BCCampus Physical Geology text to send students a link to the survey at about the 80% mark in their courses.
- c) International students. Language is a big issue because many students that arrive with English language qualifications are not able to operate effectively in English. Cultural issues (plagiarism, etc.) are also significant.

9) Upcoming articulation meetings

Deirdre: reported that the 2019 meeting has potentially been planned as cluster meeting with other programs, with a plan for it to take place within the lower mainland. Katie: Geography is not enthusiastic about the cluster meeting. No lower-mainland geography department wants to host a cluster meeting. **Motion** (Brett/Kevin): The next meeting (2019) will be at VIU, but if there is a cluster meeting arranged by some other group and we are invited, we should consider participating in that. (carried)

COTR will host in 2020, and UBC-O in 2021 (potentially joint with Environmental Studies).

MOTION: Adjourn at 4:50 PM

Minutes by S. Earle

2018 Earth Sciences Articulation attendees

Institution	Name	email
BCCAT	Meg Stainsby	mstainsby@bccat.ca
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Regrets

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