

# Minutes of 2019 Earth Science Articulation Meeting



Articulation committee members at Spray Point on Hornby Island, May 30<sup>th</sup>, 2019 (all photos by S. Earle)

**Hosted by Vancouver Island University, May 30 to 31<sup>st</sup>, 2019**

Meeting called to order at 8:40 AM, May 31<sup>st</sup>

**Chair:** Brett Gilley

**Attendance:** Todd Redding (Okanagan), Deirdre Hopkins (Selkirk), Gordon Weary (Coast Mtn.), Nancy van Wagoner (TRU), Joel Cubley (Yukon College), Brett Gilley (UBC-V), Ed Hornibrook (UBC-O), Katie Burles (COTR), Kevin Cameron (SFU), Jerome Lesemann, Sandra Johnstone & Tim Stokes (VIU), John Martin (KPU), Mark Smith (Langara), Dileep Athaide (Corpus Christi), Russel Hartlaub (BCIT), Terry Neufeldt (TWU), Reid Staples (Douglas), Duncan Johannessen (U. Vic.), Steve Earle (TRU-OL), Anna Tikina, (BCCAT by Skype)

(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 2018 meeting:** carried

**3) Matters arising from 2018 minutes:**

Nothing arising

**4) Institution reports**

**UBC -V (Brett)** Courses were not arbitrarily changed this year. There are now 42 tenure-track faculty plus 4 more this year in: hydrogeology, sedimentology, surface processes, Earth system processes. 553 undergrads (90 in geology, 145 in geo-engineering). Moving away from texts –

students are being given papers to read. Phillippe Tortell is going to become chair. Money approved for renewal of the facilities at the Oliver field camp.

**U. Victoria** (Duncan) Most students in main EOS degree. Next year's 400-level field trip will be to Death Valley. Ocean Sciences minor is doing well. There are now chemistry and physics oceanography programs. New oceanography field school in Victoria and Bamfield. It will be expensive for students. Graduate student numbers are recovering. Top Hat is trying to convince faculty to sell a "clickers on steroids" tool for teaching.

**UBC-O** (Ed) Top Hat allows the faculty member to take a cut of the fee paid by students. Ed also attended Environmental Sciences articulation meeting. Stable numbers – 40 to 45 new majors/year plus 15 or so in "Freshwater Science". Most courses are old (go back to OUC) and are going to be updated. New field course for first time last summer – 3<sup>rd</sup>-year geological mapping course in the Crowsnest Pass area. Working on a new minor degree in Geospatial Information Science. Bachelor of "sustainability" is in the works. The department received a substantial donation from C. Fipke to create a \$1M endowment for four Earth and Environmental Sciences student bursaries. Available to transfer students. Faculty in Arts and Science have voted to be separate "Arts" and "Science" faculties.

**Thompson Rivers University – Open Learning** (Steve) Seven GEOL courses are offered. Enrolments are slightly down from last year. Most students (89%) in TRU-OL geology courses are from BC. Using GEOL-1111 as an example, most (63%) are from the Lower Mainland and Fraser Valley, relatively few are from Vancouver Island (6%) and more are from the interior and the north (20%). About 6% of students come from other provinces in Canada and 5% from other countries (especially Asian countries).

**Langara** (Mark) Intro. courses are offered 5 times a year. Also Natural Hazards and Geomorphology. Enrolment is strong. Geology and Geography are a combined department. Asks how many offer Historical Geology and what is the enrolment like. Some said that enrolment is low, others that it is typically full. Langara hasn't taught Historical for many years but is thinking about bringing it back.

**Okanagan College** (Todd) Hosting NAGT June 25<sup>th</sup> to 27<sup>th</sup> in Penticton. Earth Science offerings are shrinking a little. Some sections offered only in Kelowna and Vernon. Requested an internal review but the Dean is not excited about that.

**College of the Rockies** (Katie) Lots of international students, many from India. The high school will be offering GEOL-12 and those students will be coming to the college for visits. Have taken donation of an SEM from a local mining company.

**Thompson Rivers University** (Nancy) New course offered: Petrology and Volcanology. Enrolments stable. Challenges with course scheduling (which was taken over by registrar) and is now a shambles. Provost is not sympathetic. (Jerome says that a similar change has been made at VIU and it is because of a "space utilization" requirement.) Moving ahead with a new degree

program. Looking for a desktop SEM. Nancy is going on leave and they are looking for a replacement.

**Corpus Christi** (Dileep) Physical Geology and Natural Disasters (in alternate years). Liberal Arts students. Enrolment has doubled because of foreign students. Lots don't come to class.

**Douglas College** (Staples) Offered 11 courses. Starting a Geological Resources diploma program. There will be 7 new courses offered next year for that program.

**Yukon College** (Joel) To be Yukon U. as of May next year. The geology technology program has low enrolment. Nine geology courses offered. Last year in the range of 3 to 5 students per course. One graduate this year. If enrolment challenges continue may move to a university transfer model like COTR or Selkirk.

**BCIT** (Russel) Enrolment is down from around 40 to less than 20. Have both diploma and degree students and most finishing 1<sup>st</sup> year are opting for the degree program. Many students take Physical Geology as an elective – mostly business students. 9 full-time faculty (4 geologists, 5 engineers). There will be a sessional hired this coming year. Moving towards a mining engineering degree. An accreditation decision will come in June. Just had a \$3M donation and will use proceeds for scholarships, field schools and equipment. The new core-logging facility is open. Still collecting core and will accept donations. (Duncan suggested Myra Falls Mine.) Students went to "Mining Games" at U. of Alberta.

**TWU** (Terry) Geography and Environment have come together (GENV). Terry was in the process of retiring but is still teaching. Physical Geology course typically has 20 to 25 students. Everyone has to take a lab science. Chemistry and physics enrolment has been struggling. All courses must use inquiry methods. There is a new requirement that all courses must be self-sustaining.

**Coast Mountain College** (Gord) Now getting international students – lots from India. They enroll in 2-year programs, but have very high failure rates. Poor study and writing skills make it an incredible challenge. Icefield field school is on again in August with 18 students.

**Selkirk College** (Deirdre) Physical Geology, Historical Geology and Geomorphology. Numbers are good especially in fall term. May remove Physical Geology prerequisite for Historical Geology. All international students must take a mandatory no-credit course on study habits to help with transition to post-secondary in Canada. Doing out-reach with Girl Guides.

**Kwantlen Polytechnic U.** (John) Lots of full sections, including in summer. Lots of international students. Earth Science is now part of "Geography and the Environment". Have a new class room because other programs have been moved to the new Chip Wilson facility.

**Simon Fraser U.** (Kevin) All courses but "Hazards" have higher enrolments than last year, but the number of graduating students is down (because of a bubble last year). John Clague has retired. Two new hires, one of whom will be the new Dean of Science. Just finished a 7-year review –

recommendations are almost exactly the same as the previous one, many of which were not acted on.

**Vancouver Island U.** (Jerome) Enrolments are good. Upper-level courses are mostly full. Capacity is about 60 majors in the program – enrolment is close to that. Now working on the Action Plan from the recent program review. Have received \$50k for new microscopes and work will start soon on renovation of the main Earth Science classroom. Received \$10k from Canadian Geoscience Foundation for creating rock and mineral kits for schools.

**5) Chair's report** Brett: Our new SLP is Debbie Hlady (Camosun). Joel suggested that our process for choosing the Chair is flawed because some new chairs don't have enough background to fulfill the role. For example, last year Mary S. felt that she couldn't really do a good job. Brett agreed to stay on as chair for another year. Duncan agreed to be associate chair. **It was agreed that in two years (2021) Duncan will become chair, Brett past-chair and we will find a new associate chair. The chair may remain for as long as 4 years.** There was a discussion about the host institution paying all costs of the meeting itself and it was agreed that this should be the case. **ACTION: Brett will ask for a letter from BCCAT to confirm this.**

Brett wonders if there is a way that we can push for financial support for field trips/field schools. Ed suggested that it should become equivalent to lab costs in other sciences.



## **6) BCCAT update** (Anna Tikina)

Anna referred us to the BCCAT spring update for recent news (can be found <https://www.bccat.ca/pubs/2019%20Spring%20Update.pdf>) BCCAT's main role is to ensure equivalencies between courses at different institutions. Anna asked us to review the "Pending Articulation" requests (in our case TWU GEOL-109). Transfer Credit System update: pilot with UBC

added about 50,000 equivalences for courses from other provinces and countries (publicly available on UBC website). Other institutions can now see what external courses have been articulated by UBC. Technology update: BCCAT website will be updated to improve functionality. BC Transfer Guide website has been under external review. The feedback will be taken into consideration with updates next year. We have a new SLP. Said a few words about JAM. Still accepting nominations for transfer and articulation awards (until June). There will be no Transfer Innovation Funding this year. The Council is working on ways to use that funding pool. International credit practice publication and another one on interdisciplinary degrees. BCCAT does an annual report comparing the performance of transfer- versus non-transfer-students at the 6 research universities. That will be available in the fall. Indigenous educational pathways: looking at mobility and persistence of indigenous students. Call for proposals for “contemporary issues in student mobility” this summer.

Gord explained a situation where a CEGEP student was given credit at Coast Mountain for courses taken in Quebec, and then, after completing a diploma at CMtn was denied credit at UNBC for those same courses, in spite of gaining a 2-year diploma at CMtn.

## 7) New Business

### i) Indigenizing the curriculum

Sandra asked if anyone was doing anything in indigenous issues. UBC-O is. BCIT has something embedded in an environmental course. Yukon: every course must have a learning outcome that includes indigenous values. All students must complete a First Nations knowledge course. TWU courses must include “8 ways of knowing”.

Sandra: What does indigenization mean? Different ways of learning and interacting. “First people’s principles of learning”. It’s a lot more than content knowledge. Start with introducing yourself from the perspective of your ancestors. Jerome: You can go wrong in all kinds of ways. An appropriate intent is important. Identity is tied to place. We engaged in an exercise of thinking about questions, challenges and benefits of indigenizing the curriculum, and what some plans of action might be.

**Action:** Sandra will summarize our comments, and it was agreed that we will re-visit this topic next year.

### ii) Physical Geology text

Steve announced that he is starting work on a 2<sup>nd</sup> edition of Physical Geology (first edition was 2015). At least some of the early chapters should be ready by September 1<sup>st</sup>. The intention is to bring material up to date where necessary, to correct any mistakes, and to make changes that will improve learning outcomes. Steve has a list of topics that his students consistently fail to understand. In many cases it should be possible to improve the level of



understanding by changing the way concepts are described or illustrated in the text. Steve would be grateful if committee members (or others using the text at their institutions) could provide information regarding any issues that they have with the existing text. There may be some funding available for this project and, if so, there will be opportunities to earn small honoraria for reviewing chapters. **Action: Steve will send out a Google Groups request for help.**

### iii) International Students

Mark: Students need to learn about how to succeed at post-secondary in Canada. Terry: International students need to take a Canadian culture program if their English is poor. Nancy: had a cohort of students this year (for the first time in many years of teaching) with “horrible” issues around cheating and poor attendance. Kevin: SFU has a new letter grade “FD” = “failure with dishonesty”. Todd: many international students are only looking for their residency in Canada requirements. Dileep: they are coming from a culture where it’s OK to do whatever is necessary to get a high grade. Duncan: this kind of behaviour is defeating our goal of student learning. Kevin: Universities are no longer institutions of higher learning, now we are profit-making corporations. Terry: We’re in a down-cycle of local students so we’re filling the seats with international students.

### iv) Field courses

Jerome: costs for field courses keep rising (Fee for field school is \$600 for 9 days). Ed: any course that is a requirement for a degree cannot charge a special fee, or increase the course fee beyond a certain limit. Jerome asked about costs of field schools beyond 1 week: \$1000 for CMtn Skagway trip, Yukon \$550, TWU: \$1200/week for 4 weeks for a Hawaii trip.

Steve summarized the outcomes of the BCCAT study on articulation of field courses. One of the suggested options was to create a website with information on what field courses are available at various institutions, along with locations, prerequisites, expected outcomes, costs, typical timing and the potential for participation by students from other institutions. There was general agreement that this would be a useful option for Earth Science.

**Action: Steve will create a Google doc so that committee members can provide information about field courses offered at the various institutions.**



## 9) Upcoming articulation meetings

Mark Smith will host in 2020 at Langara College and Katie will host a joint meeting with Geography at College of the Rockies in 2021. There was some discussion about timing for that joint meeting because many from Earth Science cannot make it in early May, which is when Geography typically meets.

**MOTION:** Adjourn at 2:50

Minutes by S. Earle

### 2018 Earth Sciences Articulation attendees

Institution	Name	e-mail
BCCAT	Anna Tikina	atikina@bccat.ca
BC Inst. of Technology	Russel Hartlaub	russell_hartlaub@bcit.ca
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Corpus Christi	Dileep	dileepathaide@gmail.com
Coast Mountain	Gordon Weary	gweary@coastmountaincollege.ca
Douglas	Reid Staples	rstaple4@douglascollege.ca
Kwantlen Poly. U.	John Martin	John.Martin@kpu.ca
Langara	Mark Smith	masmith@langara.bc.ca
Okanagan	Todd Redding	tredding@okanagan.bc.ca
Selkirk	Deirdre Hopkins	dhopkins@selkirk.ca
Simon Fraser U.	Kevin Cameron	kjc@sfu.ca
Thompson Rivers U.	Nancy van Wagoner	nvanwagoner@tru.ca
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