

2022 ABE Mathematics Working Committee Meeting

Minutes

BRITISH COLUMBIA COUNCIL ON ADMISSIONS AND TRANSFER (BCCAT)

Thursday/Friday, 3 and 4 March 2022

Via Zoom

Co-Chairs: Robert Ferro, Yukon University
Costa Karavas, Vancouver Community College

Vice-Chair: VACANT

In Attendance:

British Columbia Institute of Technology	BCIT	Winona Cordua-von Specht
Camosun College	CC	Patrick Montgomery Puja Gupta
Capilano University	CAPU	Richard Brand
Coast Mountain College	CMTN	Kimberly McIntyre (first part of day 1) Trudy Dolan (second part of day 1 and day 2)
College of New Caledonia	CNC	John Pacheco
College of the Rockies	COTR	Allison Platt
Douglas College	DC	Florica Alexandru
Kwantlen Polytechnic University	KPU	Tanya Boboricken
Langara College	LC	Nora Franzova
Native Education College	NEC	No Representative present
Nicola Valley Institute of Technology	NVIT	No Representative present
North Island College	NIC	Tony Trudel
Northern Lights College	NLC	Marcie Lundin Jeanette Landry
Okanagan College	OC	Mike Rutten
Selkirk College	SC	No Representative present
Thompson Rivers University	TRU TRU-OL	Izabela Mazur Bruce Irving
University of the Fraser Valley	UFV	Greg St. Hilaire
Vancouver Community College	VCC	Costa Karavas Faezeh Mohammadbeigi
Vancouver Island University	VIU	No Representative present
Yukon University	YU	Robert Ferro

Thursday, 3 March 2022

Meeting begins at 10:00 a.m.

1) Opening remarks and introductions

- a) Thank you, Robert – welcome
 - b) All agreed that a recording is ok with the option to go off camera at times
 - c) Names on Zoom should reflect full name and institution's name
 - d) Introductions and updates
- 2) Minute taker for meeting – Puja Gupta
- 3) Approval of Agenda –
- a) with additions to Day1 #12 (b) and Day2 #3**
 - b) change the order to facilitate Mike's presentation**
- M/S/C**
- 4) Review Purpose of Meeting
Reminder that meetings are not just for reviewing outlines. Networking and sharing experience and resources are important as well.
- 5) Updating members list and transfer guide
- a) New form for updating BCCAT on changes – Update the excel sheet shared, Video instructions shared
 - b) BCCAT report/update—Mike Winsemann – Spring update not finished yet, recently produced reports can be found on: <https://www.bccat.ca/> especially <https://www.bccat.ca/intro/ReverseTransfer2022> and <https://www.bccat.ca/intro/CovidandTransfer2021> , new Director of Research & Admissions – Dr. Anna Tikina
 - c) Members list - OneDrive editable document put in the chat for folks to sign as an attendance record
- 6) Approval of minutes of 4-5 March 2021, online meeting by Zoom ([Download Minutes](#)) – **M/S/C**
- 7) **Action items resulting from minutes of 2021 meeting**
- a) #4 changes done
 - b) #5 a) Robert will continue to pursue funding for an ABE equivalent to Foundations of Mathematics 12 to the Steering Committee.
 - i) No funding available last time. A suggestion that Deans or Directors can also be approached was made. TRU, CMT, Okanagan College and probably CNC are the institutions interested at articulating it at this time.
 - c) #5 b) indigenization speaker – Due to pandemic not arranged, funding support for bringing in a speaker for indigenization of our curriculum, share with co-chairs if there is any funding available for this at any institution
 - d) #9 b) all changes made
 - e) The members contact list was taken out of the articulation handbook but the working committee members agreed to maintain a current list for our own group.

8) Reports/Updates (Reports should be submitted electronically to members before the meeting dates.)

a) BCCUPMS report—Costa Karavas – detailed report available on Moodle site

1. BCCAT-Fiona McQuarrie (BCCAT Special projects Coordinator)

Fiona presented on BCCAT's activities relating to Current Transfer & Articulation Projects

<https://bccat.ca/Media/NEWBCCAT/pubs/Resources/ACUpdate202104.pdf>

Main highlights from projects:

- Who decides transfer? Who participates and ultimately who has authority to accept transfer.
- Block transfer and Degree partnership.
- Data Governance. Practices at BC post-secondary institutions, and recommendations for best practices in collecting, storing, and accessing.
- Micro-credentials. Policies, practices, motivations, and perspectives in BC and international institutions.

Additional BCCAT initiatives

2. BCcampus – Clint Lalonde (open homework systems project)

Main highlights from Clint Lalonde's, Project Manager, Open Source Homework (OSH) Systems, presentation are:

- Open textbook project has created \$25 million in textbook cost savings.
- Comparative Analysis between OSH systems WeBWorK, IMathAS and Numbas, has WeBWorK leading due to its robust developer community.
- The Centralized Shared Service Model would have an actual cost of \$200k annually (5 institutions) and would be too costly for sustaining this model. Rederly could have been a service provider, but too costly. A Decentralized Institutional Hosting model was sought instead. BCcampus applies one-time bootstrap grants (2 grants of \$30k each) to individual institutions to set-up, maintain and support their own instances of WeBWorK. There was a call for proposals in March-April 2021.
- Two additional projects: i) STEM Content Creation Grants. Four grants (\$5K each) to create STEM based question sets in open systems (WeBWorK, IMathAS, PrairieLearn) openly licenced; ii) UBC-O grant to develop question translator to move questions between platforms, openly licensed.

3. Reports from PIMS, ABE MATH Articulation, Changing the Culture

4. Flexible Pre-Major

BCCAT is not updating the Flexible Pre-Majors on its website.

5. Remote teaching – lessons learned in 2020-2021

- Creation of an email list can provide the means for instructors connecting and sharing their experiences with lessons learned from math/stats centres. A variety of platforms and technologies were used (BlackBoard, ZOOM, by appointment, Facebook, Bluejeans, Piazza, etc).
- Marking online

6. Academic Misconduct

Many opinions were expressed. Some main ones are:

- The more we focus on this issue, we get displaced from students who value learning and what our purpose is. Are we “guards” or faculty? It interferes with our energy in being facilitators of learning.
- Hard to be a coach and referee at the same time.
- Emphasis can be placed in minimizing cheating. Creation of open ended questions. Creation of exercises that cannot be searchable using online websites.

7. BCAMT - representative Susan Robinson, BCAMT president

The work they do is to support teachers in professional development, outreach and webinars.

- The high school Quarter (two courses at a time, 4 quarters, each quarter is 10 weeks and 38 classes in each quarter) and Octet (1 class-5 weeks every day, 22 days of one class, no other class during this time period) systems of teaching have received mixed reviews. Teaching three hours before lunch and three hours after lunch is difficult for the students to learn, focus and absorb what is being taught. Students are lacking processing time.

8. Open Discussion- Impact of COVID-19 on the 2021 school year

Discussion on challenges that the COVID pandemic had in the high school system. Teachers asked if students were prepared in university in Fall 2020. Post-secondary institutions really cannot determine this.

Students do not retain information when taking short duration courses versus normal length courses.

Gap knowledge has increased, students and teachers have increased anxiety, students encouraged to attend tutorials online to fill in gaps.

All type of math competitions had low participation. One reason for this is the Quarter and Octet systems the high schools implemented.

b) Joint Annual Meeting of Institutional Contact Persons (ICPs), Chairs, and System Liaison Persons (SLPs)—no report as this was open to all committee members

9) New incorporation of ABE courses in BC Transfer Guide: [Search Adult Basic Education - BC Transfer Guide](#)

10) Comprehensive review of learning outcomes for Intermediate Developmental

- a) Proposed changes:
 - i) In the goal statement hyphenate “higher level” → higher-level
 - ii) Core learning outcomes:
 - (1) #1 Estimating Skills/Calculator Use: b) add a comma after fractions → use a scientific calculator to calculate and solve problems involving adding, subtracting, multiplying and dividing whole numbers, fractions, and decimals
 - (2) #2 Measurement: b), c) and f) add “or US customary” after Imperial
d) hyphenate “stop watch” → stop-watch
 - (3) #5 Percent: a) i,ii,iii add “the” in front of percent and part →

use ratios and proportions to solve problems involving:

- i. finding the percent when the part and whole are known
- ii. finding the part when the percent and whole are known
- iii. finding the whole when the part and percent are known

- (4) #6 Geometry: b) add a comma after polygons → polygons, and circles
g) change “lassify” to classify
- iii) Additional Learning Outcomes:
 - delete the option C and reword the main sentence to →
 - To complete the course, students should choose option A or B:**
 - (1) Option A – reword to → This option helps prepare students for math at the advanced level.
 - (a) #1 Powers, Roots, and Scientific Notation: remove period after c in the list
 - (b) #2 Polynomials: c) change to → factor out the greatest common factor from polynomials
 - (c) #3 Trigonometry: remove period after c in the list
 - (2) Option B – change “unit” to “option” →
This option is intended for students exiting the ABE structure at the Intermediate Level and contains additional material pertaining to specific vocations
 - (3) Remove option C

11) Krista Lambert—Project Manager, Health and BAE ZTC Programs, BCcampus (30 min)

- a) ABE ZTC Project
 - i. Initial project pieces wrapping up March 2022 after 3.5 years
 - ii. BC Campus - supports all of the post-secondary BC institutions with their teaching and learning practices – main areas of focus are open education, educational technology, and teaching and learning practices.
 - 1. Projects include: Accessibility of open resources; tracking adoption of resources; regional outreach; teaching and learning practices; Open Online Courses (more information will come soon); Facilitating Learning Online (FLO); Trades, Business, STEM and Health OER, and ABE OER
 - iii. Open textbooks - involves the development and adaptation of teaching and learning and research resources that through permissions granted by their creator allow others to use, distribute, keep, or make changes to. OERs allows teachers and learners to use free materials as a replacement to or in

conjunction with existing learning materials. This open education project has been going on in BC for the last 10 years.

1. Over \$29,000,000 in student savings, 387 books, 768 instructors
 2. Resources can be found at open.bccampus.ca and for ABE specifically at bit.ly/ABEpathway (case sensitive)
- iv. For math:
1. Fundamental – 6 books – updated and reformatted – in process of putting them on Pressbook for better adaptability
 2. Key Concepts of Intermediate Level Math
 3. Intermediate Algebra Math
 4. Advanced Business/Technical
 5. Advanced Algebra Math – three versions – 1 ready now and 2 coming soon
- v. Izabella shared her experience with creating the textbooks
- vi. Features: aligned to ABE articulation handbook, fully adaptable, customizable, open, free, available in print
- vii. Process: find a book, make any changes in Pressbooks, ask questions, report the adoption to BCcampus.
- viii. Events: bccampus.ca/events
- ix. For corrections in textbook contact the author and also inform BCcampus
- x. May not have an incentive for someone making corrections but Krista might let Robert know
- xi. Faculty need to fill out a form to access any ancillary resource

12) Articulation/re-articulation of math courses and considerations of any possible revisions

a) No courses submitted for

- Intermediate-developmental
- Advanced-algebraic
- Advanced-business / technical
- Advanced-developmental
- Advanced-foundations
- Provincial-algebra and trigonometry
- Provincial-calculus

b) Intermediate-algebraic

- CAMO—MATH 052/053 (parts 1 and 2) – **provisional acceptance of Math 052 with the change of title#3 and adding 's' to calculator in #3c, Math 053 accepted**
- CAPU—BMTH 033/034 (parts 1 and 2) – **provisional acceptance with change of link to articulation guide -M/S/C**
- CMTN—MATH 0301/0302 (parts 1 and 2) – **M/S/C**
- CNC—MATH 030 –**Withdrawn**
- KPU—MATQ 1089 –**Withdrawn**
- NIC—MAT 033/034 (parts 1 and 2) – **provisional acceptance with the change of year**

- NLC—MATH 030 – **M/S/C**
- UFV—MATH 075/076 (parts 1 and 2) – **M/S/C**

ACTION ITEM: During discussion, it was recognized that the current URL does not take you to the correct ABE guide, it was decided that Robert and Costa will take it Steering Committee for clarification.

c) Any course deletions from the grid?

- Trudy Dolan CMTN: Math 032 (Trades Intermediate math) and Math 053 (provincial calculus)
- Tanya Boboricken KPU: MATQ 1071 – 1076(fundamental level math), Tanya will send ALFM committee a note
- Izabela Mazur TRU: Math 0300 is not longer offered, Izabela to send ALFM committee a note

Discussion: Pros and Cons of removing courses from grid. Students may be negatively affected if a course they took say 10 years ago is no longer on grid and hence may not able to get a credit for it.

ACTION from Day2: Robert and Costa will check with Steering committee about the approach to keep or remove courses from grid if a course has not been offered in a while.

13) Reviewed what is to be accomplished in next day's agenda

14) Adjournment at approximately 3:00 p.m. until Friday morning at 10:00 a.m.

Friday, 4 March 2022

Meeting begins at 10:00 a.m.

- 1) Business arising from previous day and/or continuation of items not finished in previous day such as articulation/re-articulation of courses – complete the rearticulating process for NIC, NLC, UFV and CNC
- 2) Errors or omissions in current transfer guide to correct – already addressed
 - a) General discussion on whether a course should be removed from the grid. For action item go to #12
- 3) Whole-group discussion on topics or information items
 - a. Any items needed to be put into committee's Moodle site hosted by BCCAT? – add the member contact list
 - b. Sharing of resources—texts, modules, OER, etc

- i. Trudy: do we have a space where we can work together provincially to create and share resources?
 - ii. Puja showed the resources for Intermediate Algebra on MyOpenMath, D2L and PowerPoints
 - c. Mastery of courses—are institutions doing this for math? General discussion
 - i. Richard B outlined the process of mastery at CAPU.
 - d. Foundations Math 12—who is planning to offer this and who might be willing to help in development of learning outcomes – **Izabella will email Kim, John S. from Williams Lake and Mike as next step.**
- 4) Long-range plans (two to three years into the future)
 - a) Any items that need to be reviewed
 - b) Recap schedule for rearticulation of courses
 - a. For 2023: review learning outcomes for advanced algebraic
 - b. For 2023: rearticulation of intermediate developmental courses
 - c) Possible training events or professional development opportunities for future meetings - indigenization, sharing math resources, teaching online – software, tools, exams, online testing etc.
 Proposed to have some presentations during our articulation meeting (optional on Friday afternoon and Saturday as a PD) and for those interested they can meet more frequently.
ACTION: Robert will send an email to the group to connect members interested in meeting monthly.
- 5) Elections for co-chairs/vice-chair of ABE Mathematics Working Group
 Motion to nominate Robert Ferro and Costa Karavas as co-Chairs and Puja Gupta as Vice-Chair
 M/S/C
- 6) Selection of next meeting location for 2023 (this date may be decided by Steering Committee) – hoping to be in-person, Tanya offered KPU (Richmond) as a possible site if in-person. The Steering Committee might be the one gives more direction in this case. Robert and Costa will update the committee members.
- 7) Summary of new business, next year’s items, and wrap-up
 - i) articulated 11 courses
 - ii) revamped the Intermediate Developmental learning outcomes.
- 8) Adjournment 12:26 p.m.