
THE BRITISH COLUMBIA COMMITTEE ON THE UNDERGRADUATE PROGRAM IN MATHEMATICS

MINUTES OF THE 79TH MEETING, MAY 24-26, 2001

THURSDAY, MAY 24, 2001

1. **WELCOME BY THE REPRESENTATIVE OF THE COLLEGE OF THE ROCKIES** – Heather Schneider (Dean of Instruction and Educational Technology/Senior Instructional Officer).

Heather Schneider welcomed us to the College and the City of Cranbrook.

2. **ADOPTION OF THE AGENDA FOR THE 79TH MEETING OF THE BCCUPM**

Moved by Neil Coburn and Seconded by Eric Buckley **that the agenda be approved as presented.**

Carried

3. **ADOPTION OF THE MINUTES OF THE 78TH MEETING, HELD AT CAMOSUN COLLEGE**

Deferred to Friday morning.

4. **CORRESPONDENCE**

There were no items of correspondence.

5. **ANNOUNCEMENTS**

5.1 **Notice of Elections:** At this Meeting, an election for **Vice Chair** and for **Secretary** of the BCCUPM will be held.

Jack Bradshaw had notified the Committee of his wish to decline another term as Vice Chair. David Leeming was asked to form a nominating committee for the position of Vice Chair.

Jean MacLeod was acclaimed as Secretary for another two-year term.

Members reported on conferences and meetings coming up in the next month. The BCAMT Conference will be held at West Vancouver Secondary on October 19th, 2001.

6. **REPORTS (PART A):**

6.1 **B.C. Council on Admissions & Transfer**

- a) Meeting of Articulation Chairs – Eric Buckley

Eric has served as the System Liaison Person to the BCCUPM for the past three years. The articulation committee chairs and SLP's meet once a year and there has been some discussion about whether or not to continue to have SLPs. There has also been ongoing discussion about the structure of articulation committees; some think it should be uniform, but others think this is not possible given the diverse disciplines represented.

There are TAP grants available (Transfer and Articulation Projects) for colleges/universities/committees that are interested in researching or resolving articulation issues. The principal goal of TAP is to enhance student transfer from one institution to another. C2T2 (Centre for Curriculum, Transfer and Technology) also offers PIC (Provincially Initiated Curriculum) grants. Since the inception of the university colleges, transfer issues have extended beyond first and second year courses.

b) System Liaison Person – Leo Neufeld

Leo read a letter from BCCAT to Academic Vice Presidents of BC post-secondary institutions regarding institutional representation on articulation committees. The recommendation is that the person should be someone who is knowledgeable and experienced in articulation issues. He also reminded everyone that money has been provided to every institution to cover articulation expenses. A case can be made for each institution sending a Math representative and a Stats representative to BCCUPM meetings.

At our last meeting we passed a motion that said we were happy with our SLP, but that we did not see a need for an SLP after Eric retires. Our concern was that the person should have some connection with the discipline. BCCAT has now modified the guidelines governing SLPs and will consult with the committee before appointing a new SLP. Eric suggested that the benefit of an SLP is not for us, but is a first-hand way to communicate concerns to the Administrators group and to institutional administrations generally.

Moved by Jim Totten and seconded by Susan Milner:

that while we are happy with the present SLP, the BCCUPM chooses at this time not to continue the position.

Carried

It was suggested that there may be other purposes served by the SLPs (such as acquainting administrators new to BC with the uniqueness and value of our articulation system) and that ways should be found by BCCAT to achieve these. Leo was asked to make this clear in his report of this meeting to BCCAT.

6.2 PIMS – Susan Milner

This year the 4th annual Changing the Culture (CTC) conference sponsored by PIMS was held at SFU's Harbour Centre. Kindergarten through post-graduate Math educators were in attendance. One presentation concerned a program called JUMP (Junior Undiscovered Mathematics Prodigies). Next year's CTC conference will be held April 26, 2002.

6.3 Mathematics Placement Test Survey – David Leeming

David reported that concerns about the failure rates in Calculus I and II at UVic had led to a survey that looked at placement tests for Calculus I being used in the province. David presented the results of this survey and these results will be posted on the BCCUPM web-site in June. A question was asked about how students coming from ABE do in Calculus I. There was some discussion about tracking students after they leave high school or ABE. Starting in the fall, UBC will place students without a high school calculus course in particular sections of first-year calculus.

7. FIRST-YEAR CALCULUS AND STATISTICS SUBCOMMITTEE – Parallel Sessions

First-year Calculus Session

Calc.I. Calculus 12 – Susan Milner

Last year there was some discussion about having a “core” curriculum for Calculus I and it was thought that Calculus 12 might make a good basis for that “core”. Presently, sending institutions struggle in trying to match the curriculum of several different receiving institutions, while protecting their own autonomy.

UCFV will be experimenting at the college this fall with teaching a section of Calculus I to high school students. If the students pass, they can get dual credit (high school and university). Selkirk has a similar program with the course being taught by a high school teacher. However, at the end of the Selkirk course, students receive high

school credit and may choose to get college credit. Douglas doesn't offer a separate section, but allows high school students to register in Calculus I.

One of the problems encountered in trying to assess the Calculus 12 syllabus is that there is no indication of the depth to which the topics are covered. The new Calculus 12 was not designed to be a Calculus I course.

Calc.2. Universities' Challenge Examination – John Fournier

Students who write the Challenge Exam have the option of getting credit for Calculus I. UBC has tracked some of these students – Science students who did well on the exam and received a grade also did well on the subsequent Calculus II course. Engineering students had a lower grade in Calculus II, but that could be attributed to the heavy course load they carry. This year's exam will be written June 7th. A concern was expressed that the Challenge Exam could become mandatory for students transferring from colleges – there were assurances that that couldn't happen.

Calc.3. Technology in Calculus & Course Transfer – Clint Lee

OUC has been a leader in the use of educational technology in calculus courses. Since OUC is now a receiving institution, transferring students are asking for transfer credit for courses that did not have a MAPLE (or other technology) component. At present, OUC is not requiring experience with that technology to get transfer credit. A concern was raised about the difficulty of MAPLE's syntax. Some colleges also introduce graphing calculators, *Derive*, *MatLab*, the internet and *MathCad*.

Calc.4. First-year Calculus Streams/Prerequisites

The identified streams were Life Sciences, Science, Commerce, Honours, and Technology. Each institution summarized which streams they offer. There was discussion about how students taking the Commerce stream in one institution would transfer to an institution that only has one combined stream. If students have taken the Science stream, they should have no difficulty transferring, but if students have taken the Commerce stream it is more problematic. Choosing applications and problems appropriate for a particular field of study in a science stream course could have a customizing effect on this course.

Statistics Subcommittee Session

Present: Veda Abu-Bakare (BCOU and Langara), Jim Bailey (COTR), Fae de Beck (UCC), Natasha Davidson (Douglas), Reimar Hauschildt (Capilano), Colin Lawrence (BCIT), Joe Selby (COTR).

1. **Introductions and descriptions of Stats courses** offered at each institution represented. Departments represented were 1) Mathematics, 2) Mathematics and Statistics, and 3) Business.

2. **Review of minutes of last year's meeting; call for topics** to be addressed at this meeting.

3. **Software in Intro Stats courses.** The options for teaching Stats range from no-tech (calculator based) to a spreadsheet (Excel) to a statistical software (Minitab, Statgraphics Plus). Statistics courses continue to be taught by Math instructors. There was no consensus on adopting a stat software and seeking a site license. Some felt that calculators were adequate at this time - the warning here is for the courses that seek transfer credit to the universities. The challenge is to teach Statistics as an interactive and applied subject.

4. **New Probability and Stats content in the Principles of Math 12.** From September 2001 this will account for 25% of examinable material. The difficulty is that the teachers of this material may not have the requisite background - especially in the light of inaccuracies in the texts and materials. The new content is in three sections - Combinatorics, Probability, and Statistics. This will have no impact on our Intro Stats courses since our prerequisite is still PM 11.

A draft sample exam for Sept 2001 for PM 12 was reviewed. The material covered seemed to be quite a bit for a teacher who may have had only 1 course in Probability and Statistics.

It was recommended that teachers of PM12 be supported in the learning and teaching of this material, that the support be ongoing through the year, that there be a standardized directed/guided study program that is easily accessible by teachers who are not necessarily in areas large enough to support training programs and that we (the colleges and universities) take a leadership role in providing this support.

5. **Articulation of upper level Stats courses/ Stats courses taught in other departments.** Is there a smooth transition for upper level Stats courses taught in the colleges to the universities and university colleges? (Added in proof: this is the theme of next year's meeting.) Also many departments have their own Stats courses (Economics, Psychology, Business, etc.). It was noted that at Capilano College, a Psych. course is allowed as the Math requirement for the Associate of Arts degree.

8. **BRIEF REPORTS FROM THE FIRST-YEAR CALCULUS AND STATISTICS SUBCOMMITTEE SESSIONS.**

Statistics Subcommittee

Veda summarized the discussions from the Statistics Session.

First-Year Calculus Session

Susan Milner, John Fournier, Clint Lee and Neil Coburn summarized the discussion from this session. Bruce Kadanoff suggested that we form a subcommittee to look at a group of core topics that would form the basis of all Calculus I and II courses.

Moved by Ian Bailey and Seconded by Jim Totten:

that, in order to ease transferability across all first-year calculus streams, we strike a subcommittee to develop a list of core topics for all streams of Calculus I and Calculus II.

Carried (1 opposed, 2 abstentions)

The ad hoc subcommittee should examine the issues involved, and include a representative from each of the 3 Universities present at this meeting, a university-college rep and a college rep. Leo Neufeld should be an ex officio member of the subcommittee. An attempt should be made to obtain funding to cover expenses.

Moved by Ian Bailey and Seconded by Jim Totten:

that a representative from UBC, a representative from SFU, David Leeming (U.Vic.), Casey McConill (Kwantlen), Bruce Kadonoff (Coquitlam) and Leo Neufeld (ex officio) form the subcommittee.

Carried.

John Fournier (UBC) and Rustum Choksi (SFU) promised to announce a representative for the subcommittee from their respective departments after consulting there.

THURSDAY, MAY 24, 2001 (evening)

1. Introduction and Opening Remarks.

Leo welcomed the secondary school visitors and gave a brief summary of the work of this committee.

2. BC Colleges High School Mathematics Contest Report – Jim Totten (see appendix, page 20)

3. In-Service Opportunities in Probability and Statistics – Veda Abu-Bakare

With the inclusion of Statistics in the *Principles of Math 12* course, there are a number of opportunities for in-service training in Probability and Statistics (see below). Because it has not been included on the Provincial Exam, it has usually been the first topic to be dropped at the lower grades when time becomes a problem.

- Statistics and Probability Math 12 course, June 25-28, 2001, Spectrum Community School, Victoria, 9am-1pm (lunch provided daily). Duncan McDougall, presenter. No cost to Greater Victoria School District teachers. Each participant will receive a graphing Calculator. Contact Tanis Carlow (250) 360-4333, tcarrow@sd61.bc.ca. Workshop to be repeated in August 2001.
- PMA 12 Summer Institute, Kelowna. Martin Education Centre, 1434 Graham Street. July 4-5, 9am-3:30pm. Facilitated by Lorraine Baron, barongrodzki@home.com and an OUC College Professor.
- Brad Epp (with faculty member from UCC, Shane Rollans). Thursday May 24, 4 - 6 pm, Henry Grube Centre, Kamloops. Contact Mike Hepples, mhepples@sd73.bc.ca
- Open Learning Agency (Ted Keating 604-431-3499, tedk@ola.bc.ca)

| School District | Presenter | Dates |
|---------------------------------|----------------|-----------------------------|
| Comox Valley, Alberni | Linda Rajotte | June 25, 26 |
| Coquitlam, Maple Ridge | Ted Bentley | June 25, 26 |
| Vancouver | Attila Csiszar | June 25, 26 |
| Burnaby, New West, Langley | Linda Rajotte | June 27, 28 |
| Richmond, Delta | Attila Csiszar | June 27, 28 |
| Prince George | Ted Bentley | June 27, 28 |
| North Van, West Van, Howe Sound | Ted Bentley | Sept. 19, 26, Oct. 3, 10 |

Information and registration forms have been sent to the schools. The Vancouver June 25, 26 has signed up 56 teachers.

4. First-year Calculus Courses at UBC – John Fournier

Starting this fall UBC will offer a 3-hour/week calculus for students who have any version of Calculus 12 and a 4 hour/week calculus for students who haven't taken Calculus 12. The 4-hour/week course will cost the students a little more. Students who have taken the AP exam (with the appropriate grade) or have passed the Universities' Challenge Exam would have the option of getting credit for Calculus I and going directly into Calculus II. There was a discussion about success rates in Calculus I for students who have or haven't taken Calculus 12.

5. Textbooks for Calculus 12

The provincially recommended books are by Anton, Stewart, and Thomas/Finney. The secondary teachers asked for some direction from this group about which book would be the most appropriate for their students.

6. General Discussion

There was a discussion about the three different streams in the high school curriculum. Smaller schools don't have the student body to be able to offer all streams in all grades. There is no longer a pathway for students to move from the Applications stream to the Principles stream; in Grade 10, they must choose a stream and are then "stuck" there. Individual schools will probably design their own "bridges" to assist students who may have chosen the wrong stream.

7. Adjourn to Reception.

FRIDAY, MAY 25, 2001

1. INTRODUCTION OF REPRESENTATIVES AND OPENING REMARKS.

Deferred from Thursday (item 3) - The minutes from the 78th meeting will be posted on the web-site and members can check them there. We can then either set up a mechanism to approve them with the listserv or wait until the next meeting.

2. REPORTS (PART B)

2.1 BCAMT – Chris Van Bergeyk (see appendix, page 21)

Members had questions for Chris, mainly regarding the way he was implementing the Calculus 12 course in his school.

2.2 Math Resources on the Web Subcommittee – Alan Cooper

Alan applied for and got a CMS grant to do some work in creating a database of Math resources on the web. The MAA, co-sponsored by the Math Forum and NSF funded, also has a site (JOMA) and could be a resource that would serve our needs. This site is American – there was a question about whether there should be a site with a Canadian focus.

2.3 ABE– Barbara Coombs (see appendix, page 22)

Barb responded to questions regarding how course equivalencies are determined. With the changes in the Principles of Math 12 course, there are concerns that the Provincial level ABE course would no longer be equivalent. There was interest in having a representative from BCCUPM on the ABE Math Working Committee. Colin Lawrence volunteered to represent both the BCIT and the BCCUPM at the next Working Committee meeting.

2.4 Math Centres (Study) – Susan Milner

Susan spent some time last year studying how Math Centres operate around the Province. She prepared a report and encouraged everyone to have a look at it and let her know if there were any errors. It would be a beneficial resource for making local recommendations in light of what other institutions are doing. The committee thanked Susan for preparing the report and agreed that it was a great resource.

Report of the Nominating Committee: Vice Chair

David Leeming reported for the Nominating Committee and submitted the name of Susan Milner for the position of Vice Chair.

Moved by David Leeming and seconded by Eric Buckley:

that Susan Milner be acclaimed as Vice Chair of the BCCUPM for a two-year term.

Carried

2.5 Ministry of Education

The new Math Coordinator for the Ministry as of July 5, 2001, is Richard DeMerchant and he will be attending our meeting next year. Chris Van Bergeyk was asked to forward any Ministry related questions to Richard.

2.6 The Technical University of BC - Jennifer Enns-Ruttan

Jennifer detailed the educational programs at her institution and particularly described the content of their math courses. There were questions for Jennifer regarding the transferability of courses that are packaged quite differently from courses taught elsewhere in the Province. Jennifer's feeling was that transfer will be very difficult. Some concerns were raised about calling the credentials at TechBC "Bachelor of Science" when the amount of science the programs appears to be very limited. Jennifer was thanked for her very complete presentation.

3. NEW BUSINESS

3.0 Calculator Policy – Wayne Matthews

Wayne voiced the feeling that we should have a statement on our definition of what “appropriate use of technology” really is. It is very important that students learn Mathematics conceptually first. Questions should be designed so that they must be answered analytically and a graphing calculator would not be an asset. It could then be stated that graphing calculators have good uses – for display, checking, etc. Some institutions have policies on the use of calculators and have them posted on their web-sites. The public school system is constrained by decisions made by the Ministry – Math 12 cannot be taught without the use of a graphing calculator. MAETT does not impose these constraints – it is left to the judgement of each institution/instructor. Neil said that students should be able to answer a question algebraically, analytically, graphically and verbally.

The following statement was made regarding the appropriate use of technology in the classroom:

As a first priority, we support the full development of conceptual understanding, with or without the use of technology. We support the use of graphing calculators or other technologies to enhance this learning as well as to provide the opportunity for involvement in more challenging mathematics.

There were many suggestions for amendments to this statement within the context of a lively discussion. No resolution was reached, so the suggestion was made that we put this on the listserv and have members look at it and make comments. Also, individual departments are asked to address this issue and develop their own policy statements.

3.1 BCCUPM Listserv/Document Sharing

Leo invited comments on our listserv, membership on it, and moving it to the C2T2 server. The Camosun system is changing, so this has become an opportunity to have our listserv resident elsewhere. Members with older email utilities were warned that they would encounter a difficult time accessing attachments.

Moved by Neil Coburn and seconded by Bruce Kadonoff:

that the chairman continue the transfer of the BCCUPM listserv to the C2T2 server.

Carried

With the old system, individuals had to subscribe to the listserv, but with the C2T2 system, individuals can be added independently. Everyone who is an institutional contact should be added to the listserv, but not the entire email list. Many people on the list are former members who would not necessarily wish to be on the current listserv.

Moved by Alan Cooper and seconded by Neil Coburn:

that the official BCCUPM contact person will automatically have subscription to the BCUPM listserv.

Carried

Some members felt that **all** faculty should be on the listserv, but others thought it should be voluntary. Once all the contacts are on the list, they should be encouraged to invite others in their departments to subscribe.

C2T2 may also be willing to host our web site. Currently, it is being hosted by Camosun and maintained by Leo, but in the long run the C2T2 server may be a more appropriate home for the BCCUPM web site.

3.2 Articulation in BC – Have all the potholes been removed?

Math articulation in BC has a long history and has been very successful, but are there any problems that exist or improvements that could be made? Members are encouraged to think about this and to send comments to the listserv. Because of our successes over the years, our experience may prove useful to other committees or jurisdictions. One suggestion was made to extend articulation to include institutions in other provinces. Generally, no formal agreements currently exist with institutions in the rest of Canada. Individual institutions have articulation agreements, but nothing has been done on a system-wide scale. BCCAT is now struggling with requests for transfer from outside BC, so they are hoping that articulation could be extended, probably starting with Alberta which now has a Council on Admissions and Transfers. Neil reported that the Computer Science Articulation Committee was invited to have their next meeting hosted by NAIT in Edmonton.

3.3 Theme and Agenda for the 80th Meeting of the BCCUPM

The suggestion was made that we look at 2nd year offerings (Calculus III and IV, Differential Equations, Linear Algebra, Real Analysis, 2nd year Statistics, etc.) Of particular interest were Calculus IV and the use of technology in Linear Algebra. Another area of interest is recruiting 2nd year students from the two-year colleges to the University Colleges for 3rd and 4th year.

4. INSTITUTIONAL/ARTICULATION BUSINESS

4.1 Reports from Institutions

- **CAMOSUN** – Wayne Matthews
 1. Changes to pre-calculus courses
 - Math 062/063 replacing Math 060/114 and articulating as Math 11
 - Math 115 changed somewhat keeping calculus and picking up conics
 - Prerequisites redesigned – no mention of Apps Math 12 except as an entry to the business program, Ma116 (stats) and soon Ma109 (finite)
 2. ABMA 062/063 courses being developed in self-paced format with prerequisites equivalent to those offered by the Math Department
 3. Math Department voted on a no graphing calculator policy for final exams in non-specialized courses (pre-calculus and calculus)
 4. Student Success Initiative (college)
 - introduced to increase the completion rate (programs) for students
 - each student to have a “personal education plan” (PEP)
 - part of college-wide strategic planning (budget renewal)
- **CAPILANO** – Ken Towson
 - recently regularized 2 full-time and 1 half-time instructors
 - Rick Brewster has taken a two-year leave to assume a position at Bishop’s University (as a result we have completed a “Regular-Limited Term” hire to replace him)
 - Ted Bentley is preparing to deliver in-service Prob. and Stats sessions to high school teachers (through OLA)
- **CARIBOO** – Jim Totten
 1. New chairperson is Dennis Acreman (effective May 1, 2001).
 2. Problem Solving course very successfully introduced last September with 15 students enrolled who were positive in their response to the course.
 3. New course in Graph Theory to start in January 2001.
 4. New course "Mathematics for Fine Arts" to start September 2002.
 5. Professor Roger Yu awarded an "Excellence in Research" award by U.C.C.
- **COLUMBIA** – Sam Ekambaram

Two new math courses in Discrete Mathematics are being articulated this year. The courses are expected to be offered from Fall 2001. The courses are designed for students of Computer Science and Engineering. Students are encouraged to use graphing calculators/Derive/Maple in Calculus and precalculus courses without compromising conceptual understanding, techniques and problem solving skills.
- **COQUITLAM** – Bruce Kadanoff

College - The enrollment continues to grow and we are beginning to get many more quite excellent students from China. At just under 1100 students, it is a tight fit in the space we have. A new wing is due to be completed by January 2002.

Department - We have a new member in mathematics, Richard Lee, late of the University of New Brunswick. His areas of specialty include Analysis and Differential Equations.

We are presently offering three sections of pre-calculus, four sections of Calculus I, two of Calculus II, two of Introductory Statistics and one each of Calculus III, Discrete Math, Linear Algebra and Probability. This will likely increase in the fall.

Course Numbering - We have made a minor change to our course numbering beginning in the fall. All registrars of receiving institutions and the BCCAT have been advised. The new numbers are on the BCCAT website (effective September 2001).

- **CNC** – Nicholas Buck
 - no new courses or faculty (in Math)
 - steady enrollments, though low in 2nd year courses
 - VP – Academic position is vacant. Applications are solicited from qualified persons
 - ran Math Competition as usual
 - self-evaluation is being implemented
 - new collective agreement

- **DOUGLAS** – Susan Oesterle

Not much new at Douglas this year. Our best news is that the College has finally agreed to start funding our Maple site license through our Systems and Computing budget so our Dean no longer has to use his own discretionary budget to support it. Our classes are all full with the exception of Differential Equations (which we ended up offering as a guided study to 8 students this year) and surprisingly, our Business Precalculus course. We investigated the sudden drop in the latter and discovered that effective Fall 2000 SFU has begun to award transfer credit to Douglas' BUS 330 – Business Mathematics as equivalent to SFU's Math 110 – Precalculus for Business and the Social Sciences. We are concerned about this as we have never felt that BUS 330 students would be prepared to take first-year calculus. We will have to look into this further. Finally, success rates continue to be a concern. We are considering the introduction of a stale date on prerequisites to see if this will make a difference.

- **FRASER VALLEY** – Susan Milner

Enrolment - Second-year numbers were the healthiest ever, and our upper-level enrolments continue to grow. Around 25 students are taking a math degree or have stated their intention to do so.

New Degree - We currently offer mathematics majors and minors in both BA and BSc degrees. As of 2001/02 we will also be offering a combined Computing Information Systems major with a Mathematics minor.

New Courses - Vector calculus, formerly a second-year course, has been revised and deepened to become the new Math 312. It will be offered for the first time next year.

In September 2001 we will be offering Calculus I to Chilliwack Math 12 students, on a contract basis. This course will be taught by one of our department members, follow our standard curriculum, and have the usual prerequisites. Successful students will earn both high school and university credit. We hope to offer Calculus II to these students in the winter of 2002. If all goes well with this pilot project, and other high schools in our area request a similar course, we may be able to expand the offerings.

New position - Six years after a statistician was forced to resign for health reasons, we have finally been allowed to fill her position. Our new statistician, Dr. Gillian Mimmack, comes from a position at the University of the Witwatersrand, South Africa. She joins the department in August.

Another statistician, Dr. Barry Garner, is planning to retire in summer 2002, so there will be another continuing position to fill then!

Math Centres - New this year was a line item in UCFV's budget for funding the Math Centres. We no longer have to scrape the departmental barrel for money to run our two Centres. We were able to offer extended hours at both Abbotsford and Chilliwack Centres. Next year will see yet more support and, if we are lucky, a larger space in Abbotsford.

- **KWANTLEN** – Casey McConnell

There were no changes to our course offerings or to faculty in the Math Department at Kwantlen. A branch of The Learning Centre is scheduled to open at the Richmond Campus this fall. The Learning Centre primarily supports the areas of English, Math and Study Skills. Unlike at the Surrey Campus and due to budgetary considerations, the Math Department may have to drop two sections of Math courses each semester in order to allow for a half-time faculty member to be at the Centre.

- **LANGARA** – Roger Coroas

Core Math Area

1. New courses: Math 1190 - Fundamental Concepts and Practices of Mathematics. This course is intended for pre-service and in service elementary school teachers. The course will be first offered in the fall of 2001. Transfer credits are in negotiations.
2. Math 2382 - Linear Algebra Laboratories has been successfully offered for the last 5 terms. There are still no transfer credit agreements for this course.
3. Changes are currently made to our Math 1150 - Basic and Intermediate Algebra and Math 1152 - Precalculus Algebra courses. As a result Math 1152 will cease to be a prerequisite for Math 1174 - Calculus I with Economics and Business Applications.
4. We have increased the offerings of our Calculus with Computer Explorations Math 1173/1183 and Math 1273/1283. Our goal is to have the courses offered every term.
5. Regarding BC Calculus 12 we are going to grant transfer credits to those students who provide a certificate with a passing grade from the Calculus Challenge Exam. We are in the process of reviewing the high school prerequisites for our Calculus courses.
6. This year's High School Contest was very successful and had some exposure on the local news. VTV News produced a story for the dinner hour news which, among other things, showed the students building a Sierpinski Pyramid. For more information visit <http://www.langara.bc.ca/mathstats/contest/2001/>.
7. Retirements: Two instructors, Carolyn Williston and Ted Galay, retired this year.
8. Hiring: Rob Bures is a new regular full time instructor in our department. He will be teaching in the Core Math Area.

Stats Area

1. One of our instructors in the Stats Area, Robin Susanto, has developed a Supplementary Web Module: Introduction to Statistical Inference. <http://www.langara.bc.ca/mathstats/members/susanto/lic/index.htm>
2. Statgraphics Plus continues to be the software in Stats courses except for the Stats for Marketing which uses Excel.
3. Our Statistics Diagnostic Test (screening tool for students in our Intro Stats offerings) is being updated.

- **MALASPINA** – Ian Bailey

Faculty Retirements - After teaching at Malaspina since about the time of its inception (1969/1970), both Howard Hunt and Larry Kitt have decided to hang up their chalk chucks. We are in the process of interviewing candidates to replace them, as well as finding temporary faculty to replace faculty who will be on leave.

Development of an upper-level program - A package of eight upper-level courses, chosen with future high school math teachers in mind, will constitute a Minor in Mathematics, hopefully to be offered starting 2002/2003. It has passed through most of the institutional curriculum stages; we are waiting for the senior management at the college to propose it to the Ministry. It is one of four science minors to be introduced simultaneously, to give students the option of completing a BSc (general)/BEd concurrent degree.

One final item, Ian Bailey is taking over as department chair for the next two years.

- **NORTHERN LIGHTS** – Larry Legault

We are trying to increase our Calculus I and II hours from 4 to 5 to allow for the inclusion of Maple.

- **NORTH ISLAND** – Slava Simice

- there are increased enrolments in second year calculus
- there is a new course at the ABE level: Math 046 – advanced level (for advanced level certificate)

it is preparation for Math 11 (good enough for trades, but nursing doesn't accept it)

- **NORTHWEST** – Mona Izumi

Northwest Community College hired both a new President and Bursar in September 2000. Unfortunately, the Bursar left at the end of March and we have once again posted the position. However, having a President has given us some stability.

A five-year educational plan has been approved and commitment made to maintain our programme in Terrace and Prince Rupert. The relocation of Natural Resources has also meant that several University Credit courses will continue to be offered in Smithers. Math 131 (Introductory Statistics) is being offered at all three centres and filled to capacity.

The impending teacher shortage in the province has sparked interest in teacher training programmes, and as a result, there is increased interest in Math 190 (Math for Elementary Teachers) in both Terrace and Prince Rupert.

Enrollments in Calculus I and II in the two centres remains unchanged. CIRM students in Prince Rupert are now considering taking Math 101/102 in order to meet Associate Degree requirements upon completion of the CIRM Diploma requirements. This could possibly translate into a slight increase in numbers.

Pre-Calculus is no longer offered as University Credit. Since almost identical courses were being offered by Career and College Prep, duplication was considered an unnecessary expense.

- **OKANAGAN** – Clint Lee

Personnel: The OUC Math/Stats department has hired two new faculty members. One is a statistician based at the North Kelowna Campus and the other is a mathematician based at the Penticton Campus. Phil Beckmann has been hired as Associate Dean of Science.

Curriculum: The Mathematics Major now requires the proofs course, Math 201, for any student who does not achieve a B+ or better in Calculus II. In addition, students seeking entry into the Mathematics Major now have the option of taking analysis, Math 220, or abstract algebra, Math 211, at the second year. The OUC Computer Science Department has obtained approval, at the letter of intent stage, for a BSc in Computer Science and a Bachelor of Computer Information Systems, which ladders from the CIS diploma program. Full program proposals are currently being developed.

Precalculus: We are only offering one section of Precalculus, Math 120, which is being offered at the Vernon Campus. In addition, two intakes of the on-line Distance Ed version of the course are also being offered.

- **OPEN UNIVERSITY** – Veda Abu-Bakare

Martin Petter, Provost of the BCOU, now at North Island College. Our new VP Education and BCOU Provost is Terry Piper who comes to us from York University. We are undertaking major revisions of our Math 150 (Finite Math) and Math 102 (Intro Stats) courses. This course development work was posted on the BCCUPM list serve with few takers. Enrollment numbers in Arts and Sciences are up and increasingly students are completing OU degrees - our most popular degree being the BGS (Bachelor of General Studies). We do not have a Math major degree yet but we will soon be offering a BA with a minor in Mathematics.

- **SELKIRK** – Neil Coburn

Enrollments: There have been increases in some math course (10% to 20%) but on the whole our enrollments have been fairly stable. The 2001/2002 applications for University Transfer students have increased: first-year applications are up 10% and second-year up 100%. The second increase may be due in part to changes in application procedures.

Courses: We had no new courses in 2000/2001. We are considering some proposals for new math courses: another 2nd year statistics course, a Math for Elementary Educators course, and changes to our pre-calculus course (either splitting it into a two-course sequence or offering a one- or two-term option).

Online Courses: Selkirk College is participating in the Online Associate of Arts Degree sponsored by the Centre for Curriculum, Transfer and Technology (C2T2). Initially we will include our online Math 100, Biol 104/106, Engl 110/111 and Psych 100/101 online courses in the offerings available. As part of this initiative we may be able to develop other online courses.

Faculty: One full-time Math position has been regularized. John Peregrym will be on a leave-of -absence for 2001/2002. As a replacement and as part of other changes in the department we have hired one full-time and one part-time math instructor.

Recommended Calculators for Math courses: For Math 100 and 101 (Calculus I and II) and Math 110 (pre-calculus) we are recommending the Sharp EL-9600C. We are also considering revising Math 130 and Math 131 (Finite Math) to be calculator-based courses; probably using the Sharp EL-9600C. As an aside: our Renewable Resources department is also adopting the Sharp EL-9600C for all its courses.

Coop Program: This year UT - Sciences offered a pilot Coop Program in Engineering and Biology/Chemistry for the May-to-August work term. The Selkirk Coop department will recommend continuation of these programs. Our hope is that we can expand the program to include Math students in the future.

BC Colleges High School Math Contest: Although we still have some budgetary constraints, we hope that Selkirk will participate in this Contest in 2002.

Math Transitions Project: Our department has participated in a Transitions Project with area high schools for Calculus 12 and Math 100. This has worked well for the larger schools in our area but has not addressed the problems of students at smaller schools that do not have a sufficient demand to offer Calculus 12. This past term John Peregrym has developed a *Student Workbook* and *Instructor Guide* to accompany the Stewart Single Variable text. This should allow "good" students to work through the material on their own with a teacher working as a resource guide.

- **SFU – Rustum Choksi**

- **Changes in Calculus Streams**

- The only significant changes to our calculus streams concern the choice of texts. For Math 154/155 (the biological sciences stream), we will no longer be using *Mathematics for the Biological Sciences* by Arya and Lardner. As of Fall 2001, we will be using *Calculus for Biology and Medicine* by C. Neuhauser, Prentice Hall. For Math 157/158 (the Social Science/Business stream), we no longer use the Arya/Lardner text. Instead we have adopted *Introductory Mathematical Analysis* by E. Haeussler and R. Paul, Prentice Hall.

- **Other items**

- there is a lecturer position available, closing date: July 5, 2001
 - As of May 1, 2001 the department has split into the Department of Mathematics and the Department of Statistics and Actuarial Sciences. Alistair Lachlan is chair of Mathematics and Charmain Dean is chair of Statistics.

- **TechBC – Jennifer Enns-Ruttan**

- During the 2000/2001 academic year, TechBC introduced the second year of the Bachelor of Science degree in Information Technology, Interactive Arts and Management and Technology. A class of 104 undergraduate learners entered the TechOne program and 82 learners continued in the TechTwo program.

Currently, the admissions process for the 2001/2002 academic year is underway with a target of an entering class of 220 learners. The deadline for application to the undergraduate program is June 29th. Admission requirements and application information is available online at the TechBC website: www.techbc.ca.

The Master of Applied Science and Doctor of Philosophy degrees in Information Technology and Interactive Arts will be offered for the first time commencing in Fall 2001. Further development of the graduate programs in Management and Technology is still underway. Graduate program and application information is available online at the TechBC website: www.techbc.ca.

During the Fall of 2000 the TechThree and TechFour program was revisited which led to the further articulation of the objectives and content of these program years as well as the development of the program themes and elective pathways. The development of the TechThree program, to be introduced in the Fall of 2001, is now well in hand. During the summer months a review and revision cycle will be undertaken for the existing TechOne and TechTwo courses and modules.

The first formal offering of the TechBC Coop program is now in progress for the Summer of 2001. The first group of TechTwo learners has completed a series of preparatory workshops and is involved in actively seeking employment for the Summer term.

The transfer process at TechBC has now officially begun with the awarding of transfer credit to approximately 20 learners for the 2000/2001 academic year. Given that only the first two years of the four year undergraduate program have been implemented, transfer credit is currently being awarded on a per credit rather than a block basis. A transfer credit database has been constructed and is available online at the website and will shortly be made available through the BCCAT Transfer Guide. To date, approximately 340 course outlines from institutions around the Province and elsewhere have been reviewed by TechBC faculty members and the transfer credit database is being updated on a regular basis. Current learners have transferred courses from SFU, UBC, BCIT, Douglas College, Langara College, Columbia College, Kwantlen University College, University of New Brunswick and one college in the United States. During the summer months a group of faculty members will carry on with the review of the course outlines in order to continue to build upon the transfer credit database as well as evaluate transfer credit applications for the TechOne, TechTwo and TechThree programs.

- **UBC – John Fournier**

In 1999/2000, we shifted from first-year calculus courses that mostly met for 4 hours each week to ones that mostly meet for 3 hours each week. This also involved splitting the students differently, with engineering students now taking the same calculus courses as science students interested in the physical sciences, but with new calculus courses that emphasize applications to biology; the latter also have computer labs. The calculus courses for students interested in Commerce now overlap enough with the others for them to be interchangeable as prerequisites.

In 2001/2002, we will adjust this a bit by offering two 4-hours courses in the fall term for students with no prior calculus, one aimed at the physical sciences and one at pre-Commerce. They will have the same final exams as the corresponding 3-hour courses, and the students will then move into “regular” calculus courses in the second term.

We have between 45 and 50 “regular” faculty members; in September 2001 about a quarter of them will have less than two years experience in that capacity at UBC.

“New” Faculty Members: Nike Vatsal, Izabella Laba, Ian Frigaard, Kequin Liu, Serguei Novocelskii, Laura Scull, David Brydges, Stephen Gustafson, Mike Bennett, Greg Martin, Jim Bryan, Zinovy Reichstein.

“Former” Faculty Members: Robert Adams, Robert Anderson, Cindy Greewood, Chanfeng Gui, John Coury, Peter Kiernan, George Maxwell, Robert Miura.

- **VCC – Jean MacLeod**

- enrolment has been strong and stable
- there are several new term instructors due to regular instructors on leave
- we will have a new Department head in January 2002
- there is a continuing search for a new Math 12 text – there have been several pilot projects and a decision is expected by September 2001
- there have been some organizational changes – two deans became VP’s and five Associate Deans became Deans (grievances are pending regarding the latter)

4.2 List Updates: Mailing, Telephone, Fax and E-mail

Lists were circulated for revisions.

4.3 BCCUPM Web Site

If there are features on the web site that you don’t like or things you would like included, let Leo know. Some departments’ individual web sites have links to the BCCUPM site. If you don’t have this, please let your webmasters know. If you have open faculty positions, those can be posted on the site as well. The results from the FAME competition are on the site and it might be a good idea if the top students from the BC Colleges Math Competition

could also be posted. Participating institutions should forward the top three students from both the Junior and Senior Contest, along with the school name, to Jim Totten.

Moved by Neil Coburn and seconded by David Leeming:

that the chair investigate a more permanent location for the BCCUPM web site (perhaps C2T2).

Carried

The committee thanks Camosun for hosting the site until now.

5. DATE AND LOCATION OF THE 80TH MEETING

Douglas College has offered to host the 80th meeting (campus yet to be determined). The probable dates would be either May 23 – 25 (first choice) or May 30 – June 1. The BC Colleges Math Competition brain-storming session would be held the day before (either May 22 or May 29).

6. ADJOURNMENT OF THE FRIDAY SESSION

The Friday Session adjourned at 5:00 pm.

Many, many thanks to Jim Bailey and his colleagues at the College of the Rockies for all their work in hosting the 79th meeting of the BCCUPM.

SATURDAY, MAY 26, 2000 (Morning)

- 1. The Combined Math/Physics Program at the College of the Rockies** - Jim Bailey/Richard Hewko
In presenting this unique program, Jim and Richard were assisted Lyne Lalande, who described the enjoyable, enriching experience from a student's perspective.
- 2. Connecting to On-Line Mathematics Resources** - Alan Cooper
- 3. Statistics Courses Taught On-Line** - Presenter unable to attend.
- 4. Adjournment of the 79th Meeting of the BCCUPM**

5. List of Committee Members Present (Plenary Session – Thursday, 2001-05-24)

| | |
|----------------------|---|
| Veda Abu-Bakare | BC Open University/Langara College |
| Ian Bailey | Malaspina University-College |
| Jim Bailey | College of the Rockies |
| Ross Bates | Selkirk College |
| Nicholas Buck | College of New Caledonia |
| Eric Buckley | SLP / (Okanagan University College) |
| Rustum Choksi | Simon Fraser University |
| Neil Coburn | Selkirk College |
| BarbCoombs | ABE - (Selkirk College) |
| Roger Coroas | Langara College |
| Bruce Crofoot | University College of the Cariboo |
| Natasha Davidson | Douglas College |
| Fae DeBeck | University College of the Cariboo |
| Sam Ekambaram | Columbia College |
| Jennifer Enns-Ruttan | Technical University of BC |
| David Feldman | Selkirk College |
| John Fournier | The University of British Columbia |
| Reimar Hauschildt | Capilano College |
| Bob Herring | Selkirk College |
| Richard Hewko | College of the Rockies |
| Mona Izumi | Northwest Community College |
| Bruce Kadonoff | Coquitlam College |
| Colin Lawrence | BC Institute of Technology |
| Clint Lee | Okanagan University College - Vernon Campus |
| David Leeming | University of Victoria |
| Larry Legault | Northern Lights College |
| Jean MacLeod | Vancouver Community College |
| Wayne Matthews | Camosun College |
| Casey McConill | Kwantlen University College |
| Susan Milner | University College of the Fraser Valley |
| Leo Neufeld | BCCupm – Chair |
| Susan Oesterle | Douglas College |
| Joe Selby | College of the Rockies |
| Slava Simice | North Island College |
| Ray Sproule | Malaspina University-College |
| Jim Totten | University College of the Cariboo |
| Ken Towson | Capilano College |

List of Committee Members Present (First-year Calculus Session – Thursday, 2001-05-24)

| | |
|----------------------|---|
| Ian Bailey | Malaspina University-College |
| Ross Bates | Selkirk College |
| Nicholas Buck | College of New Caledonia |
| Eric Buckley | SLP / (Okanagan University College) |
| Rustum Choksi | Simon Fraser University |
| Neil Coburn | Selkirk College |
| BarbCoombs | ABE - (Selkirk College) |
| Roger Coroas | Langara College |
| Bruce Crofoot | University College of the Cariboo |
| Sam Ekambaram | Columbia College |
| Jennifer Enns-Ruttan | Technical University of BC |
| David Feldman | Selkirk College |
| John Fournier | The University of British Columbia |
| Richard Hewko | College of the Rockies |
| Mona Izumi | Northwest Community College |
| Bruce Kadonoff | Coquitlam College |
| Clint Lee | Okanagan University College - Vernon Campus |
| David Leeming | University of Victoria |
| Larry Legault | Northern Lights College |
| Jean MacLeod | Vancouver Community College |
| Wayne Matthews | Camosun College |
| Casey McConill | Kwantlen University College |
| Susan Milner | University College of the Fraser Valley |
| Leo Neufeld | BCCupm - Chair |
| Susan Oesterle | Douglas College |
| Slava Simice | North Island College |
| Ray Sproule | Malaspina University-College |
| Jim Totten | University College of the Cariboo |
| Ken Towson | Capilano College |

List of Committee Members Present (Statistics Sub-Com. Session – Thursday, 2001-05-24)

| | |
|-------------------|------------------------------------|
| Veda Abu-Bakare | BC Open University/Langara College |
| Jim Bailey | College of the Rockies |
| Natasha Davidson | Douglas College |
| Fae DeBeck | University College of the Cariboo |
| Reimar Hauschildt | Capilano College |
| Colin Lawrence | BC Institute of Technology |
| Joe Selby | College of the Rockies |

List of Participants (Meeting with Secondary School Teachers – Thursday, 2001-05-24)

| | |
|----------------------|---|
| Veda Abu-Bakare | BC Open University/Langara College |
| Ian Bailey | Malaspina University-College |
| Jim Bailey | College of the Rockies |
| Ross Bates | Selkirk College |
| Nicholas Buck | College of New Caledonia |
| Eric Buckley | SLP / (Okanagan University College) |
| Rustum Choksi | Simon Fraser University |
| Neil Coburn | Selkirk College |
| Roger Coroas | Langara College |
| Bruce Crofoot | University College of the Cariboo |
| Natasha Davidson | Douglas College |
| Fae DeBeck | University College of the Cariboo |
| Sam Ekambaram | Columbia College |
| Jennifer Enns-Ruttan | Technical University of BC |
| John Fournier | The University of British Columbia |
| Martin Hamm | Parkland Junior Secondary School |
| Reimar Hauschildt | Capilano College |
| Mona Izumi | Northwest Community College |
| Bruce Kadonoff | Coquitlam College |
| Colin Lawrence | BC Institute of Technology |
| Clint Lee | Okanagan University College - Vernon Campus |
| David Leeming | University of Victoria |
| Larry Legault | Northern Lights College |
| Joe Lucas | David Thompson Senior Secondary School |
| Jean MacLeod | Vancouver Community College |
| Wayne Matthews | Camosun College |
| Casey McConill | Kwantlen University College |
| Susan Milner | University College of the Fraser Valley |
| Leo Neufeld | BCCupm - Chair |
| Susan Oesterle | Douglas College |
| Slava Simice | North Island College |
| Ray Sproule | Malaspina University-College |
| Jim Totten | University College of the Cariboo |
| Ken Towson | Capilano College |

List of Committee Members Present (Plenary Session – Friday, 2001-05-25)

| | |
|----------------------|---|
| Veda Abu-Bakare | BC Open University/Langara College |
| Ian Bailey | Malaspina University-College |
| Jim Bailey | College of the Rockies |
| Ross Bates | Selkirk College |
| Nicholas Buck | College of New Caledonia |
| Eric Buckley | SLP / (Okanagan University College) |
| Rustum Choksi | Simon Fraser University |
| Neil Coburn | Selkirk College |
| BarbCoombs | ABE - (Selkirk College) |
| Alan Cooper | Langara College |
| Roger Coroas | Langara College |
| Bruce Crofoot | University College of the Cariboo |
| Natasha Davidson | Douglas College |
| Fae DeBeck | University College of the Cariboo |
| Sam Ekambaram | Columbia College |
| Jennifer Enns-Ruttan | Technical University of BC |
| John Fournier | The University of British Columbia |
| Reimar Hauschildt | Capilano College |
| Richard Hewko | College of the Rockies |
| Mona Izumi | Northwest Community College |
| Bruce Kadonoff | Coquitlam College |
| Colin Lawrence | BC Institute of Technology |
| Clint Lee | Okanagan University College - Vernon Campus |
| David Leeming | University of Victoria |
| Larry Legault | Northern Lights College |
| Jean MacLeod | Vancouver Community College |
| Wayne Matthews | Camosun College |
| Casey McConill | Kwantlen University College |
| Susan Milner | University College of the Fraser Valley |
| Leo Neufeld | BCCupm - Chair |
| Susan Oesterle | Douglas College |
| Joe Selby | College of the Rockies |
| Slava Simice | North Island College |
| Ray Sproule | Malaspina University-College |
| Jim Totten | University College of the Cariboo |
| Ken Towson | Capilano College |
| Chris Van Bergeyk | BC Association of Mathematics Teachers |

List of Participants (Professional Development Sessions – Saturday, 2001-05-26)

| | |
|----------------------|---|
| Veda Abu-Bakare | BC Open University/Langara College |
| Jim Bailey | College of the Rockies |
| Ross Bates | Selkirk College |
| Nicholas Buck | College of New Caledonia |
| Eric Buckley | SLP / (Okanagan University College) |
| Neil Coburn | Selkirk College |
| BarbCoombs | ABE - (Selkirk College) |
| Alan Cooper | Langara College |
| Natasha Davidson | Douglas College |
| Sam Ekambaram | Columbia College |
| Jennifer Enns-Ruttan | Technical University of BC |
| John Fournier | The University of British Columbia |
| Reimar Hauschildt | Capilano College |
| Richard Hewko | College of the Rockies |
| Mona Izumi | Northwest Community College |
| Bruce Kadonoff | Coquitlam College |
| Lyne Lalande | Student - College of the Rockies |
| Colin Lawrence | BC Institute of Technology |
| Clint Lee | Okanagan University College – Vernon Campus |
| Jean MacLeod | Vancouver Community College |
| Wayne Matthews | Camosun College |
| Casey McConill | Kwantlen University College |
| Susan Milner | University College of the Fraser Valley |
| Leo Neufeld | BCCupm – Chair |
| Susan Oesterle | Douglas College |
| Joe Selby | College of the Rockies |
| Slava Simice | North Island College |
| Jim Totten | University College of the Cariboo |
| Ken Towson | Capilano College |

BC Colleges High School Mathematics Contest Report – Jim Totten

On May 4, 2001 the final round of the BC Colleges High School Mathematics Contest was written at 9 provincial colleges. Students who had performed well on an earlier preliminary round held within their own high schools were invited (together with a teacher sponsor) to attend the final round and spend a day the local college with several activities involved.

This year there was participation from:

| | |
|---|--------|
| Camosun College | (Cam) |
| Capilano College | (Cap) |
| College of New Caledonia | (CNC) |
| College of the Rockies | (COTR) |
| Langara College | (Lang) |
| Malaspina University College | (MUC) |
| Okanagan University College | (OUC) |
| University College of the Cariboo | (UCC) |
| University College of the Fraser Valley | (UCFV) |

Early indications were that we would have an additional 3 colleges involved this year, but it did not happen. Each of those colleges has indicated to me, however, that they will try hard to be involved next year.

The following numbers of students participated in the Final Round through each of the local colleges:

| | Prelim | | Final | | Final | |
|------|--------|--------|--------|--------|-------------|----------|
| | Junior | Senior | Junior | Senior | Top 3 Marks | |
| | # std | # std | # std | # std | Junior | Senior |
| Cam | 140 | 60 | 27 | 22 | 83,66,65 | 93,76,73 |
| Cap | 120 | 90 | 20 | 21 | 84,72,69 | 83,81,77 |
| CNC | 211 | 153 | 27 | 19 | 83,78,74 | 57,46,37 |
| COTR | 25 | 0 | 6 | 0 | 48,42,38 | N/A |
| Lang | ??? | ??? | 35 | 26 | 87,86,85 | 90,89,82 |
| MUC | 155 | 156 | 27 | 29 | 65,62,61 | 61,57,54 |
| OUC | 1200 | | 61 | 32 | 93,79,69 | 67,54,44 |
| UCC | 169 | 115 | 29 | 37 | 63,62,60 | 56,54,47 |
| UCFV | 407 | 55 | 26 | 11 | 80,76,63 | 95,71,70 |

The numbers above for the preliminary round are at best approximate, as we seem not to have a reliable method for gathering this information. Nonetheless, it appears that we had over 3000 students participating in the preliminary round and 455 at the final round.

Thanks should go to those who have been involved in organizing their own college faculty to get on board, and have also been actively enlisting the local teachers to encourage involvement of their high schools. While I don't have all the names, I will list those names I do know. First there are the primary contacts at each of the Colleges: Wayne Matthew's at Camosun College; Rick Brewster at Capilano College; Judy Malcolm at College of New Caledonia; Jim Bailey at College of the Rockies; Dave Lidstone at Langara College; Patrick Ng at Malaspina University College; Clint Lee at Okanagan University College; Susan Milner at University College of the Fraser Valley; and Dennis Acreman at The University College of the Cariboo. Although these were my contacts at each of the Colleges, it goes without saying that they did NOT do all the work required to make this contest a success. Indeed, they have all told me to indicate that their entire departments were involved with hosting the contest, and I want to be sure to thank all of them. I also want to especially thank John Grant McLoughlin of Memorial University in Newfoundland, who, as an instructor in Mathematics Education, continues to bring the rest of us back to reality regarding what we can reasonably expect high school students to be able to handle. Furthermore, we should thank the problem posers who either submitted problems or came together at Camosun last May to put together the initial draft of all four contest papers. At this point in time I no longer recall all the names of those present (this problem gets worse as I get older!) -- for next year's contest we had a sign-in sheet, so we will identify all in next year's report.

Yet another group to be thanked were those who proofread the contest papers and offered solutions for the questions: Clint Lee (OUC), Don Desbrisay (UCC), Kirk Evenrude (UCC), John Grant McLoughlin (Memorial), Dave Murray (OUC), and Jim Totten (UCC). I apologize if I have missed any. Solutions were ultimately prepared by Jim Totten, with corrections supplied by Don Desbrisay. Last, but not least, the most onerous job this year went to Clint Lee who took on the task of type-setting all four contest papers and coordinating feedback coming from several proof-readers, sometimes all suggesting conflicting ways to improve questions.

Again, apologies to anyone whose name may have been inadvertently left out.

For those planning for next year the dates for the 2002 contest are:

- Preliminary Round: March 6 (Wednesday)
- Final Round: May 3 (Friday)

I also wish to thank Rick Brewster for his involvement from the beginning. Rick is leaving this fall for Bishop's University in Sherbrooke, Quebec. I know his colleagues at Capilano College are going to miss his enthusiasm and drive, but I assure you that our Contest Committee will miss his presence at least as much as they will. Although Rick is leaving us physically, he has already expressed an interest in helping from afar, in much the same way as John Grant McLoughlin, and I am sure we will find a way for him to remain an active member.

BCAMT – Chris Van Bergeyk

1. Professional Development

- TI Training Institute (Summer 2000 and Summer 2001)
 - Cadre of Trainers
 - No plans to continue collaboration with TI
- Conferences 2001/2002
 - Fall Conference 2001 (West Vancouver, Oct. 19th)
 - Regional Conference 2002 (Kelowna, Feb. 15th, 2002)
 - New Teachers 2002 (Burnaby & Victoria, 2002)
 - Northwest 2003 (Whistler, Oct. 17th – 19th, 2003)

2. Curriculum

- *Vector*
- Newsletter
- IRP Implementation
 - Applied/Principles/Essentials
 - new Math 12 (Prob. and Stats)
 - Calculus 12
- Graphing Calculator Policy

3. Communication

- Secondary parents brochure
- BCAMT grant information and application form
- Regional representative & regional meetings
- Website and listserv
 - new page will be available after Think Tank (June 8th – June 10th)
- Student conference on Mathematical Frontiers

4. NCTM

- Power point presentation on BC-ized Standards

ABE– Barb Coombs

The ABE Math Articulation meeting was held in early March. At that time, it was decided a representative from the working group would attend this meeting to both bring information from our group to yours and from this group to the working committee. Velma MacKay (COTR instructor) was unavailable so I was asked to attend in her absence. Here is a brief summary of our meeting.

A new Data Analysis unit available through OLA that is suitable for Advanced math. The order # is VA 0298 and the cost is about \$8.00. It is a complete module with both tests and answer keys and would be an excellent addition to an Advanced math course.

There is a project to work on a Financial Math option for the Business Math course. The project has been completed and the unit will be available through OLA in the fall. We are also requesting funds (in the form of a PIC project) to develop a new course to replace the Business and Consumer and the Technical Math courses at the Advanced level. The hope is to produce one course or one set of materials which would offer options for students wanting a non-Algebraic advanced math course. A proposed outline has been developed. Funding was also requested to develop a Calculus module. Since many school districts now offer some Calculus in Grade 12, it was felt that our students could be at a disadvantage if some material was not presented. Again, a PIC proposal was put forward.

The new Intermediate Math disk is out. This disk contains 14 modules and an instructor's guide for a general math course at the intermediate level. The material is in MS Word format and can be altered and printed as required. Each College has received a copy of the disk, which can be copied for use by each institution. It is hoped the material will be used as a freestanding course or to augment existing material. By producing the material this way, the problem of replacing textbooks has been circumvented.

Extra funding from the ministry is coming so hopefully some will come to ABE. The Articulation handbook will be printed next year again with the Math section re-ordered with all the academic courses (Int., Adv. and Prov.) in one group and the Adv. Developmental, Business and Tech. in a different grouping. This may help prevent Adv. Developmental being confused with Advanced Math in the future.

Concerns were voiced about the new curricula being introduced by the Ministry of Education. We were informed that Intro Math 11 was to be discontinued, probably to be replaced by locally developed materials. The new curriculum for the Principles of Math course was discussed as were possible changes to our ABE Provincial outcomes. It was decided that no changes are to be made until we have an opportunity to see what the Post-secondary institutes want in students entering first year from the College system. This topic will be revisited for the next several years as the students with Principles of Math enter the post secondary system.

An on line course was presented by Kwantlen College. It is a program called ALEKS and is available through McGraw Hill. The presenter feels his students are doing well with the material delivered in this manner and will inform us next year of the success rates.

A list of texts used at different colleges for most math courses was put together. This is always an interesting exercise as it is nice to know which resources are being used at other institutions.

Thank you for including our input into your meeting. I will report back to the Math Working Committee in the spring on the results of this meeting. I would like to extend an invitation for this committee to send a representative to our yearly meetings. The 2002 meeting will be held on March 7 and 8 at Vancouver Community College.