BIOLOGY ARTICULATION COMMITTEE

British Columbia Council on Admissions and Transfer

Meeting Minutes May 13, 2009

Location: Trinity Western University
Chair: David Blundon, Camsoun College

10:25 Welcome

1. INTRODUCTIONS (DAVID BLUNDON)

2. HOUSEKEEPING (DENNIS VENEMA)

Welcome: Dr. Raymond, President TWU

3. APPROVAL OF THE AGENDA (DAVID BLUNDON)

- Agenda item 6: Jennifer Orum will present
- Agenda item 8: should be molecular biology not microbiology
- Dave Mossop (Yukon College) sends regrets – sent his report

***Motion to approve agenda**:* Christine Hodgson, ***2nd**:* Gerda Krause

4. APPROVAL OF THE MINUTES (DAVID BLUNDON)

- Item 9 : minor correction – chemistry instructor wanted 3hours of lecture and 1.5hours of tutorial per week with a 3 hour lab
- Miscellaneous edits:
    - Betty Mosher's (College of the Rockies) name is spelled incorrectly
    - Item 16: typo, 'lam' at the end
    - Item 21: Okanogan is Okanagan
    - A number of name edits required
    - SFU is genomic rather than genetics

Motion to approve minutes:** Eric Littley, **2nd Rob McGregor

5. INTRODUCTION OF SYSTEMS LIAISON PERSON (SLP), RICHARD STRIDE (DAVID BLUNDON)

Introduction of Richard Stride, Dean of Academic Programs, North Island College

- Explain the roles and responsibilities: 7 points from BCCAT site
- Described how the system looks currently
- Public system: relatively good budget year for institutions – research universities get 50% of funding; teaching universities,16%; colleges, 26%
- Changes: recognition of 17 private institutions (~5000 students); under PCTIA ~400 private institutions (~6600 students); 200 ESL schools not covered at all; growing number of private institutions difficult to manage because not regulated; many of these seeking articulation and its changing the face.
- According to Ruth Wittenberg, ADM, Post Secondary Education Division, Ministry of Advanced Education top Priorities are:
    1. Health – the prevalence and growth of health related programming is a big contributor to biology programs
    2. Trades Programming
    3. Aboriginal Participation – ongoing work

4. Collaboration between institutions – this encouraged but it is unclear what this looks like

6. PENDING ARTICULATION REQUESTS (JENNIFER ORUM, BCCAT)

Distributed BCCAT update (Attachment 1)

Update highlights:

- Publication – everything you ever wanted to know about articulation committees
- Pending transfer requests – automated, virtually dynamic system that sits behind BC transfer guide called the '*Transfer Credit Evaluation System*'; all the real work still happens in departments.
- Process Summary:

  1) Department alerts a Transfer Credit Contact (TCC) at your institution with course outline

  2) TCC accesses the system and sends a request to whatever institution you want to articulate with

  3) TCC on the other end receives the request and forwards to department requesting credit to be given for the course

  4) Department evaluates and passes back to TCC and to system, etc.

- BCCAT has monitored the number of requests sent but not answered over the last year
  - large number of requests have gone for months/years without an answer.
  - compiled a pending request list
  - new policy - if request sits more than a year it will be taken off the system.

Action – Each Member should check the list of outstanding articulation requests to/from their institution and respond. Articulation requests taken off the system can be resent.

Questions/Discussion: Why are so many old transfer requests still on the system?

A: Process gets bottle necked. Paperwork sits on people's desks as people are busy. Some institutions are fast and some are really slow.

A: There is no automatic resend, but there are automatic reminders

June Williams (TRU-O): we review all requests at a single meeting and all decisions go at once

A: there is the course to course guide on this system , but there are other transfer guides with different systems and are updated in different ways (block transfer guides, biology field course transfer grid, etc)

A: The Health Educators are a subcommittee of Biology. They have their own grid of anatomy and physiology course components. Most institutions are listed either as a sender or receiver.

A: Our transfer guide is built on a system that isn't the reality of student movement today.

A: it would be more ideal if each institution is both sender and receiver. Note new guide called 'Best Practice Guide for receiving institutions'. BCIT is the only one so far that has expressed interest – they are the highest receiver of transfer students.

A: Some other changes - should we incorporate out of province institutions in our transfer guide? Have started including Alberta institutions.

General discussion about the Biology Transfer Grid

- Carol Pollock (UBC) manages the grid; it is updated once a year (August), but only if information is provided (see Attachment)

- the grid can be used as a tool for counselling students

- it is accessible to the public on the BCCAT website but difficult to find

- some difficulty in attempting to triangulate equivalencies using the grid; ex., transfer from institution with a lab component to one with a no lab, but not the other way around

- if all institutions were both sending and receiving, then it may facilitate transfer

- it is difficult to identify courses from UBC, SFU, UVic, UNBC,UBCO when they are not listed as sending institutions.

- general discussion regarding assignment of 1st or 2nd year unassigned credit for courses that are not on the grid.

- if grid in place and accurate – can we make it more accessible to students – a button on the page, with a proviso that students are still responsible to check with receiving institution

Motion to support in principle that UBC, UVic, SFU, UNBC and UBCO be sending and receiving institutions for 1st and 2nd year biology courses: **David Blundon, *2nd*: Dennis Venema**

7. REMOTE/WEB-BASED SCIENCE LABS AND ARTICULATION CREDIT PROJECT/BCCAMPUS (PENNY LE COUTEUR, CAPILANO COLLEGE)

- presentation about remote/web-based science labs
- identified that are moving cautiously with respect to identifying articulation with other science courses with face-to-face labs.
- skills required in laboratory – may provide options for students with special needs, ex. Allergies to chemicals
- reminded Committee that Articulation is about content not about mode of delivery
- regarding labs, guidelines need to be set up. Two part process is planned:
    - Part I - Literature review: what criteria are people using to evaluate against?
    - face to face labs – finding that very little is being evaluated
        - Discussion paper will go to all members of articulation committee as well as geology, geography and physics (June)
        - Draft set of Principles and Guidelines – would like comments and suggestions by the end of June (august deadline)
    - Part II - Adjust guidelines based upon feedback

Motion that the BC Biology Articulation Committee recognizes the importance of developing criteria to evaluate remote and web-based laboratory portions of science courses for articulation purposes: *Penny Le Couteur*

Barbara Moon: just majors or non majors as well?

General Discussion about endorsement of motion and aspect of whether remote and web-based laboratories are acceptable for 1st and 2nd year science lab requirements.

- concerns raised:
- interaction between students in labs is lost
- currently there are no articulated biology lab courses without a face-to-face laboratory component for 1st or 2nd year level, only high school
- Emilia Kirkwood (SFU) – offer a course both in class and online; minimum of two experiments must be done in class; challenge: quality is not the same; in class students do much better than online students

- problem-solving is difficult with online labs; tendency for everything to be 'perfect' – how to deal with a spill; how deep to cut for a dissection; how to explain anomalies
- if online labs are added, there needs to be at least some face-to-face lab requirement within the course
- would require a way to distinguish between an online lab and a traditional 13 week lab course – not equivalent

General discussion regarding issues with online and web-based labs

- North Island College currently offers an astronomy course that has a web-based lab
- a project is currently underway with BC-Campus that involves a robotic arm to see if they could be used there
- the 1st year was completed and now it will enter 2nd year of funding

Edited motion:

The BC Biology Articulation Committee recognizes the importance of developing criteria to evaluate remote and web-based laboratory portions of science courses for articulation purposes. The committee acknowledges the BC-Campus applied research project "Articulation and Transfer of Remote and Web-based Science Lab Curriculum".

General discussion regarding perception that support of the motion implies endorsement of remote and web-based labs

- a reminder that this group has affirmed repeatedly the importance of hands on labs as a fundamental and intrinsic part of biology education.

Edited motion:

The BC Biology Articulation Committee acknowledges and has discussed the BCcampus applied research project "Articulation and Transfer of Remote and Web-based Science Lab Curriculum". The BC Biology Articulation Committee recognizes that criteria to evaluate remote and web-based laboratory portions of science courses will be developed. The committee, however, reaffirms its previous decision not to consider web-based courses for articulation. *Barbara Moon*

General Discussion regarding the need for a motion, but rather that it be recorded in the minutes that is was discussed

- BCCAT interested in learning the perspective of the Committee in order to proceed with funding of projects for next year
- *Penny Le Couteur:* there is a need to have guidelines established regarding online and web-based laboratories
- *Jennifer Orum:* require a broad-based set of principles; BCCAT regards this at a legitimate line of inquiry because it already exists

Motion withdrawn: Barbara Moon

Penny requested member to review criteria for this type of delivery.

8. SURVEY OF 1ST YEAR MAJORS BIOLOGY LABORATORY SKILLS AND EXPERIENCES (CHRISTINE HODGSON, NORTH ISLAND COLLEGE)

- See attachment
- The purpose of the survey was to identify the skills students should acquire in 1st year majors biology. Survey sent to all institutions; 16 replies
- results tabulated and provided in Attachment 2
- a '?' corresponds to the number of times maybe/someone the time was selected.
- skills not identified in survey – problem solving; group discussion
- item received by Committee

Action Item: Dennis Venema will send out a PDF of the survey to the committee via email.

9. DIGITAL CAMERAS IN BIOLOGY LABS (JOHN NEUMANN, COLLEGE OF NEW CALEDONIA)

- incident at CNC where one student photographed in lab with a dismembered cat and posted on YouTube
- Digital cameras have not been excluded from labs at CNC, but this incident has caused the Department to consider a policy on the use of digital cameras in lab

Question/Discussion: Do other institutions have policy on cameras in lab?

Marja de Jong (CapU) - no policy; cameras are used all the time.

Gerda Krause (Langara) – have a no-camera policy for similar reasons; faculty thought there was more value in actually sketching things – for detail. Students were taking pictures of specimens for students who didn't come to lab.

David Blundon (Camosun) - encourage students to take pictures. No policy and it's never been a problem.

Carol Pollock (UBC) - Students use cameras all the time which presents novel cheating issues. It hadn't occurred that they would get posted. Perhaps a policy is needed to agree not to post.

Betty Mosher (CotR) - vertebrate biology students bring in cameras and usually it's the better students; not sure where the photos end up

Blythe Nilson (UBCO) - students brought cameras to take pictures in biochemistry; but unsure about dissections

10. UPDATE ON SFU MOLECULAR BIOLOGY COURSES (INGRID NORTHWOOD, SIMON FRASER UNIVERSITY)

- See attachment
- Molecular Biology and Biochemistry (MBB) articulate through this committee. In the past only 2 courses were offered. These have undergone changes and a third 200-level course has been added. Please re-examine these courses based on the department outlines. If the current articulations don't correspond properly, send the paper work my way. The course numbers are MBB201, MBB222 and MBB231.
- Chem 281 is a pre-requisite for 222.
- Chem 282 – is a co-requisite for 222
- No biology pre-requisite for MBB 222.
- MBB 201 is a one semester survey course to meet the needs for non – majors
- All are non-lab based courses.

- Courses to be offered in spring 2010.

11. / 12. INSTITUTIONAL PRESENTATIONS

I. THOMPSON RIVERS UNIVERSITY (ERIC LITTLEY)

- There are four majors programs offered in Biology at TRU: Animal Biology; Ecology and Environmental Biology; General Biology; Cellular, Molecular and Microbial Biology
- Also offer indisciplinary Major in Chemical Biology
- All majors have a Co-op option and an Honours program; accept approximately 300 students per year in 1st year majors courses (Biol 111/121) and also accept transfer students into 2nd, 3rd, and 4th year of the B.Sc.
- Approximately 50 students graduate from TRU with a Biology/Chemical Biology Major each year
- As of September 2007, have enrolled our first 10 M.Sc. students into the Masters of Environmental Science program, and the program is now running full with 20 students.
- Curricular revisions have resulted in the addition of labs to program and the revamping of second year to add labs to genetics and cell courses.
- Recession has resulted in a 7% drop in application for September.

Q: How are you freeing up resources?

A: Based originally on UBC model; 2 semester courses are collapsed into 1 (evolutionary trends in animals, in plants); move 2 hour lab to 3 hours lab offered biweekly; hours saved are used to teach cell biology and genetics.

II. VANCOUVER ISLAND UNIVERSITY – VIU (ALLAN GIBSON)

- Performed undergraduate program review in 2007/08; in 2009/10, moving content of BIOL 112 (Plant Sciences), into 2nd year; will introduce BIOL 123 as a 1st year majors course; reducing the number of requirements for statistics for Biology major from 6 to 3 credits
- 2008/09 year – increase in students (n=220) entering 1st year courses; difficult to handle and may reduce to maximum of 180
- Typical enrolments in 3rd year courses are 48-60 and in 4th year, 14-18.
- Approximately 18-25 students graduate with B.Sc. in Biology
- Field course in Tropical Biology is running this year; anticipate running the course again in summer 2010
- Inundated with students – think the name change has made a difference.
- All 4th year students required to do a research project. Only have room for 20 students and 33 students wanted to register so it has been made optional. Even with the change in requirement, there are still 25 students who want to take it.

III. UNIVERSITY OF VICTORIA – UVIC (GREG BEAULIEU)

- Two new courses:
    - Bio 489 – Conceptual Foundations of Biosciences
    - Biol 248, Topics in Organismal Biology - established this as a an elective; Guest lecturers from faculty come in and speak for a couple of weeks (phylogenetics, etc) and bring in their research; Requires a C+ or better in first year biology; . For articulation, topics will likely change from year to year depending on faculty. A 200 level is recommended.
- New Science Building – Bob Wright Centre opened last September, easing the crunch for classroom and research lab space

IV. UNIVERSITY OF NORTHERN BRITISH COLUMBIA – UNBC (DEZENE HUBER)

- The BIOL degree now houses a new Minor in Biology and Conservation, due to changes in the Forestry degree
- MATH 342-3 (Biostatistics) has been replaced with MATH 240-3 (Basic Statistics). This change is due to changes in the MATH program. The overall content and intent of the course remains the same.
- BIOL 303-3 (Plant Physiology) and BIOL 305-3 (Plant Morphology and Anatomy) have been deleted.
- BIOL 304-3 (Plants, Society, and the Environment) is a new course, and replaces BIOL 303-5 in the "one of" category at the 300-level.
- BIOL 401-3 (Plant–Microbial Interactions has been deleted.
- BIOL 318-3 (Fungi and Lichens) has been added.
- The BIOL 210-3 (Genetics) prerequisite has been removed from BIOL 411-3 (Conservation Biology.
- At the time of the 2009 articulation meeting, there was an anticipated upcoming change (the forms were moving through to Senate). The change did, ultimately, take effect:
    - BIOL 318-3 (Fungi and Lichens) was placed as a Upper Division Requirement in the "two of" category along with BIOL 301-3 (Systematic Botany), BIOL 307-3 (Ichthyology and Herpetology), and BIOL 308-3 (Ornithology and Mammalogy).

V. UNIVERSITY OF THE FRASER VALLEY – UFV (SHARON GILLIES)

- Enrolment was stable at all levels in Biology this year; 2nd year number have increased with a projected increase again next year
- Summer enrolments are very strong with many courses being offered as a 7-week course (Abbotsford only)
- Have added the pre-vet concentration for this year
- Have developed an Honours program for Fall 2009
- Held a successful institution-wide undergraduate student research day; also attended the tri-universities research day in the Okanagan
- Are re-hiring a vertebrate physiologist and an environmental microbiologist for August 2009
- appropriated a few other lab spaces as they needed more space
- Barbara Moon is retiring this summer

VI. UNIVERSITY OF BRITISH COLUMBIA – UBCV (CAROL POLLOCK)

- UBC agreed to take 50-100 additional students, but there isn't enough room, ergo reorganization
- For the following, predict these will be implemented in September 2010
    - go to a series of 2nd year courses with no lab. These will be prerequisites for 3rd year courses but can be taken any time before students graduate.
- remove requirement for biochemistry unless it's needed as a prerequisite
- removing requirement for physical chemistry in second year unless it is prerequisite
- getting rid of streams of the degree – if students want to specialize they will have to go to honours
- reducing the number of credits required for a biology degree (from 127 to 120)
- students are required to take 2 lab courses in 3rd year (more expensive labs will have limited entry)
- students can still do 4th year projects if in the honours program
- loosening up requirements so that all students have the opportunity to be in a small class at least once in their time there (right now courses are still 90-100 students)
- The changes should make transfer easier - stay posted.
- There is still discussion/contention over what should be in first year courses.

- Project to provide assistance to students: 1) work study students would be present at beginning of class to answer questions and to post any queries on an electronic bulletin board; these questions would be used by the professor to structure lecture; 2) peer tutors were hired to sit in learning centre, but not utilized by students. Found that 1st year students used online and bulletin board but not face-to-face; 2nd year students made better use of peer tutors. Overall, good experience and fostered mentorship among new/experienced students.
- new pre-vet concentration and honours degree

Q: What will be the new 2nd year courses?

A: Unsure at this time.

Q: Where will this leave our labs with 2nd year students? will they get credit?

A: Even if they have labs with second year lab, it won't transfer as one of the two 3rd year lab requirements

A: Bio 112 to be replaced by Microbi 201 for 2nd year transfer students.

VII. UNIVERSITY OF BRITISH COLUMBIA OKANAGAN – UBCO (BLYTHE NILSON)

- The first 'homegrown' Ph.D. and M.Sc. students completed their degrees this year; this year's graduating class is the first that will have done all their degree work at UBCO
- 1st year biology classes are typically 600-660 in class size; 2nd year, 115 in class size; approximately 25 graduate students
- Currently, grade cut-off for acceptance into science is 72%; English 12 requirement is now 70%
- Resorting of workload policy; normal assignments are 2/2, with considerations for unit work, program or centre administration, large research grant administration, chair work
- UBCO has doubled its student population since its inception 4 years ago
- Biol 311 and 366 have always had labs but never counted toward ratio targets (student: faculty); took labs out of those courses and fused them into a single lab (separate stand alone course); by September, can reduce the number of students taking the labs and it will now count into target ratios
- Biol 493/495 (6 hours/week) ran through its first run – so successful it went from 10 students to 4 sections (60 or 80) students. Fused those two into one course.
- move stats course into second year

Q: Is UBCO in tandem with the changes occurring with UBCV?

A: No, there is no seamless transfer between UBCV and UBCO; they are separate.

VIII. TRINITY WESTERN UNIVERSITY - TWU (DENNIS VENEMA)

- 1st year that we have no hires to report.
- Dennis Venema is tenured.
- Enrolment is improving at the 1st and 2nd year level
- TWU will hold the line that we will not accept transfer of a course without a lab to TWU course that has a lab.

IX. THOMPSON RIVERS UNIVERSITY OPEN LEARNING – TRU-O (JUNE WILLIAMS)

- All courses, except for lab courses, are self-paced; university level allows 30 weeks; ABE level previously allowed 36 weeks, reduced to 30 weeks starting January 2009; students may also get an 18 week extension for an additional fee; lab courses are done over 4.5-5 days

- BISC 120/121 are undergoing major revision including new text and rearrangement of the topics between the courses; start date of revised versions not yet set
- New course development:
    - BISC 300, Biometrics
    - BISC 313/314, Biochemistry
    - BISC 414, Evolution
- Moving towards offering more courses online, paced cohorts with the instructor having more responsibility and freedom with respect to course materials, making the courses less 'pre-packaged'
- enrolment was down 30-40% over the last couple of years but student numbers are going up – hopefully able to report an increase next year
- management has ideas of adding/broadening the selection in biology
- disappointment – cancelled 2nd year environmental course

X. SIMON FRASER UNIVERSITY – SFU (EMILIA KIRKWOOD)

- Three faculty members retired leaving a significant deficit in teaching faculty (Alton Harestad, Aine Plant, Brian Hartwick)
- for the coming years the department will be rearrange to cover but 419 (Wildlife Biology) will be lost.
- All BISC and MBB prerequisites require a minimum grade of C-

Q: Are you introducing courses in sustainability?

A: Still working on curriculum right now and reorganizing faculties.

Q: How does 302 get a writing designation?

A: There are lab reports so that is how they get the writing designation.

XI. SELKIRK COLLEGE (IAN DAWE)

- 2nd year enrolment was up; 1st year enrolment was down; direct result of the elimination of Kinesiology and Physical Education program last year
- Have experienced a reduction in number of lab sections; lots of cuts
- Trying a new first year text (changing from Campbell to Wolfe)

Q: Will you let us know how the book goes? Canadian content.

A: I rewrote the test bank questions; the main objection to Campbell was it was too wordy.

XII. QUEST UNIVERSITY (ANNIE PRUD'HOMME GÉNÉREUX)

- in their 2nd year – hired 7 new faculty (3.5 of those are in the sciences)
- Recruitment looks better than last year
- Many new courses will be developed this year and next
- students have a preference for ecology and field courses (ex. Borneo)
- Developing teaching labs in the summer.
- No articulation agreements so far – meeting with BCCAT and they advised a block transfer agreement
- Quest is a private but not-for-profit school. It is very expensive but all students have scholarships so the cost is the same as UBC

Q: Where does the scholarship come from?

A: Partly from donation. Set the tuition high but budget for lower income from each student's tuition. Scholarships are based on student affordability.

Q: Chemistry follows traditional chemistry rather than the Quest model. Why is that?

A: Students want to follow a pre-med path; 50% of students are Canadian but the remaining students represent 27 different countries; classes are capped at 20 students and follow a seminar style discussion.

XIII. OKANAGAN COLLEGE (ELLEN PEDERSON)

- Penticton received $28 million for construction of a Centre of Excellence in Green Building Technology; will include trades, classrooms, and a gymnasium
- A 2-year diploma program in Human Kinetics is being offered in Pentiction; Biology department is 'fostering' the HKIN program for now; one continuing faculty member was hired last year (Wendy Wheeler); program is very successful with 15-18 students this year and 47 applicants for next year.
- Conservation Technician program is still being developed
- Howie Richardson is retiring; the position is being filled by a term faculty member, Bruce Campbell
- Erin Radomsky is on maternity leave until next January and is being replaced by Amanda Warman
- Overall applications are down this year.
- We are hoping to put on a 2nd year genetics course this year – articulation with UBCO third year.

XIV. NORTHWEST COMMUNITY COLLEGE - NWCC (GERMAINE MISTRY)

- Offers UT courses, an Associate Degree and service courses to the Northern Collaborative Baccalaureate Nursing Program
- constant struggle to maintain science program
- to preserve 2nd year science, working on block transfer laddering into teaching/research universities; if we could get arrangements with other institutions, let us know.
- Suggestions were made to collapse cell biology and biochemistry into a single semester course with a lab – not supported by faculty
- Health Canada regulations – having difficulty obtaining microbes due to lack of bio-safety cabinets and other regulations.

Ian Dawe: We also had this problem and got around it by doing a stack of paper work. We purchase different strains and adjusted things as companies won't sell them *E. coli*, *S. aureus*, etc.

XV. NORTHERN LIGHTS COLLEGE (CINDY BROBERG)

- no longer a biology program in Dawson Creek – moved to Fort. St. John
- NLC offers 1st year of a B.Sc. program
- received money to change science building to a health science building
- new lab space will be called a science lab to hold microbiology, biology, chemistry, physics, anatomy/physiology
- looking for general information on equipment required to set up A&P lab
- nursing moving forward in collaboration with UVic

Q: How are you reconciling chemicals and microscopes?

A: We put away microscopes when chemicals are in use. It hasn't been a problem.

XVI. NORTH ISLAND COLLEGE (CHRISTINE HODGSON)

- Added a 2nd year general microbiology course with a lab
- 2nd year courses to be offered in 2009/2010: Bio 200, 201, 202, 211, 215
- we do have a robotic arm –video clip is available at http://rwsl.nic.bc.ca/

XVII. LANGARA COLLEGE (GERDA KRAUSE)

- A.Sc., A.A., and diplomas in Health Sciences being developed; several faculty involved in curriculum development; courses and credentials are intended to transfer to SFU Health Sciences; Garyen Chong is the coordinator of this program
- enrolment on the upswing due to the economy
- offer a lot of 2nd year courses but scheduling becomes a conflicting issue
- retrofitting library; additional classrooms; have the new skytrain station on Cambie and 49th Avenue, which will make it easier for students to travel to Langara
- looking at the Russell text but so far nothing has changed

Q: Why do some courses have prerequisites of C and some C+?

A: The prerequisite mark is up to the instructors.

XVIII. KWANTLEN POLYTECHNIC UNIVERSITY (PAM MCDONALD)

- In response to conversion of Kwantlen University College to Kwantlen Polytechnic University, new BSc degrees are being planned. Committees are working on the following proposals: Sustainability Science (Langara Campus), Psychology (Surrey campus), Health Sciences (Surrey or Richmond campus)
- Biology courses will be offered at Langley campus for the 1st time in fall 2010 in response to a shift of our Environmental Protection Technology program to Langley and the introduction of a new B.Sc. in Sustainability Science at that campus; anticipate initially offering two sections of each of the 1st year majors course and one in Ecology
- Will be changing course format for the 1st year majors course in Fall 2010; instead of using audio-tutorial method, the course will have 2 x 2 hour classes per week; labs at Richmond and Surrey campuses will continue to be 'open', ie. Unassigned lab times, students choose when to do lab work)
- Number of sections of A&P continues to increase as enrolment for the nursing degree increases; enrolment in our remaining courses has dropped slightly; cancelled one section of 1st year majors course in spring
- Integrated Pest Management (being reviewed due to lack of interest).

Q: Do you suppose the title was the problem with the Integrated Pest Management program?

A: Yes, it's behind the times.

Q: Please clarify what will be offered in the health sciences program. Is this similar to what SFU is offering?

A: Yes.

Gerda Krause: Langara will be offering the same thing.

XVIII. COQUITLAM COLLEGE (BRUCE MILLEN)

- sciences are slightly down – especially in chemistry
- no changes to courses
- number of international students is down; are experiencing a decline in students from China, but an increase in students from other SE Asian countries and Iran
- reading comprehension and writing continues to be a challenge for the international students – they can do math but not cell biology

Q: What kind of writing assignments are given?

A: They have lab quizzes and reports. I make them make corrections and resubmit.

Q: What about reading comprehension?

A: This is a challenge with exams; exams are 3 hours and students really struggle; can perform well with multiple choice but writing portion of the exam is difficult for them. Try to have students take 100→101→102 but it's difficult to get them to take all 3 courses as it's not required. It's hard to fit all three into their course load.

Q: What about giving them an extra hour so we can evaluate their skills not their translation quickness?

XIX. COLUMBIA COLLEGE (YOK-KENG GRAAL)

- Lower enrolment due to other universities lowering entrance requirements – are universities experiencing the fallout from that?
- Seeing a shift in demographic – fewer students from China and more from Saudi Arabia. Because these students have a background that stresses religious education they have poor math skills and really struggle. This is difficult as their government funds their international studies and wants them to be engineers.
- I do a lot of frequent testing and try to stay away from multiple choice, although it does demonstrate comprehension of the concept.

Discussion about Entrance Requirements

Carol Pollock: We lowered the entrance requirement to a 'low' 87% of incoming from high school and they noticed the difference – classes had lowered averages. I don't know if that included transfers.

Emilia: We saw same thing. Students have to take a student success program – non credit courses 'back on track' BOT

Eric Littley: We have a few students who tried a few lower mainland colleges who have made it to us.

XX. COLLEGE OF THE ROCKIES (BETTY MOSHER)

- Ann Rice retired and will not be replaced so there are now only two official biologists.
- Students were surveyed over the last 3 or 4 years to see what they are interested taking in second year.
- Ecology is now back for this next year but genetics is off. Doug and I have fought to maintain four biology courses in the 2nd year level; not sure what will happen to 2nd year courses in the future
- Some emphasis in moving toward an environmental stream; name change to Biology of the Environment; hoping the title change will be more attractive to arts majors
- Health programs doing well; Biology department runs the two Anatomy and Physiology courses at 1st year level; also, teaches two 2nd year health science courses
- New dean

- Received $12 million in funding for more building and expansion on the main campus; announcement from government that money is coming for new construction project but no funds for operating expenses
- Just trying to keep their program going and 2nd year courses getting a lot of pressure.

Q: Where are the students going?

A: Universities have lowered their entrance requirements. Students in small communities have a desire to get out of the community. This is the first year chemistry numbers are higher than biology numbers.

XXI. COLLEGE OF NEW CALEDONIA (JOHN NEUMANN)

- Enrolment for university transfer is up
- Courses – no big changes , some text book changes
- Biol 111/112, Human Anatomy and Physiology: there are 37 seats available for both these courses in the alternative semester
- One section of Biol 112 will be delivered in Intersession 2009
- New initiatives – are in the process of applying for a medical radiography technology program; Anatomy and physiology will be needed - optimistic that the program will require and A&P instructor
- Medical lab tech program increased seats from 16 to 24
- New branding as per letterhead

XXII. CAPILANO UNIVERSITY (MARJA DE JONG)

- enrolments are up; summer course offerings in May/June 2009 are full
- applications for Fall entrance to University also higher than last year
- This fall, a new course entitled Human Anatomy and Physiology I for Health Sciences (Biology 112) was offered to replace Biology 104 for Health Sciences stream; Biol 104 and 112 are considered equivalent and students will only received credit for one of the courses; Biol 112 is the preferred prerequitist for Biol 113 (Human anatomy and Physiology II for Health Sciences)
- Two newly designed courses:
    - Biol 208 (Ecology); replaces 2-term Ecology courses Biol 204/205
    - Biol 222 (Microbiology); replaces Biol 220/221
- working towards some niche degrees as a new institution
- Continuing toward accreditation with AUCC in order to attract American students - only institution in Canada working toward this.
- Provide students with a card outlining what students can take and what transfers to other institutions. It also points out which institutions have not articulated Capilano's newest courses.
- Ecology has not been articulated yet.
- Lab programs are continuing to receive pressure with a push towards larger lab sections. What are the lab maximums at other institutions?

Questions/Discussion: What are the lab maximums at other institutions?

Cindy Broberg: NLC caps labs at 18 students. It's in their teaching contract. It can be expanded up to 24 if an assistant is provided for 2 hours/week.

Sharon: UFV caps at 18 students for first year and 24 for 2nd or 3rd year.

Bruce Millen: Coquitlam College caps at 18. WCB states that for safety reasons, an additional staff person is required if the number exceeds 20.

Gerda Krause: Langara caps at 30-32 students for 1sr year labs with a second staff person present; 2nd year labs are capped at 24, with the exception of microbiology which is capped at 16.

Carol Pollock: UBC caps at 24 students with a TA and a half time faculty (faculty is between 2 rooms).

Greg Beaulieu: UVic caps at 24 with one person.

Eric Littley: TRU caps at 22 with 1 lab faculty with the exception of microbiology which is capped at 18.

Emilia: SFU caps at 40 in Biol 102 and 46 in Biol 101. Both have one full time instructor plus a couple of TA's.

Ian: Selkirk College caps at 24 students.

Betty Mosher: College of the Rockies caps at 18 which is limited by room size.

Allan Gibson: VIU caps at 20 students with one lab instructor.

XXIII. NORTH WEST COMMUNITY COLLEGE – NWCC (GERMAINE MISTRY)

- 1st meeting;
- nursing program undergoing curriculum review; anatomy and physiology will be merged and combined with nutrition taught with team teaching approach; there is resistance from faculty as it affects workloads
- also a move during review that all service courses to nursing to be removed and taught by nurses as nursing courses; currently no nurses to teach so will be taught by university faculty
- 24 seats for nursing ; over 100 applicants; nursing driving biology enrolment
- university credits up 50%; faculty posted course packages for students; ex. 1st year biology when from 12 to 32 students; 2nd year genetics offered in 2010; a lot of 1st year students not taking full sweep of science courses – affects 2nd year numbers as they don't have both biology and chemistry – do other institutions have that problem as well?

Q: In adding nutrition to A&P, does that increase hours of the course?

A: No; in addition, there is a move to have Nursing become a 3 year program instead of a 4 year program.

Q: that would have some impact on articulation

A: that is a concern as once the changes are made they may not articulate

General discussion about ways to encourage students to be better prepared for nursing programs. Mostly focused on how to encourage good communication with teachers and counsellors at local high schools.

Germaine Mistry: Our problem is that counsellors have told students that they don't need anything past science 10 be in biology so they have no physics; students are also told not to take 5 courses in first year because it would be too heavy a load

John Neumann: Invited biology teachers for dinner; good opportunity to communicate these kinds of things; successful in clarify; offered free meal in the evening; good attendance

Germaine Mistry: We tried but scheduling faculty and teachers is difficult; problem seems to be with the guidance counsellors

Betty Mosher: Have close ties with high school in Cranbrook; found it very beneficial; have been asked into the Planning 10 courses to provide direction to students; host an annual wine and cheese with the teachers

XXIV. VANCOUVER COMMUNITY COLLEGE – VCC (MICHAEL ROBINSON)

- No changes to course offerings
- Do both a first year Biology and Anatomy and Physiology in 2 parts

- involved in nursing as offering A&P for LPN; Biol seems to be becoming a nursing factory as students going into nursing require the biology background
- unfortunately no longer offering university transfer physics

XXV. DOUGLAS COLLEGE (LUCIA FUENTES)

- Three new faculty: Dr. Alida Faurie, Dr. Mitra Panahi, Dr. Rey Cruz-Aguado
- Biology lab facilities will be updated this summer to include a new Human anatomy and Physiology lab; in addition, there are some renovations in the Microbiology lab to be used for microscopy, histology, molecular biology
- New dean, new president, new VP of academics coming as well as lots of changes in registration

XXVI. CAMOSUN COLLEGE (DAVID BLUNDON)

- Biology Dept. offers UT courses, an Associate Degree and service courses to the following programs: Advanced Placement (HS), Applied Chemistry and Biology, Environmental Technology (ET), Dental Hygiene, Nursing, Nursing Access for Practical Nurses (NAPN) and Sports Education
- Biology seems to be sustained by being a service to Nursing
- Not a strong core in Biology as students aren't taking two years of biology (ex., only 15 student in molecular biology)

XXVII. BCIT (MONICA DEBOER)

- no changes since last report

XXVIII. ALEXANDER COLLEGE (BARBARA MOON)

- Barbara or may not be coming back as the Alexander College rep.
- Are hiring due to a lot of attrition (retirement).
- Offer two year Associate of Arts in Business - the obligatory lab science course is biology; students find the new 'language' a real challenge as most students are ESL and business oriented
- Non majors biology text : chose Campbell's *Essential Biology*, thinking a thinner book would be helpful but it actually provides less context and less figure explanation
- Offered Biol 100 for first time in January 2009; is currently running for the second time; transfers as non-majors biology to most institutions
- Alexander College caters mostly to international students

Q: Have you looked at Krogh text? It's used in non-majors biology because it's a very readable text.

Q: What about Concepts and Connections?

Carol Pollock: We use Belk and Borden; has been customized for UBC, which may be helpful to your college; found that the non-majors do better when there is a focus on topics of interest.

Carol Pollock: Thank you to Barbara Moon for her many years of service on articulation and all the best in retirement.

XXIX. YUKON COLLEGE (LETTER PRESENTED BY DENNIS VENEMA)

- Upcoming BSc program being introduced in partnership with Alberta, Bachelor of Conservation Sciences; Dr. Fiona Schmigalo on staff with University of Alberta has been assigned to produce course content; first intake to happen Sept 2009
- Outcome of this change: Courses in biology from UofA will become part of the articulation 'package' that Yukon College brings to the process

- Enrolment slight down; dominated by female students
- New course for 2008 – Introduction to Northern Ornithology

Discussion

Barbara Moon: may have an impact – in Alberta non-majors do not require a lab. This may put pressure on our non-major offerings to drop the lab requirement.

June Williams: BC College of Teachers no longer requires a lab science.

Allan Gibson: I would be curious as to how many teaching programs no longer require a lab science.

Barbara Moon: There is discussion going on at the university as to whether arts students should need a lab.

13. UBC-O 2010 MEETING (BLYTHE NILSON)

- Next year the meeting will be in the sunny Okanogan
- Booked for May 11/12 tentatively (mid-week) but could be anytime
- BCBio planned to occur immediately before Articulation Meeting

14. FUTURE MEETINGS (DAVID BLUNDON)

2011 – Quest University Canada
2012 – College of the Rockies
2013 – Capilano University
2014 – Queen Charlottes?

15. ELECTION OF CHAIR FOR BBCAT BIO-ARTICULATION (DAVID BLUNDON)

Motion to continue David Blundon as Chair : Dennis Venema; ***2nd***: Christine Hodgson
All in favour