



THE UNIVERSITY OF BRITISH COLUMBIA
Vancouver Senate Secretariat
Senate and Curriculum Services
Enrolment Services
2016–1874 East Mall
Vancouver, BC V6T 1Z1
www.senate.ubc.ca

VANCOUVER SENATE

MINUTES OF APRIL 18, 2001

Attendance

The Eighth Regular Meeting of the Senate of the University of British Columbia for the Session 2000/01 was held on Wednesday, April 18, 2001 at 8:00 p.m. in Room 102, George F. Curtis Building.

Present: President M. C. Piper (Chair), Vice President B. C. McBride, Dean F. S. Abbott, Dr. P. Adebar, Dr. J. D. Berger, Ms. E. Blewett, Dean J. Blom, Mr. P. T. Burns, Dr. H. M. Burt, Dean J. A. Cairns, Mr. A. Campbell, Mr. T. C. Y. Chan, Mr. C. Eaton, Dr. D. Fisher, Dean F. Granot, Dr. S. W. Hamilton, Dr. A. G. Hannam, Rev. T. J. Hanrahan, Ms. J. Hutton, Dean M. Isaacson, Dr. C. Jillings, Dr. D. D. Kitts, Dr. V. LeMay, Mr. R. W. Lowe, Dr. D. M. Lyster, Dr. M. MacEntee, Mr. B. J. MacLean, Dr. P. L. Marshall, Dr. W. R. McMaster, Mr. R. W. Morasiewicz, Dr. G. N. Patey, Dr. T. F. Pedersen, Dr. W. J. Phillips, Mr. G. Podersky-Cannon, Dean M. Quayle, Ms. C. Quinlan, Dr. V. Raoul, Ms. H. E. Roman, Dr. H. J. Rosengarten, Dean J. N. Saddler, Mr. B. Simpson, Dr. C. E. Slonecker, Ms. D. Soochan, Dr. R. C. Tees, Dean R. J. Tierney, Mr. D. Tompkins, Mr. G. Y. C. Tsai, Dean A. Tully, Mr. D. R. Verma, Dr. D. Ll. Williams, Dr. R. A. Yaworsky.

Regrets: Dr. W. L. Sauder (Chancellor), Mr. R. Affleck, Dr. R. W. Blake, Mr. P. T. Brady, Ms. E. J. Caskey, Dr. J. H. V. Gilbert, Dr. R. Goldman-Segall, Dr. D. Granot, Mr. E. Greathed, Ms. M. Hassen, Dr. P. E. Harding, Dr. J. Helliwell, Mr. R. R. Hira, Ms. S. Iwagami, Dean M. M. Klawe, Dr. S. B. Knight, Dr. B. S. Lalli, Mr. T. P. T. Lo, Mr. W. B. McNulty, Ms. V. G. Mirehouse, Dean D. Muzyka, Dr. P. N. Nemetz, Dr. J. Perry, Mr. H. Poon, Ms. K. Riecken, Dr. K. Schonert-Reichl, Prof. A. F. Sheppard, Dr. C. Shields, Dr. D. Sjerne, Ms. L. M. Sparrow, Dr. B. Stelck, Mr. E. Storm, Dr. J. R. Thompson, Mr. W. Tong, Dr. R. J. K. Wilson, Dean E. H. K. Yen, Dr. W. Yuen.

By Invitation: Dr. Neil Guppy, Dr. Michael A. Goldberg, Vice President Dennis Pavlich.

Minutes of the Previous Meeting

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| <i>Dr. Tees</i> | } | <i>That the minutes of the meeting of February 28, 2001, be accepted as circulated.</i> |
| <i>Mr. Verma</i> | | |

Carried.

Chair's Remarks and Related Questions

BUDGET 2001/2002

The President reported that the University had recently received from the provincial government confirmation of its 2001/2002 budget. The President had met with the Budget Committee, and the Board of Governors was to receive the budget for approval in May. Although President Piper was quite pleased overall, there remained several issues to be resolved, including funding for pay equity. No budget cuts had been assessed, and there was some flexibility to move funds into new areas. President Piper reported that each of the BC universities were in different positions, and that cuts may have been allocated to some of UBC's sister universities.

PENDING TRIP TO ASIA

The President planned to travel to Asia in late April, accompanied by a delegation including several deans, members of Senate and alumni. The group was to visit Tokyo to celebrate the awarding of the Japan Prize to UBC Professor Emeritus Timothy Parsons. The Japanese government was to host award ceremonies and receptions throughout the week, which the group would be honoured to attend. The delegation also planned to meet with Japanese government officials and science and technology authorities. An alumni event was to be held in Tokyo. Meetings were scheduled with colleagues from Ritsumeikan University, the University of Tokyo, Waseda University and the Tokyo University of Agriculture & Technology. The group was to also host an event in honour of a gift to the Faculty of Dentistry.

The President was to visit Beijing as a representative of the only Canadian university invited to attend Tsinghua University's 90th anniversary celebrations. The President described Tsinghua University as a significant university colleague in China.

The President was also to meet with delegates from the Chinese University of Hong Kong with a view to developing an enhanced exchange agreement.

RESEARCH PRIZES

The President reported that she had recently attended an event in honour of the following UBC faculty award winners for 2001:

1. The Jacob Biely Faculty Research Prize: Dr. Robert Hancock, Department of Microbiology and Immunology;
2. The Charles A. McDowell Award for Excellence in Faculty Research: Dr. Douglas Bonn, Department of Physics and Astronomy;
3. The Sam Black Award for Education and Development in Arts: Dr. F. Graeme Chalmers, Department of Curriculum Studies;
4. The Dorothy Somerset Award for Performance and Development in the Arts: Dr. Errol Durbach, Departments of English and Theatre, Film & Creative Writing.

The President remarked that the University could take pride in these four individuals, who have distinguished themselves in their fields and demonstrated leadership to the entire University.

Presentation of Certificates

The President presented certificates of appreciation to the following student senators, who had completed their terms effective March 31, 2001. President Piper offered her thanks for their expenditure of time and energy. The recipients were: Mr. Alan Baggish, Ms. Tiffany Chung, Ms. Joëlle Dennie, Ms. Keri Gammon, Ms. Pamela Liu, Ms. Yvette Lu, Ms. Jennifer Parry, Ms. Katie Riecken, Mr. Dennis Visser, Mr. Howard Poon (completing term May 31, 2001), Mr. James Kondopulos, and Ms. Kristine Wilker.

Introduction of Student Senators

The following list of the student representatives to Senate for the term from April 1, 2001 to March 31, 2002 was circulated for information. The President invited the recently-elected student representatives who were present to introduce themselves.

Agricultural Sciences

Mr. Howard Poon (continuing until May 31, 2001)

Applied Science

Mr. Eric Storm (new)

Arts

Ms. Michelle Hassen (continuing)

Commerce and Business Administration

Mr. Wesley Tong (new)

Dentistry

Ms. Sakura Iwagami (continuing)

Education

Ms. Erica Blewett (continuing)

Forestry

Mr. Adam Campbell (new)

Graduate Studies

Mr. David Tompkins (continuing)

Law

Mr. Wallace Yuen (new)

Medicine

Vacancy, election to be held in April 2001.

Pharmaceutical Sciences

Diana C. Soochan (new)

Science

Mr. Timothy C. Y. Chan (continuing)

Members-at-large (all new):

Mr. Christopher Eaton

Mr. Brian J. MacLean

Mr. Ryan W. Morasiewicz

Ms. Hannah E. Roman

Ms. Gina Y. C. Tsai

Senate Nominating Committee Membership

DECLARATION OF VACANCIES: CALL FOR NOMINATIONS FOR TWO STUDENT REPRESENTATIVES TO SERVE ON THE SENATE NOMINATING COMMITTEE

In accordance with regulation 4.1.5 of the Rules and Procedures of Senate, the Secretary of Senate reported that a call for nominations was to be sent out immediately following the meeting and, if necessary, an election was to take place at the May 16, 2001 meeting of Senate.

From the Board of Governors

Notification of approval in principle of Senate recommendations: subject, where applicable, to the proviso that none of the programs be implemented without formal reference to the President, and that the Deans and Heads concerned with new programs be asked to indicate the space requirements, if any, of such new programs.

- i. Curriculum proposals from the Faculty of Science (pp. 12623-4);
- ii. Changes to the Diploma in Forestry (Advanced Silviculture) and the Diploma in Forest Engineering (p. 12623);
- iii. The establishment of a Certificate in Rehabilitation (p. 12623);
- iv. New awards (p. 12625).

Reports from the Vice President, Academic and Provost

UNDERGRADUATE ENROLMENT TARGETS 2000-2001

Vice President McBride had circulated the following memorandum to members of Senate, accompanied by tables listing the enrolment targets. The tables have not been included in the Minutes, but are available in hard copy on request from the Manager, Senate & Curriculum Services.

Undergraduate Enrolment Targets 2001-2002

For the forthcoming 2001-02 academic year we plan to keep total undergraduate enrolment close to the level for which we are funded by the provincial government. In this current academic year (2000-2001) our Full Time Equivalent (FTE) enrolment is 25,359. For the academic year beginning this coming September (2001-2002) we plan on an FTE enrolment of 25,659, up 300 FTE from last year. This will translate into approximately 28,350 students (the difference is from an adjustment for students taking fewer than 30 credits).

Our forecast predicts our actual FTE enrolment will be below the funded level for this coming academic year, but recall that several years earlier we had enrolments well above the funded level. We are working to ensure that over a three-year cycle there is a balance between our actual FTE and our funded FTE. Exactly meeting the annual funded target is extremely difficult on a yearly basis, but over a slightly longer cycle we can manage enrolments better. The three-year average is selected because this is the time frame the government uses in its FTE funding models.

The number of new students entering most programs will increase this year, relative to last year. This increase, which will be for both first year students entering directly from high school and for transfer students from the colleges, will address several factors: i) a slight decline in the number of courses that upper level (continuing) students are taking (resulting in lower FTE's), ii) a slight decline in the number of continuing students who are returning (resulting from a higher graduating rate recently among upper year students), and iii) an increase in the number of funded FTE's.

Importantly, however, the actual FTE numbers for the Faculties will be relatively stable. For example, although intake numbers in the Faculty of Science show a growth of 321 students (from 1678 to 1999), the overall FTE in Science will grow by only 67 FTE (or 1.3%). Recently class sizes have grown, time spent in student evaluation has increased, and demand for advising has risen. Mainly for these reasons, we want in 2001W to shrink the funded-to-actual FTE gap that we experienced from 1997W to 1999W.

In the coming academic year the distribution of FTE's among the Faculties will remain relatively constant. In the past some Faculties have changed in size at rates greater or smaller than the overall growth of UBC. This year we have received more funding from the government to increase the size of the incoming medical class by 8 students, and we have been asked to increase the size of our nursing program by 10 students in September and another 30 in January.

This year it is also important to note that in Commerce, for the first time, we will be admitting direct entry students. This year approximately 150 students will directly enter Commerce from high school and in future years this will grow to about 75% of the incoming class. Students also enter Commerce at the second year level from other UBC programs and from the colleges. The size of the Commerce cohort will not, over the long run, be increasing as a result of this change, although for this coming year we will have both a direct entry class as well as a second year class of normal size.

For information a table showing Graduate Student headcount is attached as well (*not included in the Minutes*).

The University has in place two committees to oversee undergraduate enrolments. First, the Senate Admissions Committee is responsible for reviewing University and Faculty enrolments of new and continuing students. I met with this committee on March 21, reviewing the enrolment plan for the upcoming year. Second, the Enrolment Management Committee (chaired by the Acting Registrar, David Holm) oversees the enrolment process, advising Faculties and the Undergraduate Admissions Office as necessary. This committee meets regularly through the admission cycle.

The Committee of Deans also reviews our enrolment plans and helps in the process of setting enrolment targets for the University and for specific Faculties. In particular the Deans of admitting Faculties are responsible for determining at which year levels and at what numbers we are to admit new students. The individual Faculty intake numbers for 2001-2002 I am providing you with at this time have been agreed to by the Deans. The attached tables are for information (**not included in the Minutes**).

Vice President McBride pointed out that the provincial government had requested that UBC increase its 2001-2002 enrolment targets by 530 FTE over the previous year. Of those 530 FTE's, 126 FTE's had been allocated to the information technology sector, 40 FTE to the nursing program, and 8 to the MD program.

Vice President McBride gave a brief overview of the enrolment targets and then drew attention to some of the mechanisms used by the University in forecasting and managing enrolment, emphasizing that it remained difficult to exactly predict enrolment figures. Dr. Lyster, as Chair of the Admissions Committee, agreed and affirmed that the Admissions Committee supported the proposed targets.

*Vice President McBride
Dean Isaacson*

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*That Senate approve the undergraduate
enrolment targets for the 2001-2002 academic
year as circulated.*

Carried.

Universitas 21 and U21 Global

Please see 'Appendix A: Universitas 21 and U21 Global.'

Vice President McBride introduced the proposal. He stated that Universitas 21 is a consortium of universities that had been formed in 1997 under the leadership of Alan Gilbert, Vice Chancellor of the University of Melbourne. The membership of Universitas 21 comprises 17 research universities from Australia, New Zealand, China, Singapore, Canada, the United States, Sweden, Germany and Great Britain. A guiding principle was that the group could accomplish significantly more as a collective than as individuals. The deans from several faculties as well as the librarians have met to discuss joint initiatives.

Vice President McBride described U21 Global as Universitas 21's most ambitious proposal to date. This initiative had been designed to combine the power of Universitas 21 with a commercial partner to deliver and market e-Learning programs. The Vice President invited Dr. Michael Goldberg, former Dean of the Faculty of Commerce and Business Administration and UBC contact officer for Universitas 21, to speak to the proposal.

Dr. Goldberg further elaborated on U21 Global, a proposed joint venture between Universitas 21 and Thomson Learning. To broaden the context, he listed some of the accomplishments of Universitas 21, such as uniform exchange agreements and the Professional Portability Project.

U21 Pedagogica, the main mechanism for quality control in U21 Global, was to become a legal entity under the leadership of Sir Stewart Sutherland, the former Vice Chancellor of the University of London and the current Principal of the University of Edinburgh. Given the diversity of member universities, U21 Pedagogica's goal would be find a way to assess quality across universities and departments. U21 Pedagogica was to be responsible for: a) determining the admis-

sion process and standards, b) determining the promotion requirements, c) awarding credentials, and d) approving all learning materials.

U21 Global differed from existing open learning and joint education ventures in that it was part of a larger and more ambitious consortium, in that there was no focus on any one particular discipline, and in that it could operate world-wide. U21 Global was to be created as a legal entity which would offer e-Learning degree programs, initially in Asia in two business-related areas: e-Business and Management Information Systems. U21 Global was to be owned in equal partnership by Thomson Finance and U21 Equity. U21 Equity was to comprise of those institutions choosing to make an equity investment. Of the 17 Universitas 21 institutions, 13 had agreed to participate in U21 Global, while 11 had agreed to make an equity investment.

U21 Global was to generate two revenue streams: profits to be divided equally between Thomson Finance and U21 Equity, and a royalty stream peaking at 14% of gross fees to the member institutions in exchange for the use of their identifying marks. Dr. Goldberg emphasized that the marks of all of the participating institutions had to be used together, and only in the context of U21 Global. In response to a query, Dr. Goldberg clarified that the equity investments were to be in the form of money rather than in-kind donations.

In response to a query, Dr. Goldberg confirmed that the Board of Governors was considering making an equity investment in the amount of \$500 000 US. Vice President Pavlich confirmed that UBC could resign its membership in U21 Global after one year, but that U21 Global could continue to use UBC's identifying marks for four additional years.

Dr. MacEntee raised some concern about the process for bringing forward such a complex and significant matter for approval after only one discussion on the floor of Senate, and suggested

that referral to one or more Committees of Senate might be the best way to produce informed feedback from Senate. In response to questions, Vice President McBride stated that he hoped that Senate would approve of UBC joining U21 Global. The agreement with Thomson Learning stipulated a May deadline for a minimum of 12 institutions to join.

Mr. Tompkins asked why Thomson Learning had been chosen as the corporate partner, as opposed to the Universitas 21 operating this venture independently or perhaps choosing another partner. He also asked whether provincial government money would be used to fund UBC's investment. Dr. Goldberg responded that Thomson Learning had been chosen because of its enormous expertise in large scale e-Learning. UBC intended to raise the funds from donations rather than allocating General Purpose Operating Funds.

Dr. Tees commented that capping the royalty stream at 14% suggested that the collective universities' power and influence would also be capped at 14%. Dr. Goldberg pointed out that the 14% royalty would be assessed on gross fees with only minimal deductions, which he felt to be generous. He added that Thomson Learning had agreed to approach Universitas 21 institutions first when choosing course writers and technological support. The member universities were to have access to any learning materials developed for U21 Global for their use free of charge. Dr. Goldberg stated that UBC had the opportunity to be part of this very large e-Learning experiment at relatively low risk, yet UBC could integrate successful courseware or technologies immediately on our campus at no cost.

Dr. Fisher described this venture as a dramatic step toward the commercialization of education. He drew a distinction between U21 Global and full cost recovery courses or partnerships with other public institutions. Although one might approve of Universitas 21 in general, one might be skeptical about joining U21 Global. He asked for clarification about the possible concern about

ensuring proper attention to a venture located in Singapore. Dr. Goldberg responded that the business office was to be located in Singapore for tax purposes, and that there may be some challenge for U21 Global to supervise management staff located so far away.

In response to a query from Mr. Podersky-Cannon, Dr. Goldberg stated that U21 Global would not have any right to use UBC Library resources unless a contract agreement was reached and a fee paid. Independently of U21 Global, librarians have been discussing some collaboration as part of the Universitas 21 consortium.

Dean Isaacson spoke in support of Universitas 21 as providing many opportunities for synergies. As for U21 Global, he agreed with Dr. MacEntee that the Academic Policy Committee or the Budget Committee might be appropriate bodies to review the proposal and provide feedback. He noted the May deadline, however, by which UBC would have to reach a final decision. Vice President McBride stated that although he agreed that Senate might choose to refer the matter to one or more committees, he was hopeful that Senate could achieve a level of comfort such that the venture could be approved, at least in principle. He added that the financial features of U21 Global were minor compared to the opportunity to learn what works pedagogically in e-Learning.

Prof. Burns acknowledged the concerns about the commercialization of knowledge. Apart from those concerns, he asked for reassurance that UBC would not risk a great deal of money should the venture not be profitable. In response to his query, Vice President McBride confirmed that UBC was working to solicit one or more donations to comprise the \$500 000 US equity investment. He noted that the University of Melbourne had agreed to invest \$5 million, while the National University of Singapore had committed \$2 million. Prof. Burns drew attention to the fact that any possible UBC decision to eventually withdraw from U21 Global might be costly in

terms of our relationships with other member universities. Prof. Burns further expressed concern about the need for a quick decision in order to meet the May deadline.

In response to a query from Dr. Sjerpe, Dr. Goldberg confirmed that there was no binding restraint on UBC concerning its course delivery or its fee structure. The only restriction was to be that UBC could not sell U21 Global materials. In response to queries from Dr. Lyster, Dr. Goldberg stated that UBC would not be restricted in terms of existing or new exchange agreements with partner universities.

Mr. Podersky-Cannon expressed concern that he could not fulfill his fiduciary duties as a member of Senate without first reviewing the contractual agreements. He shared the concern about the corporatization of knowledge.

Dr. Tees spoke in support of U21 Global as an interesting, exciting, and potentially valuable experience. He suggested that the Senate view the discussion as "first reading," and that a mechanism for ongoing review by the Senate be devised, e.g. an annual report either directly to Senate or through one or more Senate Committees.

Dr. Hamilton expressed support for U21 Global. He acknowledged the legitimate questions raised about the venture and about the risk to UBC's reputation. He remarked that, although \$500 000 US is a significant sum, it was a relatively modest investment in the global education market. Dr. Hamilton expressed concern that, if UBC were to decline this opportunity, global alliances would continue to be formed elsewhere and UBC could become a local actor in a global field. Ms. Hutton agreed, adding that the next such partnership to be developed would likely require a much larger investment.

Prof. Burns expressed support for an approval in principle, especially in light of the extensive discussion. He agreed that a mechanism for review should be written into the motion, such that the Senate would have the opportunity to reconsider its position in future. Dr. Williams pointed out that the Senate could not properly approve the business plan nor the investment of venture capital, as those responsibilities fell to the Board of Governors. The Senate could, however, support the cooperation of the member universities on academic matters.

Dr. Pedersen recalled that the University had been founded to supply education in British Columbia, because access to higher education at a reasonable cost was deemed to be for the public good. He contrasted this principle with alignment with a corporate, profit driven partner, and asked how U21 Global would guarantee access to good students who could not afford to pay the presumably high tuition fees. Dr. Goldberg stated that projected fees for a 12 month continuous program would be approximately \$6-7 000 USD, significantly less than the fees for some existing distance education degree programs. Rather than restricting access, Dr. Goldberg viewed U21 Global as increasing access for students in Southeast Asia who could then study at home rather than travelling abroad. Dr. Goldberg added that a foundation had been established to provide financial aid for Universitas 21 students, including U21 Global students.

*Vice President McBride
Dr. Hamilton*

} *That the Senate approve UBC entering into the agreement to join U21 Global as outlined, with no relationship to the financial issue, which shall be dealt with by the Board of Governors; and
That the Vice President Academic and Provost make an annual report to Senate on the status of U21 Global, either directly or through the appropriate Committee(s) of Senate; and
That the Senate approve in principle the University of British Columbia entering into a relationship with U21 Equity.*

Mr. Tompkins proposed to amend the motion to exclude support for investment in U21 Equity, both because this was an issue for the Board of Governors, and because he believed that graduate students would not be in support. President Piper remarked that, as a point of order, the Senate could not approve investment in U21 Equity.

The motion was amended to delete the statement on U21 Equity.

Mr. Podersky-Cannon reaffirmed his wish to review the partnership agreements. Vice President Pavlich agreed to meet with interested parties to share that information. He added that the documents were very large.

In response to a query from Dr. MacEntee, President Piper clarified that the motion did not extend to general Senate acceptance of the corporatization of education.

The amended motion was put and carried.

Admissions Committee

EDUCATION ABROAD PROGRAMS

Dr. Lyster presented the following report.

Education Abroad Programs for Approval

Institutionally based agreements for approval:

- University of Otago
- University of Washington
- National Taiwan Normal University
- Université de Lausanne
- Korea Advanced Institute of Science and Technology
- Albert-Ludwig University Freiburg
- Humboldt University of Berlin

- Université Polynesie Francaise
- University of Aberdeen

Faculty specific agreements for approval:

- University of Bern - Faculty of Law
- Royal Veterinary and Agricultural University - Faculty of Agricultural Sciences & Faculty of Forestry
- E.A.R.T.H -Faculty of Agricultural Sciences & Faculty of Forestry
- University of Technology, Sydney - Faculty of Education & Faculty of Arts.
Restricted to aboriginal students or students focusing on aboriginal studies.

Consortium Arrangements for information:

- Canada-European Forestry Consortium: Human Dimensions in 21st Century Forestry
- AQUA3 Consortium - North American Alliance for Sustainable Water Resources
- Canada-European Pulp and Paper Consortium: Advanced Vocational training and Professional Development in Papermaking Technologies
- Intercontinental Master's Program in Adult Learning and Global Change.

Dr. Lyster

Dr. Fisher

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That Senate approve both the institutionally based and the faculty based education abroad programs as proposed.

Mr. Podersky-Cannon stated that he had difficulty voting to approve the exchange programs without having first reviewed the agreements, or a summary thereof. Dr. Lyster stated that the Admissions Committee had elected not to circulate the agreements because they were large documents. He stated that exchange programs were usually initiated by UBC faculty sponsors with interest in a particular area. The International Liaison Office crafts the agreement, and then the documentation is presented to the Admissions Committee for approval. Vice President McBride added that student exchange agreements usually specify reciprocal exchange of a specific number of students. Mr. Podersky-Cannon stated that, although he did not wish to cast aspersions on the approval process, he still wished to review a summary of the agreements. Dr. Lyster stated that he accepted Mr. Podersky-Cannon's comments and that, in future, he would bring a summary of the agreement(s) for approval.

In amendment,

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| <i>Dr. Yaworsky</i> | } | <i>That the Admissions Committee be requested to provide a summary of each of the thirteen education abroad agreements at the next meeting.</i> |
| <i>Mr. Podersky-Cannon</i> | | |

Defeated.

The original motion was put and carried.

Adult Basic Education Provincial Diploma

Dr. Lyster had circulated the following report on behalf of the Committee.

Current Calendar Entry (2000/01 Calendar, p.39, col. 2)

Adult Basic Education - Provincial Diploma

The University recognizes the ABE Provincial Diploma for admission to the first year of an undergraduate program. A minimum average of "C+" is required based on mathematics, English, a science and a language at the Advanced Level and English plus three academic subjects at the Provincial Level chosen from the following: biology, chemistry, physics, geography, history, literature, mathematics, and computer science.

University Transfer courses may not be used as part of the Provincial Diploma for admission to UBC.

Proposed Calendar Entry

Adult Basic Education (ABE) - British Columbia Adult Graduation Diploma (BCAGD)

The University recognizes the British Columbia Adult Graduation Diploma (BCAGD) for admission to the first year of an undergraduate degree. Applicants who have completed the BCAGD must be at least 19 years of age and meet the following admission requirements:

- Adult Basic Education (ABE) Advanced Level or Grade 11 courses in
 - English,
 - Mathematics (ABE) or Principles of Mathematics 11,
 - a science,
 - one of Social Studies (ABE) or Social Studies 11 or First Nations 12 or language 11
- Four subjects at the ABE Provincial Level or Grade 12 including English and 3 additional subjects chosen from biology, chemistry, physics, Mathematics (ABE) or Principles of Mathematics 12, Computer Science

(ABE), geology, geography, history, English literature, languages.

- A minimum average of C+ or 67% based on the 4 ABE Provincial or Grade 12 courses presented which must be graded. Grade 12 course results must include the provincial examination component of the course.

Because of enrolment limitations, the academic standing required for admission to most programs is higher than C+ or 67%. Entrance requirements to specific programs parallel those for BC/Yukon secondary school graduates and applicants should refer to the table "Specific Program Requirements for Applicants from a Secondary School in BC/Yukon"

Rationale:

Previously there were two forms of adult graduation credential for BC adults, the 'Adult Dogwood' Certificate issued by the Ministry of Education and the Adult Basic Education Provincial Diploma (ABEPD) issued by the Ministry of Advanced Education, Training and Technology. Both of these credentials were phased out as of August 2000 and replaced by the British Columbia Adult Graduation Diploma (BCAGD) starting September 1999. The new common credential, also to be known as the "Adult Dogwood", is owned jointly by the MOE and the MAETT.

Historically the ABEPD was accepted by UBC for admission as noted in the current calendar entry. It was based on ABE Advanced and Provincial Level courses only. The old 'Adult Dogwood' Certificate was not approved as a basis of admission because of the limited number of secondary school courses required for graduation. (However, if on occasion an adult student presented all the grade 11/12 required courses with the necessary standing, admission consideration was given on an individual basis.) Under the new diploma requirements both systems will accept each other's courses allowing for a combination of ABE college and adult secondary courses towards completion of the BCAGD.

By requiring that the provincial examination mark be a component of any grade 12 subject used in the diploma ensures that the same standard applies for all students who present a course whether it is part of the regular secondary graduation diploma or the adult BCAGD.

Dr. Lyster
Mr. Verma

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That the proposed Calendar entry regarding the Adult Basic Education Provincial Diploma be approved.

Carried.

Computer Science B. Sc. Major and Minor

Dr. Lyster presented the following report, as Chair of the Committee.

Present Calendar Entry: NONE

Proposed Calendar Entry: (page 369, col. 2)

Enrolment in Computer Science is limited. Students wishing to pursue Major, Minor, Honours, or combined Honours programs in Computer Science must formally apply to the Department of Computer Science. Admission, normally at the end of first year, and continuation are based on academic performance. The application deadline is May 1st. For more information regarding admission and continuation requirements students are advised to contact the Department of Computer Science or visit the Computer Science undergraduate web site: <http://www.ugrad.cs.ubc.ca>.

Admission to a degree program in Computer Science is a prerequisite for receiving a B.Sc. in Computer Science.

Rationale:

The number of students in the Major program in Computer Science has increased from 520 in the 1996 Winter session to 997 in the 2000 Winter session. This has caused serious concerns with respect to the quality of the education that our students are receiving. To address these concerns, it is imperative that the Department of Computer Science obtain control over admissions to its Major and Minor programs, in the same way that it currently controls admissions to its various Honours programs.

It is worth noting that two recently approved programs in the Department have admission requirements. These are the Software Engineering Option and the Major in Cognitive Systems: Computational Intelligence and Design.

We propose to require that all students who wish to receive a degree from a program in Computer Science must be formally admitted to the program. Admissibility will be determined primarily by minimum GPA thresholds.

The Department believes that the following properties are desirable for any acceptable admission policy for the Major, Minor, and Honours programs in Computer Science:

Students may not continue to take courses at UBC on an ongoing basis in order to eventually secure admission. Therefore, students who wish Computer Science programs will be told early of their admissibility. It is hoped that students denied admission will seek a different academic route to a degree and stop taking upper-level computer science courses (except for their own interest). Students who have been choosing upper-level Computer Science courses have often been doing so in the faint hope that they will eventually secure a degree in Computer Science; the consequence of their actions has overtaxed resources in Computer Science as well as creating difficulties in getting places in courses for legitimate Computer Science students and other students in Science who require or desire these courses for their programs.

There are continuation thresholds defined akin to, but lower than, the thresholds for admission. Continuation requirements will apply to a student only until he or she has completed the required Computer Science second-year courses. Continuation requirements are a necessary consequence of our desire to decide admission early - at the end of first year. We believe that they are preferable to delaying the admission decision for students.

Good external transfer students should be able to come into the program with confidence that they have either been admitted or that they will be able to secure admission with high probability.

Weak or questionable external transfer students will have to qualify for admission to computer science programs while at UBC.

Internal transfers (within UBC) should be encouraged no matter how far along they are in their program, and no matter what their program is.

Students who are required to withdraw from a program should not be allowed back into the program

An appeals process that deals with mistakes and special, well-justified exceptions to these rules is a necessary component of any implementation of a policy satisfying these properties.

The number of undergraduate Major, Minor, and Honour students that the Department can effectively educate will vary over time as a function of faculty size, graduate program size, program requirements, instructional techniques, budget, etc.

It is the intention of the Department to reserve seats in Computer Science courses for students who are admitted to programs in Computer Science. The Department remains committed to offering courses to all students. It should be easier for students in other programs to gain access to Computer Science than under many alternatives to this proposal. With the primary admission decision made between first and second year, there will be no need to escalate the enrolment restriction threshold for required second year Computer Science courses. Also, students will know early of their admissibility and will be encouraged to pursue alternative academic options, thus reducing demand in Computer Science courses.

Effective Date: May 1, 2001

| | | |
|-------------------|---|--|
| <i>Dr. Lyster</i> | } | <i>That the Calendar entry on the Bachelor of Science Major and Minor be approved.</i> |
| <i>Dr. Berger</i> | | |

In response to a query from Dean Granot, Dr. Berger clarified that this policy would be in effect in September 2001 and would apply to students entering second year. The Dean expressed some concern about changing requirements for students who are already enrolled, citing the example of students who would require five or six years to complete an undergraduate degree because they cannot meet the revised requirements. Dr. Berger stated that the proposal represented a regularization of procedures already carried out on informal basis through selection on the basis of

marks. This more formal procedure will allow students to know whether or not they have been accepted in advance of registration.

The motion was
put and carried.

Agenda Committee

WEB INFORMATION FOR SENATE APPROVAL

Dr. Slonecker had circulated the following information as Chair of the Agenda Committee.

Web Information for Senate Approval (information item)

As the use of electronic rather than print delivery of information increases, Senate is more frequently being asked to approve revisions to academic information that appears only on the web. In some recent proposals to Senate, the authors have asked that members of Senate review one or more web sites in preparation for voting on proposed changes.

The Agenda Committee supports and encourages the use of electronic media where possible, but also requests that a printed copy of the text under revision be circulated to members of Senate. This could be accomplished, for example, by pasting the web pages into the Senate proposal. Although this may add to the length of some proposals, it would be greatly appreciated by the members who do not have consistent web access, and would also be helpful at the Senate meeting should any discussion arise.

Please also be reminded that the deadline for submission of agenda items for a meeting of Senate is always 4:00 p.m. on the Wednesday two weeks prior to the meeting itself.

Thank you for your cooperation in this matter.

Dr. Slonecker emphasized that material for a Senate agenda must be delivered to the Manager, Senate and Curriculum Services two weeks prior to a Senate meeting at 4:00 p.m. The Agenda Committee will not accept late submissions.

Curriculum Committee

FACULTY OF SCIENCE

Please see 'Appendix B: Curriculum Change Summary.'

Dr. Berger reported that most of the changes involved the recrediting of courses. The formula used by the Curriculum Committee in assigning course credits is based on contact hours: one hour of lecture, or three hours of laboratory work, or two hours of tutorial weekly per term equals one credit. Although this formula had been applied to new courses, many existing courses varied from the standard. One problem in the Faculty of Science was that many program years were nominally weighted at 30 credits, yet they contained the equivalent of 36 to 38 credits in contact hours. The proposed adjustments would increase the number of program credits by an average of three to six credits per year, for an average increase of eight credits over the course of a degree. Dr. Berger pointed out one correction: BIOL 431 should have been listed as having four credits rather than three.

| | | |
|-------------------------------|---|---|
| <i>Dr. Berger</i> | } | <i>That the course proposals from the Faculty of Science be approved.</i> |
| <i>Vice President McBride</i> | | |

Carried.

| | | |
|-------------------|---|--|
| <i>Dr. Berger</i> | } | <i>That the program proposals from the Faculty of Science be approved.</i> |
| <i>Dr. Tees</i> | | |

In response to a question from Dean Granot, Dr. Berger confirmed that courses in Computer Science would remain available to students in the Integrated Science Program and other mathematical science programs who require them.

The motion was put and carried.

Adjournment

Adjournment

There being no further business, the meeting was adjourned.

Next meeting

The next regular meeting of Senate will take place on Wednesday, May 16, 2001 at 8:00 p.m.

Appendix A: Universitas 21 and U21 Global

AN UPDATE AND DISCUSSION OF IMPORTANT DETAILS RELATING TO UNIVERSITAS 21 GLOBAL AND THE BENEFITS THAT CAN ACCRUE TO UBC

By Mike Goldberg, Universitas 21 Contact Officer, Office of the Vice President, Academic

I. Introduction to *Universitas 21*

Founded in 1997, *Universitas 21* now includes 17 universities from 10 countries. It has engaged in a dialogue to consider collaborative, working arrangements on a number of fronts. At its second Annual General Meeting in Glasgow, the Board of Directors agreed on 10 projects that would help define *U21* and move it forward:

1. Develop succinct analytical summary of defining characteristics of member institutions as comprehensive research intensive universities
2. Establish bench-marking in key strategic areas of: academic management; research; and teaching and learning
3. Create *U21* Fellowships for outstanding and innovative university teachers and administrators
4. Capitalise on/extend capacity of *U21* universities to exploit new teaching and learning technologies and delivery systems
5. Promote and support student mobility
6. Integrate international student exchange and job placement
7. Develop and promote international courses and curriculum materials
8. Extend professional recognition via international co-operation in curriculum development and delivery
9. Promote reputation and viability of *U21* as internationally known brand signifying international quality and credibility
10. Establish a *U21* data base to facilitate collaboration and development of comparative management systems

Several of these projects are well along and will be discussed next when we review *U21* progress. The broad aim of *U21* discussions has been to create a model that will provide opportunities for member universities to operate internationally in ways and on a scale that none could expect to achieve through individual initiatives or conventional models of international co-operation. The scope of the foregoing projects indicates the breadth of the areas being considered as venues for international cooperation.

Universitas 21 consists of: Albert Ludwig Universitat (Freiburg), University of Auckland, Beijing University, University of Birmingham, University of British Columbia, University of Edinburgh, Fudan University, University of Glasgow, University of Hong Kong, Lund University, McGill University, University of Melbourne, University of Michigan, University of New South Wales, University of Nottingham, University of Queensland, and the National University of Singapore.

There is an Annual General Meeting of all Directors (the Presidents, Principals, Vice Chancellors or Rectors of the *U21* universities) in the Spring of each year. This year's meeting will be held in Boston from May 9 to May 11. In addition, the *U21* Contact Officers gather twice a year: once at the AGM each Spring; and once at a *U21* university each Fall. The current Chair of *U21* is Alan Gilbert, Vice Chancellor, University of Melbourne, who has served as Chair since *U21*'s inception in 1997. A new Chair will be chosen at this year's AGM in Boston.

UBC has developed a diversity of relationships through *Universitas 21* over the past three years. For example, the Deans of Applied Science, Science, Commerce, Arts, Education and Medicine have connected with their *U21* decanal colleagues to discuss collaborative projects and strategies including: enhancing transnational portability of professional qualifications; exploring joint research programs; joint course and degree development; and a diverse array of student, faculty and staff exchanges and support.

II. *Universitas 21* Overview: Progress and Emerging Opportunities

Universitas 21 has made major progress on a number of the ten defining projects cited above. Here we briefly review the progress in the five projects that have made the most significant advances toward their goals.

a. Progress

i. Exchange Agreements (Projects 5 and 6)

There has been great progress on exchanges within *U21*. After several iterations a draft exchange agreement was approved by all schools and duly signed. *U21* exchange students are already at UBC this year and we will be sending our students next year. Initially for undergraduates, these exchanges will be extended to graduate students possible as early as next Fall. Lastly, there have also been a number of faculty members on *U21* faculty exchange visitors here at UBC and elsewhere as well as senior staff visits to look at systems and processes that are particularly successful at other *U21* schools.

ii. Professional Portability Project (PPP) (Projects 5 and 8)

The Professional Portability Project was motivated by the realization that professions are becoming increasingly globalized and there is an opportunity for universities to facilitate the portability of professional degrees and credentials. For example, global flows of investment have meant that companies have to adopt increasingly global accounting standards to compare investments. Real estate investors also need global valuation standards as they are investing globally too. [UBC has played the lead role in moving this project forward over the past three years and will continue to lead this effort.]

(1) PPP in Accounting

The first PPP we attempted was in Accounting. We had hoped (naively) that if the 10 or 12 *U21* accounting programs could recognize the functional equivalence of learning in each

program, and if each program enjoyed accreditation by the local accounting body, then by extension accreditation could be extended by that body to all the schools who signed an accord attesting to the equivalency of their undergraduate accounting programs. Unfortunately, the Accounting Institutes did not agree to accredit, at this time, the 9 *U21* schools that signed the initial accord accepting each other's undergraduate Accounting degrees as being fully equivalent in terms of learning outcomes. Two more schools this year will join the original 9 schools totaling 11 signatories to the *U21* PPP in Accounting.

(2) PPP in Real Estate Valuation/Appraisal

Unlike Accounting, the senior real estate accrediting body, the Royal Institution of Chartered Surveyors, is very interested in developing protocols for recognizing via their MRICS designation the degrees of the 8 *U21* schools that offer undergraduate degrees in Real Estate Valuation and Appraisal. Thus, a Memorandum of Understanding (MOU) is now being drafted for approval by the RICS and *U21* Boards in May. The precise quality assurance and accreditation standards will be developed next year. However, the MOU will set out the basis for accreditation will be learning outcomes and competencies, not courses taken, which is a very exciting. This offers a general approach that could work in future PPP's such as those discussed in Education and Architecture.

iii. Quality Assurance through *U21 Pedagogica* (Projects 2 and 9)

Sir Stewart Sutherland, Principal, University of Edinburgh is already at work developing the framework for *U21 Pedagogica*. Stewart has extensive experience in the area as he led a commission looking in to Quality Assurance in the UK while he was Vice Chancellor at the University of London, a post he held for 10 years before returning to Edinburgh 5 years ago. Stewart has organized a group of *U21* Directors to serve with him as an initial Board of Directors or Advisory Group and they are actively surveying quality assurance processes around the world and starting to develop processes and strategies for *U21 Pedagogica's* quality assurance responsibilities.

iv. Meetings of Deans and University Librarians (Projects 3, 5, 7, 8)

There have been a number of meetings of *U21* deans in the past two and a half years and UBC was well represented at these. Decanal meetings held to date include those for: Arts; Commerce; Education; Engineering; Librarians; Medicine; and Science. Additional or follow-up meetings are being considered by: Education Deans; Dentistry Deans; Librarians; and Medical Deans.

v. Joint Venture with Thomson Learning (Projects 4, 7, 9)

The joint venture is in its final preparatory stages after more than a year of planning and negotiations. Details of the Joint Venture are set out and discussed at length below, so we will reserve discussing progress on this project until later in this update.

b. Opportunities

The progress made to date, and the scope of activities envisioned for *Universitas 21*, open a broad array of opportunities that we at UBC can seize and benefit from.

i. Build on Deans' Meetings

The Deans' meetings have created significant opportunities for innovative international academic joint ventures among *U21* universities. The Deans are beginning to discuss joint multi-university multi-national research projects along with innovative multi-national research funding. Joint Teaching Programs have been discussed along with faculty and staff exchanges and finding funds to facilitate such exchanges. Lastly, preliminary discussions have been started to explore Joint Degrees, Diplomas and Certificates along with non-certificated short courses.

ii. Build on Student Exchanges

Student exchanges started this year as noted. Some are actively exploring possibilities for international student internships and coop placements and by extension international job and career placements. Additionally, possibilities exist to develop international joint student projects across similar courses in several participating universities, providing students with a powerful comparative perspective and international research or work experience, depending upon the nature of the project.

iii. Build on Quality Assurance (*U21 Pedagogica*)

U21 Pedagogica opens up an array of interesting possibilities for each university to explore using *U21 Pedagogica* at each institution to evaluate our own courses and programs and also to evaluate the programs of applicants and transfer students from other schools. The tools of analysis and processes to be developed by *U21 Pedagogica* hold significant promise for benchmarking our academic programs and developing additional useful quality assurance measures for our own learning and research programs.

The work of *U21 Pedagogica* also presents interesting opportunities to work with developing countries to assist them in identifying and monitoring their own quality assurance issues. These tools and processes could be extremely powerful means to enhance quality in human resource development project consortia comprised of several *U21* schools with funding potential from national aid agencies, the World Bank, the Asian Development Bank and the Inter-American Development Bank to name a few, as well as from leading private foundations.

iv. Build on Professional Portability Projects

Successful launching of PPP's could open up significant international training opportunities for consortia of *U21* schools and international accrediting bodies. We could build on existing PPP relationship to develop student and teacher exchanges, international coop and internship placements in the professions, and international career placements. PPP relationship among *U21* schools and the accrediting bodies could also help build professional competence in developing countries, again with support from domestic aid agencies and from World Bank, ADB, etc.

v. Build on *U21 Global* and Thomson Learning Joint Venture

[See Section III immediately below for the details on the *U21 Global* - Thomson Learning Joint Venture]

III. *Universitas 21 Global*: Structure, Quality Assurance, and Process

a. *Universitas 21 Global*: Structure and Its Purposes

i. The Context

Open learning agencies and universities mandated to offer "distance education" courses are experimenting with new technologies to assist in program delivery. Private universities such as the University of Phoenix are also entering into this area of activity in a big way. However, none of the orthodox, public universities has embarked in learning strategies that integrate the technology as a primary goal of their learning and pedagogical mandates. None has the prescience to foresee the form that these new education methodologies will take. The reason for this is that the terrain is experimental and involves cutting edge pedagogical applications that are expensive and risky. For the most part, these traditional universities continue to rely mainly on more conventional program delivery methods. None has been prepared fully and on its own to assume the risk that such a venture implies, given the major capital and infrastructure outlay that such a complex venture requires.

As a means of spreading risk and of taking advantage of individual strength, some of the leading universities are now combining into business consortia and embarking into the world of e-education *collectively*. Examples include NextEd, Unext.com and Pensare involving Stanford University, Columbia University Business School, University of Chicago, London School of Economics, Carnegie Mellon University, Harvard Business School and others as partners in these consortia. We think there are two distinguishing characteristics of *U21 Global* when compared with these other e-education alliances. First, the *U21 Global* joint venture grew out of a purely and unabashedly academic consortium of schools wanting to work together on a global basis. This raises the second distinguishing feature of *U21 Global* namely its truly global intensions and reach, as compared with the regional scope of the other alliances.

From a global perspective, if successful learning technologies can be devised, the e-university market is likely to expand considerably since it will offer an effective means to help meet the predicted massive demand for higher education. In 1997, 48 million persons were enrolled in higher education. That figure is forecast to increase to 97 million persons by the year 2010 and to 160 million (87 million in Asia) in 2025. If successfully adapted, e-education could be an effective means to provide access to a university education to millions of persons. At the same time these numbers provide market opportunities for enterprising universities.

ii. The Proposed Arrangement

The consortium of universities will enter into a joint venture arrangement in which they agree to license their university names and crests to *Universitas 21*. These marks and devices will be used collectively (and only collectively) for the purpose of enabling the accreditation of *Universitas 21* on academic credentials conferred on persons who are admitted as students

under criteria, course evaluation and standards endorsed by it. This quality function will be under the aegis and control of the *Universitas 21* consortium in a collective styled "*U21 Pedagogica*". Although actual delivery of programs will rely on a partnership with Thomson Learning, it is important to repeat that quality assurance will be regulated and controlled by *U21 Pedagogica* in four key areas: admission criteria; the academic content of courses; the evaluation of student performance; and the quality of course delivery.

The operational side of the e-education mandate will be performed in a corporation known as *U21Global*. This body will present the consortium universities with an opportunity for engagement in on-line education without compromising on-campus programs or placing any constraints on the participating universities in their individual pursuit of other strategies or partnerships in e-education. *U21Global* will use the names and devices of *Universitas 21* on a royalty fee basis.

U21 Global will operate with academic quality control from *U21 Pedagogica*, and products and service infrastructure from Thomson Learning. *U21 Global* is a joint venture between Thomson Finance and *U21 Equity*, the latter consisting of those universities in the *Universitas 21* consortium who choose to subscribe to its shares (minimum of \$US500, 000 to a maximum of \$US5 million). The capital contemplated under this joint venture will be \$US50 million. Both Thomson Finance and Thomson Learning are wholly owned subsidiaries of Thomson Corporation of Toronto. (Annex "A" summarizes the scope of Thomson Learning in life long learning.). Combined with the vision statement of Thomson Learning to become the foremost provider of educational content and learning solutions, this conglomerate is an attractive partner in an e-education venture in that its commitment, resources and expertise provide an available and strong infrastructure system for program delivery.

A party can exit the joint venture on 5 years notice. (Annex B is a flow chart that provides an overview of the proposed arrangement).

iii. The Advantages of the Joint Venture Arrangement

The proposal:

- (1) Will enable the University to be at the forefront and, with other internationally placed universities, learn in a significant way the possibilities and limitations of e-education;
- (2) Places UBC with a number of internationally-regarded, like-minded universities, with common values, interests and concerns, to engage in a venture that offers structure and a forum to engage creatively and in an applied manner the e-education debate, experience and research;
- (3) Places UBC and the other universities in the company of a financial partner with considerable resources and a record of successful business in global markets and a demonstrable commitment to leadership in e-education;

- (4) Allow greater participation in higher education by people irrespective of their country of residence, a TREK objective towards promoting UBC and internationalism;
- (5) Given the strong participation of excellent universities in Asian and Oceanic countries, the consortium is well placed to conduct e-education in Asia and offer access to higher education to a large numbers people globally who need and desire it;
- (6) Enables the University to spread risk in what might otherwise be regarded as a high risk venture;
- (7) Affords UBC flexibility in terms of the extent and duration of its involvement;
- (8) Allows relatively easy exit from the consortium;
- (9) Provides unfettered and free access to all *U21 Global* courseware for our students and faculty and staff.

iv. Potential Problems and Issues to be Considered Concerns

- (1) Ensuring proper attention to a venture located in Singapore;
- (2) Ensuring that *U21 Pedagogica* functions to ensure the values of the university are appropriately respected with regard to entrance requirements, quality of curriculum, learning support for students, and assessment of students.
- (3) The University's financial risk is properly managed and minimally exposed.
- (4) Raises issues about the role and relationship of public universities as commercial education providers.

v. A Closing Concern

There is considerable concern as well about the risks of not joining the *U21 Global* joint venture with Thomson Learning. Specifically, failure to be part of the joint venture may lose UBC the chance to be at the forefront of this increasingly vital area of pedagogy and also the chance to learn about large-scale e-education delivery in a low risk environment and share in the educational and financial benefits if the venture is academically and financially successful.

b. Which *U21* universities have agreed to let *U21 Global* to use their name?

To date, 14 of the 17 *U21* Universities have agreed to license the use of their names to the *U21 Global* joint venture. [Those shown with an asterisk (*) have also agreed to invest equity in *U21 Equity* so that they can receive dividends as well as royalties from *U21 Global*]. The 14 universities include: Albert Ludwig Universitat (Freiburg); University of Auckland*; University of Birmingham*; University of Edinburgh*; University of Glasgow*; University of Hong Kong*; Lund University*; McGill University*; University of Melbourne*; University of New South Wales*; University of Nottingham*; University of Queensland*.

c. Courseware (Learning Materials) Development Process

i. Role of Thomson Learning

Thomson Learning as noted above is a leading global provider of educational materials and services as shown. It will be responsible for developing the courses of study (programs in our terms) with the approval of *U21 Pedagogica*. It will hire leading academics to write the modules (courses in our terms) and oversee the academic content of each module. It will then combine the academic leader with module producer who will coordinate the diverse audio and visual media that are to be included in the final on-line module and learning support services as available to students. Thomson have agreed that faculty members at *U21* universities will be the first sought for writing and overseeing modules. If no one at a *U21* university is available or suitable Thomson then can look elsewhere. The contractual arrangements between Thomson and the academic responsible for each module will be similar to those in place today for writing textbooks and will be only between Thomson and the individual faculty member with no involvement of the faculty member's university.

ii. Role of *U21 Pedagogica*

U21 Pedagogica will be involved in all facets of quality assurance for the *U21 Global* joint venture. It will establish and assess admissions criteria, criteria and standards for advancing within each module and within the entire course as well as determining standards and outcome measures for the awarding of degrees, diplomas and certificates. It will also review each course, each module, each instructor and each teaching assistant tutor as to their appropriateness. To do this, *U21 Pedagogica* will develop assessment processes and hire leading scholars to actually do the reviews of modules and courses.

iii. Role of *U21* member Universities

U21 universities have several roles. First, they lend their names and prestige to the *Universitas 21* modules, courses and awards. Second, they will be prime suppliers of faculty to develop and design courses. Third, they will be involved in electing members to the Boards of both *U21 Pedagogica* and to *U21 Global* (as the Annex B). Fourth they will be active participants through *Universitas 21 Ltd.* and *U21 Pedagogica* and *U21 Global* in shaping the joint venture and more broadly in shaping the future of *U21* and the research, benchmarking and other activities in which it will be involved globally. Members will also add credibility and recognition to the courses in the various regions where they will be offered as in Southeast Asia where the first courses will be aimed.

IV. *U21 Global* and its Potential Benefits for Enhancing Pedagogy and Course Learning Materials at UBC

U21 Global holds significant promise for helping each member university to learn about the rapidly changing world of pedagogy and learning materials using appropriate advances in information technology (both hardware and software). Specifically, as participants in *U21 Global* we will be able to use the courseware developed for *U21 Global* courses free of charge for our own degree students. We will also be able to use *U21 Global* and Thomson Learning soft-

ware on campus to build our knowledge and capacity to use these emerging software technologies and materials linked to them, to better serve our degree students.

Access to *U21 Pedagogica* and its quality assurance processes is also a significant advantage as noted above for our own quality assessment processes and for assessing new applicants and transfer students. *U21 Global* and Thomson Learning hardware will also be available to us for our own distance learning programs and to provide us with invaluable experience in how to use this learning hardware and software effectively. Lastly, Thomson Learning and *U21 Global* student service tools, standards, and processes will be accessible by us to learn about such vital e-learning support as tutoring, chat rooms, reference materials, and other services available to *U21 Global* students.

V. Conclusions

a. Progress

Great progress has already been made in *U21* on a number of fronts, not just with the joint venture with Thomson Learning (TL). The Joint Venture is the most ambitious effort to date however, and despite its complexity it appears that it will get started within the next few months. The *U21 Global* joint venture should be reasonably well capitalized. We at UBC should reap significant benefit from the collective experiences of *U21* universities and TL in distance learning and e-learning. It should provide benefits to UBC in learning, pedagogy, and experimenting with new learning technologies without risk to our faculty and students and our finances.

b. Opportunities

The most exciting opportunities in *U21* are also getting moved forward quickly. As a result of the meetings by Deans and University Librarians, by the *U21* Contact Officers, and by the Presidents-Vice Chancellors-Rectors, etc., discussions are moving ahead to broaden the *U21* areas of cooperation to include: Developing joint research initiatives; developing joint degrees, diplomas and certificates; promoting and funding faculty and professional staff exchanges; developing professional and continuing education consortia among *U21* universities; extending Professional Portability to new fields linked to professional accreditation; developing a *U21* scholars program to facilitate the movement of graduate students primarily allowing them to study for a year or more at another *U21* university. Finally, we are also working to develop international internship and coop placements, as well as international career job placements, and international student project teams to deal with international clients through linking simultaneously similar project courses at a number of *U21* universities.

Appendix B: Curriculum Change Summary

FACULTY OF SCIENCE

- Course changes: BIOL 200, 204, 205, 209, 210, 320, 345, 350, 352, 353, 406, 330 (becomes 431), 433;
CHEM 111, 113, 121, 123, 313;
CPSC 100, 122, 124, 126, 128, 216, 218, 319;
EOSC 110, 112;
ENVR 200, 300, 499;
MICB 419;
PHYS 100, 101, 102, 270;
PSYC 260, 365, 366, 464;
STAT 306, 335, 344, 404, 441, 442, 445, 450.
- New courses: BIOL 240, CSPW 100, EOSC 114, 398, 399, 498, 499,
GEOG 472, MICB 407, PHYS 258, STAT 307, 308.
- Course deletions: CHEM 151, EOSC 423.
- Program changes: amend Computer Science preamble;
delete B.Sc. and D.M.D.;
add Co-op statement under Geological Sciences, and
Geophysics;
amend entry on Environmental Sciences, addition of new
Honours ENSC program;
new program: B.Sc. Combined Major in Statistics and
Economics.