

THE UNIVERSITY OF BRITISH COLUMBIA Vancouver Senate Secretariat
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Enrolment Services
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# **VANCOUVER SENATE**

# **MINUTES OF DECEMBER 15, 1999**

#### **Attendance**

Present: President M. C. Piper (Chair), Vice-President B.C. McBride, Mr. R. Affleck, Dr. P. Adebar, Dr. J. D. Berger, Dean J. Blom, Mr. P. T. Burns, Dean J. A. Cairns, Mr. T. C. Y. Chan, Dr. D. Fisher, Dr. J. H. V. Gilbert, Dean F. Granot, Dr. S. W. Hamilton, Dr. A. G. Hannam, Dr. P. E. Harding, Dr. J. Helliwell, Dean M. Isaacson, Dr. C. Jillings, Dr. D. D. Kitts, Dean M. Klawe, Dr. S. B. Knight, Dr. B. S. Lalli, Dr. V. LeMay, Mr. T. P. T. Lo, Dr. D. M. Lyster, Dr. P. L. Marshall, A/Dean J. A. McLean, Dr. W. R. McMaster, Mr. W. B. McNulty, Dean D. Muzyka, Mr. V. Pacradouni, Dr. G. N. Patey, Dr. J. Perry, Mr. G. Podersky-Cannon, Mr. H. Poon, Dean M. Quayle, Dr. H. J. Rosengarten, Dr. K. Schonert-Reichl, Dean N. Sheehan, Prof. A. F. Sheppard, Dr. C. Shields, Dr. C. E. Slonecker, Dr. R. Tees, Dr. J. R. Thompson, Mr. D. Tompkins, Dean *pro tem.* A. Tully, Mr. D. R. Verma, Dr. D. Ll. Williams, Dr. R. A. Yaworsky, Dean E. H. K. Yen.

By invitation: Associate Vice-President N. Guppy, Dr. M. Chapman.

Regrets: Dr. W. L. Sauder (Chancellor), Dean F. S. Abbott, Dr. R.W. Blake, Mr. P. T. Brady, Dr. H. M. Burt, Ms. E. J. Caskey, Mr. A. Chui, Ms. J. DeLucry, Ms. J. Dennie, Mr. E. Fidler, Dr. R. Goldman-Segall, Dr. D. Granot, Mr. H. D. Gray, Mr. E. Greathed, Rev. T. J. Hanrahan, Ms. L. Hewalo, Mr. J. Kondopulos, Ms. P. Liu, Mr. R. W. Lowe, Dr. M. MacEntee, Mr. S. MacLachlan, Ms. L. Morton, Dr. P. N. Nemetz, Dr. T. F. Pedersen, Dr. W. J. Phillips, Ms. C. Quinlan, Dr. V. Raoul, Dr. D. Sjerve, Ms. K. Sonik, Mr. J. E. Sookero, Ms. L. M. Sparrow, Mr. J. Tsui, Dr. W. Uegama, Dr. W. C. Wright, Jr.

## **Senate Membership**

Mr. Timothy C. Y. Chan had replaced Mr. Adrian Mitchell as student representative of the Faculty of Science. President Piper welcomed Mr. Chan to Senate.

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Minutes of the Previous Meeting

# **Minutes of the Previous Meeting**

Dean pro tem. Tully
Dr. Fisher

That the minutes of the meeting of November 17, 1999 be adopted as circulated.

Carried.

## **Business Arising from the Minutes**

REPORT OF THE AD HOC COMMITTEE ON TEACHING QUALITY, EFFECTIVENESS, AND EVALUATION (PP. 12135-7)

Please see 'Appendix A: Report of the Ad Hoc Committee on Teaching Quality, Effectiveness, and Evaluation'

As chair of the Committee, Dr. Guppy presented the report. The same report had been circulated and received at the May 1999 meeting of the Senate. Dr. Guppy provided some background information on the Committee and its report. He pointed out that the report covered sensitive material, including working conditions for faculty, teaching evaluation, and academic freedom.

The Committee began its work by examining several previous reports to Senate, along with the *Trek 2000* document, and the Academic Plan discussion paper. The Committee conducted a survey to evaluate the extent to which previous recommendations on teaching effectiveness and evaluation had been implemented. The survey determined that teaching evaluations are currently conducted in almost all courses. Most units use teaching evaluations in making decisions about merit and promotion, but the way in which this is done varies. The standards for what constitutes good teaching also vary considerably from unit to unit. There are some similar questions appearing on forms used by different units.

Dr. Guppy stated that the twelve recommendations at the end of the report represent some suggestions for enhancing teaching at UBC, and added that the appendices to the report list some best practices for consideration. The Committee understands that not all of the recommendations

can be implemented in every unit across campus, and that they may need some fine tuning within and across Faculties. Referring to Recommendation 10, Dr. Guppy stated that the proposed report from the Vice-President, Academic and Provost in March 2000 would be too early. It was the wish of the Committee that this recommendation be amended to delete the phrase '...at the March 2000 Senate meeting.'

Dr. Patey asked whether approval of the motion would mean the acceptance of all details in the report, or whether the intent was to have the report examined further and returned to Senate at a later date. Dr. Guppy confirmed that, if Senate were to accept the report, the Vice-President, Academic would be asked to report back to Senate on the implementation of the recommendations.

Dean Isaacson stated that adoption of the report by Senate did not imply recommendations to the Faculties. He remarked that in the past, however, the recommendations in reports adopted by Senate have become mandatory. He expressed concern that this would happen once again with this report. Dr. Guppy confirmed that it was not the wish of the Committee that the recommendations be taken as mandatory instructions to the Faculties. The Committee would like to see its recommendations implemented to the extent that it is possible. Dr. Gilbert commented that the Committee felt it important to make recommendations with associated actions, rather than simply making suggestions. Dr. Gilbert expressed support for the recommendations, as ways to demonstrate our commitment to teaching and to respond to a number of outstanding criticisms about teaching at UBC. There may be good reasons why some of the recommendations cannot be accomplished, and it is the Committee's wish that those reasons be reported to the Senate. Mr. Podersky-Cannon stated that the report contained some very clear recommendations for actions

to be taken by deans and heads of units, and that he expected to see a report to Senate on the results.

Dean *pro tem*. Tully expressed concern about how the report would be implemented, and that the recommendations could easily be viewed as UBC's guidelines for good teaching. He stated that the principles contained in Appendix C do not address the issue of good teaching, but read instead like a manual. Some of the elements of good teaching have been overlooked, including imagination, interest, intellectual engagement, and the raising of questions. Although the principles in Appendix C may encourage the establishment of minimum standards, they do not speak to what is really the essence of good teaching.

Referring to Recommendation 1, Dean *pro tem*. Tully suggested the deletion of the word 'appropriate.' He stated that he was not fully in favour of the use of a common set of questions on evaluation forms, as they might lead to a certain illusion of certainty once one conforms to a narrow standard. Common forms for all units would ignore the need to contextualize. Some common elements, or variations on common questions would be more acceptable than a single, shared set of questions.

Mr. Burns spoke against the motion as presented. He agreed with Dean *pro tem*. Tully, and added that the document represented an enormous amount of work on behalf of the Committee. He shared the concern that adoption of the motion on the floor would mean that the recommendations would become the only standard against which UBC will measure teaching, regardless of the intentions of the Committee. The report seemed to suggest that all teaching can be impressed upon a particular model and measured against the criteria listed. Mr. Burns was also concerned that the actions in the report would lead to further bureaucratization of the activities of the University. He gave the example of the proposed creation of Faculty teaching development commit-

tees as being counterproductive. Faculty time would be better spent on teaching, rather than on evaluating teaching. He requested clarification of the term 'teaching dossier.'

Dr. Hamilton noted that Recommendations 3, 4, and 7 through 12 appeared to be process-oriented, and could be approved by Senate. Recommendations 1, 2, 5, and 6, as the motions causing the greatest concern, could be referred to the Provost and the Committee of Deans for consideration and reporting back to Senate.

In response to a query from Dr. Tees, Dr. Guppy stated that the Committee had debated ways of evaluating at a later date what students learn in a given class, but had not found effective strategies for long term tracking of students. In response to a second question from Dr. Tees, Dr. Guppy reported that the Committee had discussed the costs associated with its recommendations, and had determined that none of the recommendations would be prohibitively expensive for any one unit.

Mr. Tompkins spoke in support of a common evaluation form for all courses, and suggested that all results be made available on the World Wide Web. He viewed these as ways of becoming more accountable and transparent to students. He stated that, rather than dividing up the motion, he would prefer that Senate send the report back to the Committee for further deliberation.

There was discussion about the possibility that Senate would receive the report, rather than vote on its recommendations. Dean Klawe spoke against receiving the report, stating that several other committees had presented similar recommendations in the past, and that the same recommendations would likely come forward again in the future. Dean Klawe stated that faculty are asked to review research activities in many different ways, and that some of that same rigour should be applied to teaching in order to ensure quality. She also expressed the preference for a

small number of common questions to be used on evaluation forms, as well as a common evaluation scale.

#### In amendment,

Dr. Gilbert Dean Klawe That Senate accept recommendations 3, 4, and 7 - 12, and;

that Senate instruct the Deans to report to the Vice-President, Academic and Provost with respect to the possible implementation of Recommendations 1, 2, 5, and 6, and; that the Vice-President, Academic report back to Senate.

Carried.

The amended motion was put and carried.

# ADMISSIONS COMMITTEE: IMPLEMENTATION OF TOEFL REQUIREMENTS IN THE ENGLISH LANGUAGE ADMISSION STANDARD (P. 12130-3)

As chair of the Committee, Dr. Lyster requested that the following motion be taken from the table. A vote on the motion had been postponed at the November 17, 1999 meeting of Senate.

Dr. Lyster Dr. Berger

That the proposed changes to the implementation of the TOEFL requirements in the English Language Admission Standard be approved.

Dr. Lyster reminded members of Senate that Dr. Knight had raised a question regarding whether an investigation had taken place into tests of oral English proficiency other than the Test of Spoken English (TSE). The Admissions Committee had agreed to look into whether the Canadian English Language Test of Oral Proficiency (CELTOP), which is being developed by UBC Applied Research and Evaluation Services (ARES), could be substituted for the Test of Spoken English (TSE). Dr. Lyster reported that the investigation had not taken place. Dr. Lyster pointed

out that Dr. Knight's concerns did not directly relate to the motion under consideration. He stated that approval of the motion did not preclude the acceptance of other tests, including the CELTOP, as they become available.

Dr. Knight expressed two concerns. First, he stated that he was opposed to waiving this part of the English Language Admission Standard. He explained that concerns regarding facility in listening and speaking skills had been expressed by several Faculties to the Senate Admissions Committee (SAC), and that it had become clear that English language standards were not being upheld. The requirement for a test of oral proficiency had been approved by the SAC and Senate as one way to address these important concerns. When it had become clear that there was not the adequate capacity to deliver the TSE to applicants in the Lower Mainland, Dr. Knight stated that the SAC had asked the Vice-President, Academic, the Registrar and the SAC Chair to meet with ARES to see whether the CELTOP could be made available at an earlier date than first anticipated. Dr. Knight expressed frustration that, five months later, this had not been done.

Second, Dr. Knight pointed out that the Registrar's Office had already effectively waived the TSE requirement without prior approval by the Senate. Dr. Knight spoke against what he described as a unilateral action on behalf of the Registrar's Office, as well as a lack of respect for the democratic process of the Senate.

Dr. Lyster remarked that maintaining the admission requirements as approved by Senate would mean that many otherwise qualified students would not meet UBC admission standards. He added that the CELTOP test is not yet available as it is still under development.

Dr. Spencer responded that he, as Registrar, had taken the actions attributed by Dr. Knight to the Registrar's Office, and that he would take full responsibility for those actions. He explained that

he understood that any action which resulted in Senate-approved rules not being applied constituted a very serious matter. Before making the decision to defer the TSE requirement, Dr. Spencer had sought advice from the Vice-President, Students, as well as the Associate Vice-President, Academic Programs. Although Dr. Spencer had not requested authorization to defer the TSE requirement, he stated that he did receive some encouragement for his suggested solution to the problem. He had also advised the chair of the SAC that, due to insufficient TSE testing capacity, the requirement would be deferred. Dr. Spencer added that he judged the regulation requiring the TSE to be a good regulation, but that he did not wish to penalize applicants unable to take the test. He emphasized that many students learn about UBC through interaction with student recruiters, and it is therefore necessary that student recruiters are able to deliver clear information about admission requirements. If the motion before Senate were to be defeated, the Registrar stated that Admissions would be forced to revert to the approved policy.

Vice-President McBride spoke in support of the initiative taken by the Registrar. Senate had made a decision to require the TSE without fully understanding the implications of that decision, and when those implications became apparent, the appropriate action was taken.

Mr. Podersky-Cannon, speaking on behalf of the convocation senators, expressed concern about due process. He stated that good intentions should not justify dispensing with proper legal process. He spoke against the motion, adding that Senate's support of an inappropriate process would justify inappropriate processes at other levels. Given the importance of English language proficiency, the TSE requirement should not be set aside for administrative reasons.

Dean Klawe spoke in support of the motion and the actions of the Registrar, stating that Senate had made a mistake in approving a regulation that could not be implemented.

Chair's Remarks and Related Questions

Dr. Hannam drew attention to the fact that the proposed deferral of the TSE requirement would be effective for the years 2000 and 2001. The two-year period would provide other agencies a chance to compete in the testing arena. UBC would revert to the original TSE requirement in 2003.

The motion was put and carried.

#### **Chair's Remarks and Related Questions**

#### TRIP TO TORONTO

The President described a recent visit to Toronto, where she was accompanied by nine deans, one of the Vice-Presidents, and the President of the UBC Alumni Association. Approximately 400 people attended an evening alumni event. The group was busy throughout the visit, making connections and developing cooperative arrangements. Interviews were conducted by the members of the press. The visit represents an attempt to connect with central Canada, where UBC has not been particularly visible in the past. It is hoped that this visit will become an annual event.

## **JOINT 2000/01 BUDGET SUBMISSION**

The President reported briefly on a recent collective budget submission by British Columbian universities. The submission, along with a background document, has been made publicly available on the World Wide Web. The proposal builds the case for additional funding in the form of a five percent increase in general purpose operating funds, as well as additional research infrastructure support. The document recommends that the BC government adopt an arrangement similar to that of the Province of Quebec, where the Provincial government contributes 15 cents for every dollar of federal research funding toward the hidden costs of research activities. The university presidents had recently met with the Minister of Advanced Education, Training and

Report from the Vice-President, Academic and Provost

Technology, and the President stated that they would continue to stress the need for increased funding as the BC Provincial Government develops its 2000/01 budget.

## **Report from the Vice-President, Academic and Provost**

FACULTY OF EDUCATION: NAME CHANGE FOR THE DEPARTMENT OF LANGUAGE AND LITERACY EDUCATION

Vice-President McBride Dean Sheehan That Senate approve the change in name from the Department of Language Education to the 'Department of Language and Literacy Education,' effective January 1, 2000.

The proposed acronym for the renamed Department was 'LLED.' Dr. Spencer pointed out that the departmental acronym is an administrative matter to be determined by the Registrar's Office, and not part of the proposal for approval by Senate.

Carried.

#### 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. New Awards (p. 12183);
- ii. The establishment of the BC Wine Research Centre (pp. 12134-5);
- iii. The change in the name of the Department of Chemical and Bio-Resource Engineering to the Department of Chemical and Biological Engineering effective January 1, 2000 (pp. 12135-6).

#### **Admissions Committee**

Dr. Lyster presented the reports, as chair of the Committee.

#### FACULTY OF APPLIED SCIENCE: MINOR IN COMMERCE

Present Calendar Entry, page 103, column 3

Minor in Commerce

"Students desiring a stronger foundation in business are encouraged to consider the Minor in Commerce. Upon successful completion of this Minor program, the notation 'Minor in Commerce' will be placed on the student's transcript.

Admissions Committee

Enrolment in this program is limited. An application for admission can be obtained from Engineering Student Services in the Dean's office. The completed form must be returned by May 15. For an application to be considered, the student must be eligible for third-year standing in the Faculty of Applied Science with a cumulative average of at least 68% in the previous two years. Meeting the stated minimum requirements does not guarantee admission into the Minor."

# Proposed Calendar Entry: (change shown in *bold italics*)

#### Minor in Commerce

"Students desiring a stronger foundation in business are encouraged to consider the Minor in Commerce. Upon successful completion of this Minor program, the notation 'Minor in Commerce' will be placed on the student's transcript.

Enrolment in this program is limited. An application for admission can be obtained from Engineering Student Services in the Dean's office. The completed form must be returned by May 15. For an application to be considered, the student must be eligible for at least third-year standing in the Faculty of Applied Science with a cumulative average of at least 68% in the previous two years. Meeting the stated minimum requirements does not guarantee admission into the Minor. *Preference will be given to students who have already completed ECON 309 or ECON 100.*"

#### Rationale:

There was considerable demand for this program when it was introduced last year. However, a concern was that many students would not carry through with their original intention because of the workload. Students who have already completed ECON 100 are more likely to complete the minor. The admission process has also been opened up to upper-year students since more of them will have completed ECON 100.

Dr. Lyster
Dean Isaacson

That the proposed changes to the Calendar entry on admission to the Minor in Commerce be approved.

Carried.

## PROPOSAL TO CLARIFY ADMISSION DEADLINES

The Senate Admissions Committee recommends the following addition to the admissions 1999/2000 Calendar Entry:

• Add to the Policy on Admissions after the third paragraph, page 63, 1999/2000 Calendar:

"The number of new students that can be admitted to each program is dependent on a number of factors and is usually not known when the first offers of admission are made. The chances of receiving an offer of admission may be increased by the early submission of an application and supporting documentation. Application and document deadlines are the latest dates on which an application or document will be accepted. Processing of applications does begin before these dates and in some

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cases programs may be filled by well qualified students before the document deadline."

 Add some similar wording at the start of the Application Deadlines section, page 11, 1999/2000 Calendar:

"These deadlines are the latest dates on which an application or document will be accepted. Processing of applications does begin before these dates and in some cases programs may be filled by well qualified students before the document deadline."

#### Rationale:

Admission offers to first year students commence in January and to college transfer students in February before the enrolment targets set by the university for each program are finalized and approved. The early offers of admission to undergraduate degree programs are also made prior to application deadlines when the total number of applications, and possible large increases in these numbers, are known.

Dr. Lyster
Dean Klawe

That the proposed changes to the Calendar entry on admissions be approved.

Carried.

## **Curriculum Committee**

Please see Appendix B: Summary of Curriculum Changes

Dr. Berger presented the report, as chair of the Committee. He described recent changes in the curriculum approval process, which included a new Category 1/Category 2 distinction for curriculum change proposals. Category 1 (formerly 'substantive') changes are those which have resource implications or require consultation outside the proposing Faculty. New courses and new programs are examples of Category 1 proposals. All Category 1 proposals must be approved by Senate. All other curriculum changes fall into the broadened category of changes now known as Category 2 (formerly 'editorial'). Category 2 changes are approved by the Editorial Sub-committee of the Curriculum Committee and then forwarded directly to the editors of the *Calendar*.

Curriculum Committee

## FACULTY OF APPLIED SCIENCE

Dr. Berger
Dean Isaacson

That Senate approve the curriculum proposals from the Faculty of Applied Science.

Carried.

## **FACULTY OF COMMERCE**

Dr. Berger
Dr. Hamilton

That Senate approve the proposed new course,
COMM 495: Business and Sustainable
Development, from the Faculty of Commerce
and Business Administration.

Carried.

#### **FACULTY OF EDUCATION**

Dr. Berger
Dean Sheehan

That Senate approve the curriculum proposals from the Faculty of Education.

Dr. Berger introduced Dr. Marilyn Chapman, from the Faculty of Education, and invited questions from members of Senate about the proposed revisions to the Teacher Education Program. Dr. Berger commended the Faculty of Education on the clear presentation of these complex proposals.

Carried.

Student Awards Committee

#### **FACULTY OF FORESTRY**

Dr. Berger A/Dean McLean That Senate approve the proposed new course, CONS 101: Introduction to Conservation and Forest Sciences, from the Faculty of Forestry.

Carried.

#### **FACULTY OF SCIENCE**

Dr. Berger Dean Klawe That Senate approve the curriculum proposals from the Faculty of Science.

Carried.

#### **Student Awards Committee**

Please see Appendix C: 'New Awards'

Dr. Thompson presented the report, as chair of the Committee.

Dr. Thompson Dean Blom That the new awards be accepted, and recommended for approval by the Board of Governors, and that letters of thanks be sent to the donors.

Carried.

#### **Other Business**

## GENDER AND ENROLMENT

Dr. Williams, referring to the enrolment reports circulated by the Registrar at the November 17, 1999 meeting of Senate, remarked that the percentage of women students at UBC continues to increase. He noted that the percentage of female students has increased even in Faculties such as Arts and Education, where male students are already a distinct minority. He asked whether this trend had caused concern for the respective deans of these Faculties. Dean Sheehan responded that the increase in women students in the Faculty of Education was mainly in the Elementary Teacher Education Program. She added that it remained difficult to attract men to elementary

Tributes Committee - in camera

teaching, especially since the handling of young children by teachers is in question at all times. Dr. Lyster added that the Admissions Committee was in the process of reviewing a proposal from the Faculty of Education, which names male applicants to the Teacher Education Program as one of the groups to which the Faculty would like to give priority.

## **Tributes Committee - in camera**

## **EMERITUS STATUS**

Dr. Helliwell presented the report, as chair of the Committee. The following candidates for emeritus status were presented for approval.

Name	Proposed Rank (effective December 31, 1999)
ANDREEN, Carol Inge	Assistant Professor Emerita of Curriculum Studies
BLOM, Margaret H.	Associate Professor Emerita of English
DE BRUIJN, J. Erik	Assistant University Librarian Emeritus
EVANS, David L.	Associate Professor Emeritus of English
FORBES, Jennifer	General Librarian Emerita
HAINSWORTH, Geoffrey	Associate Professor Emeritus of Economics
JULL, Edward V.	Professor Emeritus of Electrical Engineering
McPHAIL, John Donald	Professor Emeritus of Zoology
MERIVALE, Patricia	Professor Emerita of English
MUNRO, Gordon R.	Professor Emeritus of Economics
ORR, James	Associate Professor Emeritus of Pharmaceutical Sciences
PASZNER, Laszlo	Professor Emeritus of Wood Science
PHILLIPS, John E.	Professor Emeritus of Zoology
RICHARDS, John S. F.	Associate Professor Emeritus of Opthamology
ROWLEY, Ann E.	General Librarian Emerita
SOUDACK, Avrum C.	Professor Emeritus of Electrical Engineering
TZE, Wah-Jun	Professor Emeritus of Paediatrics
WINKLER, Earl R.	Professor Emeritus of Philosophy
Name	Proposed Rank (effective June 30, 1999)
FROESE, Victor	Professor Emeritus of Language Education

Adjournment

Dr. Helliwell pointed out that Dr. Moira Diana Luke had been removed from the list that was circulated, as Dr. Luke has not yet officially retired.

Dr. Helliwell
Dr. Slonecker

That the recommendations of the Tributes
Committee concerning emeritus status be
approved.

Carried.

# **Adjournment**

There being no further business, the meeting was adjourned. The President wished all members of Senate a happy upcoming holiday and new year.

# **Next meeting**

The next regular meeting of Senate will be held on Wednesday, January 19, 2000 at 8:00 p.m.

# **Appendix A**

# REPORT OF THE AD HOC COMMITTEE ON TEACHING QUALITY, EFFECTIVENESS, AND EVALUATION

N.B.: Appendices to this report are not included in the minutes. Copies are available from the Manager, Secretariat Services.

# Report of the Ad Hoc Senate Committee on Teaching Quality, Effectiveness, and Evaluation

History: In 1991 a Senate Ad Hoc Committee on Teaching Evaluation recommended improvements in the handling of teaching evaluations. In the fall of 1994 a subsequent committee was charged with reviewing the procedures and policies. That committee reported in the spring of 1996 (Gosline). More recently (1997) Senate struck another committee on teaching (the current committee), charged with reviewing progress in improving graduate and undergraduate teaching at UBC. In 1996 the Committee of Deans also constituted a committee to examine the issue of teaching valuation (Ungerleider).

**Procedure:** We began by reviewing recommendations on teaching evaluation made in two previous reports (see summary of these recommendations in Appendix F):

- 1. Gosline report to Senate: Review of Teaching Evaluation (Feb., 1996)
- 2. Ungerleider report to Committee of Deans (Oct. 1997)

Both reports contained numerous recommendations on teaching evaluation and the valuation of teaching. We decided to proceed strategically by first considering the initial part of our mandate: "progress made by the University in the area of teaching evaluation procedures." We did this by undertaking a survey, as described below. To proceed with the second part of our mandate, enhancing teaching quality and effectiveness, we chose to examine several possible "best practice" initiatives. We report on these initiatives after considering responses to our survey questions about teaching evaluation procedures.

Progress in Teaching Evaluation: In considering this part of our mandate we surveyed teaching units on campus to learn more about how teaching is evaluated and how the results of evaluation are used. In particular we canvassed the campus community, at the level of both Faculties/Schools as well as Departments/Programs, to ascertain the influence of earlier recommendations. Guided by the recommendations in the Gosline and Ungerleider reports, survey questions were designed to address core issues raised in these previous initiatives. The results of this survey work, and our deliberations as a result of the responses, are reported on in detail in Appendix A.

<sup>&</sup>lt;sup>1</sup> For our purposes we understood teaching to include, but not be limited to: teaching undergraduate, graduate, and professional courses; supervising student projects/theses, and developing course curriculum. We focused mainly on the first of these.

The survey results can be summarized as follows:

The use of student evaluations of teaching is now widespread at UBC. Although in some courses evaluations are not conducted (e.g., directed studies courses), our results suggest that for all courses in which such evaluation is appropriate, it is conducted. For academic units making recommendations on merit or career progress salary increments (not all do: e.g., Arts One), the vast majority of units report using teaching evaluations as part of the decision criteria. While quality of teaching is increasingly recognized in these decisions, other survey responses suggested to us that we all need to be more alert to the recognition of teaching, via local, national, and international prizes.

The public availability of student evaluations of teaching is not as widespread as would be appropriate. This is more a consequence of students not knowing that such information is available if they ask, than it is of units refusing to release this information. Some attention to publicity needs to be undertaken.

On the survey we asked about the criteria for effective teaching and the standards for judging quality teaching. The results suggested to us that there is room for improvement here and so as part of our subsequent work, we undertook to devise some principles and practices that reflect good teaching (see below).

The survey requested that all units supply us with the forms used for students to evaluate teaching. Prompted by one of our respondents, we undertook a close reading of the questions already used across campus and found that many questions appear on most forms. While we do not think that it would be wise for UBC to adopt a standard form for all teaching units, we do think that using a common *core set of questions* on all forms would be warranted. We say this for two main reasons: it allows for common assessment across teaching units when such comparison is warranted (as in promotion and tenure or in nominating colleagues for national or international teaching prizes) and it gives students from all faculties a common base on which to use teaching evaluation information. In Appendix B we have proposed a set of common core questions.

Peer evaluation of teaching is also something that is increasingly common although here we found that practices vary widely. Again one of the respondents prompted us to consider the quality of peer review and toward the goal of improving such evaluation, we propose guidelines that teaching units could adopt, or revise as necessary, to help colleagues engaging in the peer review of teaching (see Appendix E).

While we are stressing teaching more in our hiring procedures, we also have an obligation to ensure that our own graduate students are receiving the instruction in teaching that we would like to see in the new colleagues we hire. Our effectiveness here is mixed and we believe that more support for teaching preparation among our graduate student populations would be useful. We say this because such preparation would both benefit our undergraduates, many of whom take courses in which all or part of the teaching is done by graduate students, and our graduates, the majority of whom seek teaching-related jobs (we note here the introduction by TAG of a

Certificate Program for Graduate Students).

Finally, we also wish to note two other issues related to student evaluations of teaching that arose in the course of our deliberations. First, we heard of instances where one student completed more than one teaching evaluation form for a course. This is a form of fraud about which we need to be vigilant if the teaching evaluation process is to remain viable. (Ways to discourage this include having serial numbers on forms, counting forms distributed and returned, and generally being vigilant and professional in our procedures.) Second, we also want to encourage the use of evaluation mechanisms for diagnostic reasons, not just for reasons of performance review. Increasing numbers of colleagues are distributing a tailor made feedback form in their classes to encourage early comments from students that can be used to make improvements in the course. This is a very good idea that we would like to encourage.

# **Enhancing Teaching Quality and Effectiveness**

As a consequence of what we learned from the survey we pursued four separate initiatives:

1. What constitutes effective teaching?

After reviewing the literature on teaching criteria we constructed a set of principles and practices which we believe represent core features of effective university teaching, and which when followed appropriately, lead to the best learning outcomes for our students. We have circulated these criteria for comment among selected colleagues<sup>2</sup> at UBC and we have incorporated their suggestions into the final version that appears in Appendix C. We feel these principles and practices could be used in a variety of circumstances, including the following:

- As exemplars for improving teaching
- As exemplars for new instructors
- As criteria to guide the evaluation of teaching
- 2. If we built on common questions that now exist on most Faculty student evaluations of teaching, what might a set of common core elements look like?

As we noted above, some very similar questions appear on almost every form used by students when evaluating teaching at UBC (see Appendix B). Systematizing these questions would be useful so that when we evaluate teaching, we have some commonality in our measuring instrument. We suggest that minor modifications be made on all UBC forms for the student evaluation of teaching so that we use identical question wording and a common scale to collect evaluations, *for a set of core questions*. Student evaluation of teaching forms used by Faculties and Schools would retain other questions that measure important aspects of teaching that are

<sup>&</sup>lt;sup>2</sup> These colleagues (29 in total) were purposely chosen to reflect experience levels and academic diversity. We are grateful for their constructive commentary.

outside this common core, and are often specific to different academic units (this strategy addresses important objections to the common core idea noted on our survey).

As with our teaching principles and practices we have asked selected colleagues for feedback, and their comments are reflected in the question wording and format we propose. The majority of colleagues supported the idea of common questions. Objections were limited to worries about any type of numerical summation of teaching quality.

3. What are basic principles and guidelines that ought to be considered in peer review teaching?

Some Departments and Faculties already have guidelines for the peer review of teaching, but the majority do not. We have drafted "Suggested Principles and Guidelines for the Peer Review of Teaching" (Appendix E) with the intent of providing some guidelines that might be used by Deans, Heads, and Directors to enhance the utility of peer reviews of teaching.

4. How should Heads/Directors respond to relatively poor or very good teaching reviews?

On our survey questionnaire, a few respondents noted that they did not have specific standards for satisfactory teaching. One Head noted that some ideas on how to respond to weak teaching scores would be helpful. We note, in Appendix D, some ideas about how Heads/Directors (or others) could respond to either strong or weak teaching assessments.

## Recommendations

- 1. That the "Common elements on Student Evaluation of Teaching Forms" (Appendix B) should be included on all appropriate UBC evaluation forms (Action: VP Academic and Provost).
- 2. That "Effective Teaching Principles and Practices" (Appendix C) be adopted by Faculties as the basis for their criteria of effective teaching (Action: Deans).
- 3. That "Effective Teaching Principles and Practices" (Appendix C) be circulated to all members of faculty including tenured, tenure track, and sessionals (Action: Deans/Heads/Directors).
- 4. That all academic units review their procedures to ensure that students are made aware of the availability of student evaluations of teaching, as appropriate (Action: Deans).
- 5. That a short diagnostic evaluation of teaching (for the instructor's own purposes) be given to students after about 25% of a course is completed (Action: Deans/Heads/Directors).
- 6. That academic units, alone or in combination, have or use existing credit courses on effective teaching for graduate students, and especially for graduate student teaching assistants (Action: Deans).
- 7. That "Responding to Information from Evaluations of Teaching" (Appendix D) be circulated to all Heads and Directors (Action: Deans).
- 8. That "Suggested Principles and Guidelines for the Peer Review of Teaching" (Appendix E) be circulated to

- all Heads and Directors (Action: Deans).
- 9. That this report, including the Appendices, be made available on the Web site of the Centre for Teaching and Academic Growth (Action: Director TAG).
- 10. That the VP Academic report on the implementation of these recommendations (Action: VP Academic).
- 11. That the VP Academic report annually to Senate on teaching quality, effectiveness, and evaluation, and on the extent to which the university is reaching its learning goals (Action: VP Academic).
- 12. That the Ad Hoc Senate Committee on Teaching Quality, Effectiveness, and Evaluation be dissolved (Action: Senate).

## **Appendix B**

## **SUMMARY OF CURRICULUM CHANGES**

All proposals are to be effective September 2000, unless otherwise indicated.

# Category 1 Changes (for approval by Senate)

# Faculty of Applied Science

CHEMICAL AND BIOLOGICAL ENGINEERING

New courses CHBE 254, CHBE 330, CHBE 344.

New courses, effective September 2001 CHBE 444, CHBE 456, CHBE 482.

ELECTRICAL AND COMPUTER ENGINEERING

New courses, effective September 2000 EECE 321, EECE 369, EECE 375, EECE

415.

New program Software Engineering Option

**ENGINEERING PHYSICS** 

Revisions to Fifth year,

Revisions to Honours Mathematics Option.

MECHANICAL ENGINEERING

New courses MECH 303, MECH 458.

New program Thermofluids Option.

Program changes B.A.Sc./M.Eng. in Electro-Mechanical Design Engineering,

Second year - Electro-Mechanical Design Engineering, Third year - Electro-Mechanical Design Engineering

Program changes, effective September 2001 Third year - Electro-Mechanical Design

Engineering.

Program changes, effective September 2002 Fourth year - Electro-Mechanical Design

Engineering,

Fifth year - Electro-Mechanical Design

Engineering.

Mining and Mineral Process Engineering
New course MMPE 305

Faculty of Commerce and Business Administration

New course COMM 495

Faculty of Education

Program changes Revisions to Teacher Education Program, revisions to related

degree requirements and Calendar entries.

EDUCATIONAL AND COUNSELLING PSYCHOLOGY AND SPECIAL EDUCATION

New course ECPS 300

**EDUCATIONAL STUDIES** 

New course EDST 400

**CURRICULUM STUDIES** 

New courses CUST 300, ARTE 300, MAED 300, MUED 300, PETE 300,

SCED 300, SSED 300, TSED 320, CUST 314.

Course changes ARTE 314, BUED 314, CSED 314, HMED 314, MAED 314,

MUED 314, PETE 314, SSED 317: change credits and hours,

omit description and co-requisite.

CUST 414: change title, hours, and pre-requisite, omit

description.

SCED 312, SCED 313: change title and hours, omit

description and co-requisite.

SCED 314, SCED 315, SCED 316, SCED 317: change hours,

omit descriptions and co-requisite.

SSED 312: change number, credits and hours, omit

description and co-requisite.

TSED 314: change title, credits, and hours, omit description

and co-requisite.

LANGUAGE AND LITERACY EDUCATION

New courses LLED 300, LLED 321, LLED 322, LLED 324, LLED 336,

LLED 456, LLED 439, EDUC 300, EDUC 301, EDUC 302, EDUC 303, EDUC 400, EDUC 401, EDUC 402, EDUC 403.

Course changes LANE 426: change subject code, number, title, hours,

description.

MLED 312, LANE 314, MLED 318: change subject code,

credits, hours, omit description and co-requisite.

LANE 313: change subject code, title, credits, hours, pre-

requisites, omit description and co-requisite.

Faculty of Forestry

New course CONS 101.

Faculty of Science

COMPUTER SCIENCE

New course CPSC 444.

EARTH AND OCEAN SCIENCES

New course EOSC 473.

MICROBIOLOGY AND IMMUNOLOGY

New course MICB 405.

Course change MICB 153: change description and hours.

PHYSICS AND ASTRONOMY

New course PHYS 407.

Course change PHYS 251: change title, number, credits, hours and

description.

Program changes Changes to Calendar entries on Upper-level Requirement and

Other Credit Allowances.

Add minor in Science, changes to Calendar entry on Minor

Programs.

Changes to Calendar entries on Minor in Arts and Minor in

Commerce.

# Category 2 Changes (for information only)

# Faculty of Commerce and Business Administration

Course changes COMM 437: change in credit exclusion.

# Faculty of Education

**CURRICULUM STUDIES** 

Course changes ARTE 300, MAED 300, MUED 300, PETE 300, SCED 300,

SSED 300, TSED 320: change title.

ARTE 425, MAED 372, MAED 373: change description,

title, pre-requisite, and vectors.

MAED 471, MUED 308, MUED 335, MUED 336, SSED

324: change description, pre-requisite, vectors.

MAED 488, PETE 326: change description, number, pre-

requisite, and vectors.

MUED 307: change description, number, pre-requisite, title,

and vectors.

PETE 327: change description, number, and pre-requisite. SCED 330, SCED 331, SCED 409: change pre-requisite, title,

and vectors.

SSED 421: change pre-requisite and title.

# Course changes, second submission

ARTE 425: change pre-requisite, vectors, description and title. MAED 372, MAED 471, MUED 336, SSED 324: change pre-requisites, vectors, omit description.

MAED 373: change pre-requisites, vectors, title, omit

description.

MAED 488, PETE 400: change pre-requisites, vectors,

number, omit description.

MUED 307: change pre-requisites, vectors, number and title.

MUED 308: change number, vectors, add pre-requisite. MUED 335: change number, pre-requisites, and vectors. PETE 401: change pre-requisites, number, omit description. SCED 330,SCED 331, SCED 400: change pre-requisites,

vectors, and title.

SSED 421: change pre-requisites, number and title.

# EDUCATIONAL AND COUNSELLING PSYCHOLOGY AND SPECIAL EDUCATION

Delete courses EPSE 422, EPSE 428, EPSE 429, EPSE 434, EPSE 435.

Course changes EPSE 433, ARTE 300, MAED 300, MUED 300, PETE 300,

SCED 300, SSED 300, TSED 320: change title.

EPSE 436: change pre-requisite and title.

EPSE 437, EPSE 455: change description and pre-requisite.

EPSE 448: change pre-requisite.

ECPS 300: change credits (later rescinded - credits to remain

as 5)

#### **EDUCATIONAL STUDIES**

Course changes EDST 400: change credits (later rescinded - credits to remain

as 5.

## LANGUAGE AND LITERACY EDUCATION

Delete courses LANE 320, LANE 475, MLED 311, MLED 313, MLED 314,

MLED 315, MLED 316, MLED 317, MLED 319, MLED

394.

Course changes ENED 449, MLED 449, READ 449: change description,

number, subject code, and title.

LANE 206: change co-requisite and subject code.

LANE 226, LANE 337, LANE 486: change hours and subject

code.

LANE 333, LANE 334, LANE 335, LANE 480: change description, hours, subject code, and title.

LANE 338, MLED 320, MLED 340, MLED 393, MLED 480: change description, hours, number, subject code, and title.

LANE 340, LANE 341, LANE 345, LANE 349, LANE 360, LANE 389, LANE 416, MLED 489, READ 477: change description, hours, number, and subject code.

LANE 342, LANE 343, LANE 344, LANE 473, LANE 477: change description, hours, number, pre-requisite, and subject code.

LANE 346: change description, hours, pre-requisite, number, subject code, and title.

LANE 379: change hours, number, and subject code.

LANE 382, MLED 396: change description, hours, number, and subject code.

LANE 391: change description, hours, pre-requisite, and subject code.

LANE 481, LANE 489: change description, hours, and subject code.

LANE 392, LANE 320: change description, hours, prerequisite, and subject code.

LANE 435: change credits, description, hours, pre-requisite, subject code, and vectors.

LANE 472, LANE 474: change description, hours, number, subject code, and title.

LANE 478: change co-requisite, hours, pre-requisite, and subject code.

LANE 310: change description, hours, and subject code. LIBE 381, LIBE 385, LIBE 387: change description, hours, and number.

LIBE 383: change description, hours, number, and title. LIBE 384, LIBE 386, LIBE 388: change description, hours,

LIBE 449: change description, number, and title.

# Additional changes, second LLED submission

LANE 391, LANE 392: change pre-requisite.

number, and pre-requisite.

LANE 435: change credits, pre-requisite, and vectors.

LLED 391, LLED 392: change pre-requisite.

LLED 435: change pre-requisite, credits and vectors.

#### TEO/NITEP

Course changes

EDUC 143, EDUC 244: change credits and title.

EDUC 441, EDUC 442: change description, hours, and title.

## Faculty of Forestry

Program changes Wood Products Processing, 2nd year: delete WOOD 241.

B.Sc. (Natural Resources Conservation), Forest

Science/International Forestry, Forest Science, Forest

Resources Management, Forest Resources

Management/International Forestry, Three-Year Program for BC Forestry Technology Graduates, Forest Operations, Students Entering as Forestry Technology Graduates, B.Sc. in

Wood Products Processing: add footnote.

B.Sc. in Natural Resources Conservation: add CONS 101, change total number of first year credits to 31, change

wording of degree requirements.

B.Sc. in Natural Resources Conservation: change footnote #2

of Program chart.

Delete courses CONS 430, WOOD 482.

Course changes FRST 305, FRST 395, FRST 495, CONS 330, CONS 340:

add pre-requisites.

WOOD 476: change description.

Faculty of Science

Course changes BIOL 327: reinstate.

BIOL 330: change title.

CHEM 411, CHEM 416, CHEM 435, CPSC 216, CPSC

315.: change description.

CHEM 414: change description and title.

CPSC 220: change description and pre-requisite.

CPSC 304, CPSC 310, CPSC 319, CPSC 320, CPSC 410:

change pre-requisite.

Pairing list change (p. 315, col. 3)

**BIOLOGY** 

Program changes Replace footnote 2b for the following:

Major: Animal Biology

Major: Cell Biology and Genetics Major: Conservation Biology

Major: Ecology and Environmental Biology

Major: General Biology Major: Marine Biology Major: Plant Biology

COMPUTER SCIENCE

Program change Calendar entry p. 349, col. 3.

EARTH AND OCEAN SCIENCES

Delete courses GEOL 256, GEOL 333, GEOL 354, GEOL 428, GEOP 448,

GEOP 449, GEOP 499, OCGY 406, OCGY 408, OCGY 415,

OCGY 448, OCGY 449.

Course changes ATSC 200: change description and pre-requisite.

EOSC 100, EOSC 355: change number.

GEOL 100, GEOL 150, GEOL 200, GEOL 202, GEOL 205, GEOL 235, GEOL 302, GEOL 303, GEOL 307, GEOL 308, GEOL 313, GEOL 323, GEOL 335, GEOL 342, GEOL 351, GEOL 368, GEOL 402, GEOL 406, GEOL 407, GEOL 415, GEOL 421, GEOL 425, GEOL 438, GEOL 441, GEOL 442, GEOL 443, GEOL 444, GEOL 446, GEOL 452, GEOL 462, GEOL 499, GEOP 120, GEOP 230, GEOP 231, GEOP 232, GEOP 300, GEOP 301, GEOP 320, GEOP 321, GEOP 322, GEOP 420, GEOP 421, GEOP 422, GEOP 426, OCGY 100, OCGY 308, OCGY 309, OCGY 403, OCGY 404, OCGY 407, OCGY 410, OCGY 412, OCGY 413, OCGY 414,

OCGY 420: change subject code and number.

GEOL 301: change subject code, number and pre-requisite. GEOL 309, GEOL 420: change subject code, number, title

and description.

GEOL 448: change subject code and title.

GEOL 449: change subject code.

**GEOGRAPHY** 

Delete courses GEOG 403.

Course changes GEOG 200: change description and pre-requisite.

Program change Calendar entry p. 327, col. 1-3.

**MATHEMATICS** 

Course changes MATH 200, MATH 215, MATH 217, MATH 230, MATH

231, MATH 255, MATH 256: change description.

MICROBIOLOGY AND IMMUNOLOGY

Course changes MICB 318: change title, description, hours and pre-requisite.

MICB 400: change number and hours.

MICB 408: change number.

Program changes Major: Microbiology and Immunology (p. 332 col. 3, p. 333,

col. 1).

PHYSICS AND ASTRONOMY

Delete courses PHYS 141, PHYS 142, PHYS 306, PHYS 353, PHYS 411,

PHYS 414, PHYS 421, PHYS 475.

Course changes PHYS 170: change description.

PHYS 206, PHYS 301: change pre-requisite.

PHYS 259: change hours and credits.

PHYS 309: change title, credits, description, hours, and pre-

requisite.

PHYS 319: change title, description, hours, and pre-requisite.

PHYS 351: change number.

PHYS 251: change number, credits, and hours.

Change to Pairing List (p. 315, col. 3)

Program changes Honours: Physics (p. 336, col. 3).

Honours: Physics and Astronomy (p. 337, col. 1).

Major: Physics (p. 336, col. 2).

**PSYCHOLOGY** 

New courses PSYC 364, PSYC 368, PSYC 461.

Course changes PSYC 307: change credits, description, number, and pre-

requisite.

PSYC 363: change title, credits, description, and pre-requisite. PSYC 355, PSYC 313: change title, description, number, and

hours.

PSYC 460: change title, credits, description, number and

hours.

DEAN'S OFFICE

Program changes Student Academic Performance, Science Scholar and Dean's

Honour List.

Arts or Science Breadth Requirement.

Appendix C

# **Appendix C**

## **NEW AWARDS**

Edith Eleanor BLUSSON Memorial Scholarship-A \$2,400 scholarship has been endowed by The University of British Columbia in appreciation of Dr. Stewart and Mrs. Marilyn Blusson's generous support. The award is in memory of Dr. Blusson's mother and is offered to an undergraduate student entering the University from secondary school or college. (Available 1999/2000 Winter Session)

May DUNCAN Memorial Bursary-A \$300 bursary has been endowed in memory of May Duncan by her family and is offered to a student in any program and year of study. (Available 2000/2001 Winter Session)

George K. FUJISAWA Q.C. Memorial Scholarship-A \$6,000 scholarship has been endowed in memory of George Kiyoshi Fujisawa, Q.C., by Davis & Company, Barristers & Solicitors, and enhanced by a number of Mr. Fujisawa's valued clients. The award is offered to an outstanding student entering Law and is made on the recommendation of the Faculty of Law. (\$5,000 available 1999/2000 Academic Session)

Balvinder GAKHAL Memorial Award in Pharmaceutical Sciences-A \$300 award has been endowed by friends and colleagues in memory of Balvinder Gakhal. The award is offered to a third year student in Pharmaceutical Sciences in good academic standing who demonstrates leadership skills in pharmacy or university organizations and participates in volunteer activities. Students should apply to the Faculty of Pharmaceutical Sciences to be considered for the award. The award is made on the recommendation of the Faculty. (Available 1999/2000 Winter Session)

Eirwen Megan HAMILTON Scholarship-A \$1,100 scholarship has been endowed through a bequest by Eirwen Megan Hamilton and is offered to a student in any year and program of study. (Available 2000/2001 Winter Session)

Eirwen Megan HAMILTON Scholarship in Music-A \$1,100 scholarship has been endowed through a bequest by Eirwen Megan Hamilton for a student in Music. The award is made on the recommendation of the School of Music, and in the case of graduate students, in consultation with the Faculty of Graduate Studies. (Available 2000/20001 Winter Session)

Ian S. ROSS Memorial Award in Engineering-Two awards of \$500 each have been endowed by family, friends, colleagues, and Westmar Consultants Inc. in memory of Ian S. Ross. The awards are offered to students who demonstrate initiative, leadership and involvement in extra-curricular activities. One award is offered to a student in Mechanical Engineering, the other to a student in Civil Engineering. The awards are made on the recommendation of the respective departments. (Available 1999/2000 Winter Session)

SENTINEL Prize in Anthropology-A \$300 prize has been endowed by members of the fan club of "The Sentinel", a television production filmed on campus. The award is offered to a student specializing in Anthropology and is made on the recommendation of the Department of Anthropology and Sociology and, in the case of graduate students, in consultation with the Faculty of Graduate Studies. (Available 1999/2000 Winter Session)

Appendix C

Sandy SILVER Memorial Volleyball Award-One or more awards, which may range from a minimum value of \$500 each to the maximum allowable under athletic association regulations, have been endowed in memory of Sandy Silver. Awards are offered to students, in any year of study, who are outstanding members of the Thunderbird Women's Varsity Volleyball team. The awards are made on the recommendation of the President's Athletic Awards Committee. (Available 1999/2000 Winter Session)

Harry and Martha Virginia SMALL Bursary in Medicine-Bursaries totalling \$3,000 have been endowed through a bequest by Martha Virginia Small for students in Medicine. (Partial funding available 1999/2000 Winter Session)

Harry and Martha Virginia SMALL Scholarship in Medicine-Scholarships totalling \$3,000 have been endowed through a bequest by Martha Virginia Small for students in Medicine. The awards are made on the recommendation of the Faculty. (Partial funding available 1999/2000 Winter Session)

Ethlyn TRAPP Memorial Scholarship in Medicine-Scholarships totalling \$1,500 have been endowed by the British Columbia members of the Federation of Medical Women of Canada in memory of Dr. Ethlyn Trapp. The awards are offered to students in second, third or fourth year Medicine, with preference given to students with demonstrated interest in women's health. The awards are made on the recommendation of the Faculty of Medicine. (Available 2000/2001 Winter Session)

UNIVERSITY of B.C. Wood Products Processing Awards-Awards totalling \$18,400 are offered to undergraduate students in Wood Products Processing and are made on the recommendation of the Department of Wood Science. (Available 1999/2000 Winter Session)

WELDWOOD of Canada Limited H. Richard Whittall Scholarship-Scholarships totalling \$6,000 have been endowed by Weldwood of Canada Limited in honour of H. Richard Whittall. The awards are offered to students studying Forest Ecosystem Management. Awards are made on the recommendation of the Faculty of Forestry and, in the case of graduate students, in consultation with the Faculty of Graduate Studies. (Available 1999/2000 Winter Session)

## FOR INFORMATION ONLY - Now endowed

2353 PACIFIC Regeneration Technologies Inc. Silviculture Scholarship-A \$1,150 scholarship has been endowed by Pacific Regeneration Technologies Inc. The award is offered in alternating years to the top undergraduate student in forestry studying silviculture and forest seedling culture and to the top undergraduate student in agricultural sciences studying Plant Breeding and Biotechnology. The award is made on recommendation of the Faculty of Forestry and Faculty of Agricultural Sciences.

Approved by Senate Committee on Student Awards

November 29, 1999