Senate
Senate Chamber
Room 245 Engineering Building
WEDNESDAY, May 12, 2004
1:30 p.m.

AGENDA

I MATTERS TO BE CONSIDERED IN CLOSED SESSION

1. Report of the Senate Committee on Honorary Degrees

This report will be distributed to members of Senate at the meeting. Documentation will be available for examination by eligible members of Senate the day preceding the Senate meeting.

The Senate Executive Committee recommends that the report be considered in closed session at the end of the Senate meeting.

II CANDIDATES FOR DEGREES, DIPLOMAS AND CERTIFICATES - MAY 2004 Page 17

This report will be available at the Senate meeting. A copy of the list of graduands will be kept at the front table for examination by members of Senate.

III REPORT ON MEDALS AND PRIZES TO BE AWARDED AT THE MAY CONVOCATION

This report will be available at the front table in the Senate Chamber for examination by members of Senate.

IV ELECTION OF SENATE REPRESENTATIVES

V MATTERS RECOMMENDED FOR CONCURRENCE WITHOUT DEBATE

VI MATTERS FORWARDED FOR INFORMATION

1. Correspondence from the Vice-President (Research)

Senators are reminded that questions shall normally be submitted in writing to the University Secretary no later than 10:00 a.m. of the day preceding the meeting.

IX CONSIDERATION OF THE MINUTES
OF THE MEETING OF APRIL 7, 2004

X BUSINESS ARISING FROM THE MINUTES

XI REPORTS OF THE SENATE EXECUTIVE COMMITTEE
AND THE SENATE PLANNING AND PRIORITIES COMMITTEE

1. Report of the Senate Executive Committee — Page 147

2. Report of the Senate
Planning and Priorities Committee

The Chair will make an oral report on the Committee's activities.

XII REPORTS OF OTHER COMMITTEES OF SENATE,
FACULTY AND SCHOOL COUNCILS

1. Proposal of the Faculty of Medicine
for a Bachelor of Allied Health Science (Diagnostic Cytology) — Page 149

   a) Report of the Senate
   Planning and Priorities Committee — Page 158

   b) Report of the Senate Committee
   on Curriculum and Course Changes — Page 161

2. Proposal of the Faculty of Environment
for a Bachelor of Science in Physical Geography — Page 164

   a) Report of the Senate
   Planning and Priorities Committee — Page 193

   b) Report of the Senate Committee
   on Curriculum and Course Changes — Page 197

3. Proposal for a Joint Honours Program in
Computer Science and Physics and Astronomy — Page 201

   a) Report of the Senate
   Planning and Priorities Committee — Page 210

   b) Report of the Senate Committee
   on Curriculum and Course Changes — Page 212

4. Proposal for a Joint Honours Program in

The Chair will make an oral report of the Committee's activities.

XIII **ADDITIONAL BUSINESS**

XIV **ADJOURNMENT**

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CANDIDATES FOR DEGREES, DIPLOMAS AND CERTIFICATES

1. Degrees Notwithstanding a Deficiency

A list of students to be considered for degrees notwithstanding a deficiency will be distributed at the meeting.

Deans and Directors should note that they may be asked to explain the circumstances leading to the recommendations from their respective Faculties or Schools.

At the conclusion of discussion of the report, the Speaker of the Senate Executive Committee will make the appropriate motion(s).

2. Report of the Senate Committee on Appeals

An oral report will be presented to Senate by the Chair of the Committee only if the Committee has heard an appeal which will result in the recommendation of the award of a degree notwithstanding a deficiency.

3. List of Graduands

A list of graduands will be provided to the University Secretary on the day of the meeting. The list will not be distributed to members of Senate but will be open for inspection by individual members of Senate.

The list to be provided to the University Secretary will be a compilation of the lists of the graduands of each Faculty and School.

The Speaker for the Senate Executive Committee will make the appropriate motion approving the list of graduands, subject to the right of Deans and Directors to initiate late changes with the Director of Student Records up to May 14, 2004.

Election of Senate Representatives to the Board of Governors

General

Section 11.2 of the *Senate Handbook* outlines the procedures to be followed for the election of members of Senate to the Board of Governors. Among the more important procedures are the procedures governing nominations, the means of balloting, and the procedures to be followed in the event of a tie vote.

Special attention is directed to Clause 11.2.3, which reads in part "...If the person nominated is not present, the nominator must state that the person nominated has consented to the nomination."

Election of Senate Representatives to the Board of Governors

1. The following resolution was approved by Senate on June 4, 1997: "*That Senate rescind its resolution of March 9, 1976 reserving one of its seats on the Board of Governors for a student Senator*".

2. The following resolution was approved by Senate on June 4, 1997: "*That in the future, as openings occur, Senate assure itself that at least one of the three individuals who represent it on the Board of Governors has no administrative responsibilities greater than those of department head at the time of election*".

3. Members-at-large

   According to Section 27(4) of *The University of Manitoba Act* (the "Act"), a member of Senate elected by a faculty or school council who has been subsequently elected by Senate to the Board and whose term of office on Senate expires before his or her term of office on the Board, shall be appointed by Senate to be a member-at-large of Senate for the remainder of his or her term on the Board unless re-elected to Senate.

4. Students and *Ex Officio* Members

   Students and *ex officio* members who are elected to represent Senate on the Board of Governors, but whose membership on Senate expires prior to their membership on the Board are dealt with under the terms of the Act (Section 10(2)).

   Pursuant to Section 10(2) of the Act, the Senate Executive Committee shall bring to Senate a motion to grant assessor status on Senate for the remaining portion of a student or *ex officio* member of Senate who was elected to represent Senate on the Board of Governors and whose term on Senate has expired prior to the person's term on the Board. Should such a motion fail, a motion to terminate the membership on the Board of Governors as a Senate representative shall be adopted.

5. Present Senate representatives on the Board:

Professor J. Hoskins (St. John's College)	2004
Professor H. W. Duckworth (Science)	2005
Professor A Secco (Graduate Studies)	2006

6. Not eligible for election are: the Chancellor; the President; and the Board representatives on Senate, Mr. G. Lane and Dr. V. Dhruvarajan.

7. Terms of Senate representatives on the Board are normally for three years.

Procedures

1. Nominations for the position shall be received from the floor.

2. Senators shall vote for no more than one candidate on the ballot provided.

3. The candidate receiving the largest number of votes shall be declared elected for a three-year term.

4. In the event of a tie, the question shall be resolved by another ballot involving those candidates who have tied.

/jml

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Election of Senate Representatives to the Senate Executive Committee

1. One representative is to be elected from among the Vice-Presidents, Deans of Faculties and Directors of Schools, to be elected for a three-year term (June 1, 2004 - May 31, 2007) to replace Dean D. Collins, whose term of office ends on May 31, 2004.

   (1) Eligible for election are:

   (a) Vice-Presidents: E. Goldie, J. Keselman, D. McCallum

   (b) Deans: H. Bjarnason, D. Witty, R. O'Kell, A. Percival, J. de Vries, J. Wiens, D. Ruth, L. King, G. Sevenhuysen, H. Secter, J. Gray, B. Hennen, D. Gregory, D. Collins, D. Hrycaiko, J. Jamieson and R. Mulally

   (c) Directors: C. Rabinovitch and D. Lonis

   (2) Presently serving:

Dean D. Collins (Pharmacy)	2004
Dean D. Witty (Architecture)	2005
Director D. Lonis (Music)	2006

   (3) Procedures:

   (a) Nominations for the position shall be received from the floor.

   (b) Senators shall vote for no more than one candidate on the ballot provided.

   (c) The candidate receiving the largest number of votes shall be elected for a three-year term.

   (d) In the event of a tie, the question shall be resolved by another ballot involving those candidates who have tied.

2. Two Senators elected by faculty/school councils need to be elected for three-year terms (June 1, 2004 - May 31, 2007), to replace Professors Ramu and Stimpson whose terms on the Executive Committee expire on May 31, 2004.

   One Senator elected by faculty/school councils needs to be elected for a two-year term (June 1, 2004 - May 31, 2006) to replace Professor Barbara Payne, who is going on leave.

   One Senator elected by faculty/school councils needs to be elected for a one-year term (June 1, 2004 - May 31, 2005) to replace Professor Arlene Young, who is going on leave.

(1) Presently serving:

Professor B. Stimpson (Engineering)	2004
Professor G.N. Ramu (Arts)	2004
Professor J. Cooper (Medicine)	2005
Professor R. Sparling (Science)	2005
Professor A. Young (Arts)	2005
Professor K. Coombs (Medicine)	2006
Professor A. Louka (Dentistry)	2006
Professor B. Payne (Arts)	2006

(2) Procedures:

(a) Nominations for the positions shall be received from the floor.

(b) Senators shall vote for no more than four candidates on the ballot provided.

(c) The two candidates receiving the largest number of votes shall be elected for three-year terms, the candidate receiving the next highest number of votes shall be elected for the two-year term, and the next highest shall be elected for the one-year term .

(d) In the event of a tie, the question shall be resolved by another ballot involving those candidates who have tied.

/jml

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Procedures for the Election of a Student Member to the Senate Executive Committee

Observations

1. The composition of the Executive Committee makes provision for one student member and three student assessors. The President of UMSU serves in an *ex-officio* capacity as one of the three assessors as does the President of the GSA.

2. The terms of the student member and the student assessor named by the Student Senate Caucus are of one-year duration, from April 1 to March 31 of the following year. The terms of the UMSU President and the GSA are from May 1 to April 30 of the following year.

Recommendations

1. That a caucus of student Senators, to be convened by the President of UMSU, prepare for presentation to the May meeting of Senate, a slate of candidates for the election of a student member to the Senate Executive Committee.

2. That the caucus of student Senators name one of its members as an assessor to the Senate Executive Committee and advise Senate of the person so chosen.

/jml

March 4, 2004

Report of the Senate Committee on Curriculum and Course Changes - Submitted to Senate for Concurrence Without Debate

Preamble

The Senate Committee on Curriculum and Course Changes (SCCCC) met on March 4, 2004 to consider course and curriculum changes from faculties and schools.

Observations

1. **General**

   In keeping with past practice most changes for departments totalling less than ten credit hours are forwarded to Senate for concurrence without debate. This is in accordance with the Senate's recommendation approved 3 July 1973 that course changes would cease to go to the SPPC when the resource implications are intra-faculty. Deans and directors are to assess the resource implications to the respective units when course changes are proposed. Major changes in existing programs are to be referred to the SPPC for assessment of resource implications.

2. **Agricultural and Food Sciences**

   In order to increase flexibility in course selection for Business Management Option students in the Diploma in Agriculture, the Faculty is proposing adding course 034.066 Materials Handling and Electrical Controls to the list of restricted Biosystems electives. At present, Business Management Option students must take one Biosystems elective from a list of three. This change provides an additional option.

3. **Architecture**

   Environmental Design

   The Student Records Office brought to the attention of the department that a number of courses were on the system and had not been offered in a number of years. Accordingly, the department recommends the formal deletion of the following courses: 079.132, 079.133, 079.141, 079.142, 079.204, 079.212, 079.225, 079.227, 079.232, 079.233, 079.241, 079.242, 079.243, 079.244, 079.314, 079.332, 079.336, 079.341, 079.342, 079.343, 079.344, 079.345, 079.346, 079.401, and 079.402

   The department also recommends that the following courses be placed in the "not currently offered category": 079.310, 079.313, and 079.403

   Interior Design

   The Student Records Office brought to the attention of the department that a number of courses were on the system and had not been offered in a number of years. Accordingly, the department recommends the formal deletion of the following courses: 051.113, 051.114, 051.133, 051.155, 051.158, 051.205, 051.206, 051.207, 051.218, 051.234, 051.240, 051.243, 051.244, 051.245, 051.246, 051.247, 051.248, 051.307, 051.308, 051.309, 051.310, 051.316, 051.322, 051.340, 051.345, 051.346, 051.347, 051.348, 051.413, and 051.449

4. **Arts**

The Faculty of Arts is proposing two policy changes. The first will remove the ten-year limitation on transfer credit from a first degree earned at the University of Manitoba towards a second degree in Arts at the University of Manitoba. This change is proposed to ensure that students completing a second degree are treated in the same manner as those students completing a first degree.

The second change is to the criteria for the awarding of degrees with distinction for students completing a second degree. Students completing a second degree in Arts will be eligible for 'with distinction' status provided they complete a minimum of 60 credit hours with a minimum cumulative Grade Point Average of 3.80 following their admission to a B.A. General program or minimum of 90 credit hours with a minimum cumulative Grade Point Average of 3.80 following their admission to a B.A. Advanced program.

5. **Faculty of Education**

The Faculty, in an effort to broaden the scope of their courses in Social Studies Education and to attract more students, propose the introduction of **132.5AN The Teaching of Social Studies in the Early Middle Years**, the modification of 132.566 Theoretical Foundations of Social Studies, and the deletion of **132.567 The Teaching of Social Studies in the Early Years.**

The Faculty also proposes that students who have completed Master of Education courses which have not been used to satisfy the requirements of the M.Ed. Degree may apply to have these courses transferred into a Post-Baccalaureate Diploma in Education program subject to the existing statute of limitation of nine years of courses in the Post-Baccalaureate Diploma in Education.

6. **Faculty of Engineering**

Civil Engineering

The Student Records Office brought to the attention of the department that a number of courses were on the system and had not been offered in a number of years. Accordingly, the department recommends the formal deletion of the following courses: 023.110, 023.111, 023.112, 023.119, 023.121, 023.125, 023.127, 023.128, 023.130, 023.136, 023.138, 023.145, 023.200, 023.201, 023.206, 023.207, 023.223, 023.226, 023.227, 023.230, 023.262, 023.263, 023.264, 023.265, 023.266, 023.267, 023.268, 023.270, 023.271, 023.272, 023.300, 023.302, 023.303, 023.304, 023.305, 023.309, 023.310, 023.331, 023.343, 023.344, 023.345, 023.346, 023.349, 023.350, 023.351, 023.352, 023.353, 023.358, 023.361, 023.362, 023.363, 023.364, 023.365, 023.366, 023.367, 023.368, 023.372, 023.398, 023.399, 023.400, 023.401, 023.402, 023.406, 023.407, 023.408, 023.409, 023.414, 023.415, 023.416, 023.417, 023.419, 023.424, 023.426, 023.427, 023.430, 023.432, 023.453, 023.469, 023.474, 023.480, 023.482, 023.483, 023.484, 023.485, 023.486, 023.487, 023.488, 023.492, 023.493, 023.494, 023.495, 023.496, 023.497, 023.499, 023.602, 023.603, 023.604, 023.605, 023.708, 023.718, 023.722, 023.723, 023.724, 023.729, 023.733, 023.734, 023.739, 023.752, 023.754, 023.755, 023.763, 026.000, 026.202, 026.225, and 026.405

Electrical and Computer Engineering

The Student Records Office brought to the attention of the department that a number of courses were on the system and had not been offered in a number of years. Accordingly, the department recommends the formal deletion of the following courses: 024.101, 024.206, 024.208, 024.210, 024.221, 024.224, 024.225, 024.300, 024.320, 024.326, 024.327, 024.328, 024.329, 024.363, 024.366, 024.400, 024.413, 024.417, 024.422, 024.423, 024.432, 024.434,

024.435, 024.436, 024.441, 024.445, 024.450, 024.473, and 024.489

Mechanical and Manufacturing Engineering

The Student Records Office brought to the attention of the department that a number of courses were on the system and had not been offered in a number of years. Accordingly, the department recommends the formal deletion of the following courses: 025.100, 025.217, 025.221, 025.307, 025.308, 025.311, 025.318, 025.321, 025.323, 025.325, 025.332, 025.340, 025.341, 025.402, 025.421, 025.422, 025.423, 025.435, 025.436, 025.437, 025.441, 025.443, 025.444, 025.447, 025.448, 025.449, 025.450, 025.453, 025.459, 025.476, 025.478, 025.484, 025.485, 025.488, 025.494, 025.495, 025.707, 025.725, 025.746, 025.747, 025.750, and 025.763

7. **Faculty of Law**

In an effort to make the course title more descriptive of the subject matter of the course, the Faculty is proposing the deletion of **045.266 Introduction to Taxation** and the introduction of **045.2AA Income Tax Law and Policy.**

8. **School of Medical Rehabilitation**

Physical Therapy course **068.370Fundamentals of Physical Therapy**, an 11 credit hour course is proposed for deletion, effective in the 06R session. It will be replaced with the six credit hour 167.3XX Physical Therapy Neurological Interventions Across the Lifespan 1 and the seven credit hour 167.3YY Physical Therapy Neurological Interventions Across the Lifespan 2. The original course will be split to accommodate the volume of material. The content of the courses has been updated to reflect the current evidence base. The proportion of lecture, tutorial and lab hours has been modified to incorporate more tutorial and small group work and more lab time to increase skill base.

As the Occupational Therapy program is not longer an undergraduate program, the School wishes to delete course **068.409 Independent Study.**

9. **School of Music**

Courses **033.386 Topics in Music,** and **033.387 Topics in Music** are being deleted and courses **033.3CC Topics in Music Education,** and **033.3CD Topics in Music Education.** The goal of these changes is to ensure that there are course titles that more accurately reflect course content.

10. **Faculty of Nursing**

For a number of years, course 090.324 Principles of Disease related to Adult Intensive Care, has been numbered as a Physiology course, although it is a nursing course. Accordingly, the Faculty of Medicine recommends the deletion of **090.324 Principles of Disease related to Adult Intensive Care** and the Faculty of Nursing proposes the introduction of **049.3XX Principles of Disease related to Adult Intensive Care.**

The Student Records Office brought to the attention of the Faculty that a number of courses were on the system and had not been offered in a number of years. Accordingly, the department recommends the formal deletion of the following courses: 049.124, 049.125, 049.201, 049.202, 049.203, 049.204, 049.205, 049.206, 049.209, 049.210, 049.306, 049.310, 049.311, 049.312, 049.313, 049.314, 049.315, 049.316, 049.317, 049.318, 049.401, 049.402,

049.403, 049.404, 049.405, 049.406, 049.407, 049.408, 049.409, 049.411, 049.412, 049.414, and 049.415.

The faculty also recommends that the following courses be placed in the "not currently offered category": 161.100, 161.200, 161.201, 161.202, 161.302, 161.400, 161.401, and 161.402

11. **Faculty of Pharmacy**

The Faculty is proposing a modification of the course description for 046.444 Clinical Pharmacy 2 to better reflect course content.

12. **Faculty of Science**

Botany

The Student Records Office brought to the attention of the Department that a number of courses were on the system and had not been offered in a number of years. Accordingly, the department recommends the formal deletion of the following courses: **001.121, 001.333, 001.414, 001.434,** and **001.466**.

Chemistry

Following suggestions from an accreditation review that suggested the need for a biochemistry course without a biology prerequisite for major and honours students, the department is proposing the introduction of **002.2XX Chemistry of Biomolecules**. As a result modifications are proposed for courses 002.236 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy, 002.236F Biochimie 1: les molecules biochimiques et une introduction à l'énergie métabolique, 002.237 Biochemistry 2: Catabolism, Synthesis, and Information Pathways, and 002.237F Biochimie 2: catabolisme, synthèse, et les voies d'information.

Computer Science

The Student Records Office brought to the attention of the Department that a number of courses were on the system and had not been offered in a number of years. Accordingly, the department recommends the formal deletion of the following courses: **074.123, 074.201, 074.226, 074.226F, 074.339, 074.447,** and **074.457**. The department also recommends that courses **074.313** and **074.314** be placed in the 'not currently offered category'.

Microbiology

Further to the introduction of 002.2XX Chemistry of Biomolecules, modifications are proposed for courses 060.236 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy, 060.236F Biochimie 1: les molecules biochimiques et une introduction à l'énergie métabolique, 060.237 Biochemistry 2: Catabolism, Synthesis, and Information Pathways, and 060.237F Biochimie 2: catabolisme, synthèse, et les voies d'information.

Statistics

Course 005.462 Mathematical Probability is being modified to remove a redundancy in the prerequisites. Course **005.451** has not been offered in many years, and is proposed for formal deletion.

Courses offered in other Faculties and Schools Acceptable for Credit in the Faculty of Science

The Faculty of Science is recommending a minor be established in Human Nutrition and Metabolism, which will comprise entirely of courses offered by the Faculty of Human Ecology. The Faculty also proposes that the following courses be acceptable for credit in the Faculty of Science: 030.214 Basic Principles of Human Nutrition, 030.330 Vitamins and Minerals in Human Health, 030.331 Macronutrients and Human Health, 030.412 Senior Thesis, 030.454 Functional Foods and Nutraceuticals, and 078.454 Functional Foods and Nutraceuticals. The last course will have a notation that indicating that it can not be held with 030.454.

Proposed policy changes in the Faculty of Science

The first of two policy changes in the Faculty of Science would permit student to enter the honours program after their third year, provided they meet the existing requirements for entry to the honours program.

The second policy change is an extension of the existing Minimum Performance Level Table for students who are permitted to exceed the 138 credit hour limit on the degree.

13. **Undergraduate Timetable 2004-2005**

The timetable outlines deadlines for the submission of undergraduate program, curriculum and course changes.

Recommendation:

The Senate Committee on Curriculum and Course Changes recommends:

1. That the undergraduate timetable for 2004-2005 be approved by Senate;

2. That curriculum and course changes from the units listed below be approved by Senate:

Faculty of Agricultural and Food Sciences
Faculty of Architecture
Faculty of Arts
Faculty of Education
Faculty of Engineering
Faculty of Law
School of Medical Rehabilitation
School of Music
Faculty of Nursing
Faculty of Pharmacy
Faculty of Science

Respectfully submitted,

Dean B. L. Dronzek, Chair
Senate Committee on Curriculum and Course Changes

Terms of Reference: *Senate Handbook*, section 8.21

/jml

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the report to Senate.

Agricultural and Food Sciences

Course 034.066 Materials Handling and Electrical Controls is added to the list of restricted Biosystems electives for students in the Business Management Option of the Diploma in Agriculture Program.

Faculty of Architecture

Environmental Design Program

Courses to be placed in the 'not currently offered' category:

079.310, 079.313, and 079.403

Courses to be deleted:

079.132, 079.133, 079.141, 079.142, 079.204, 079.212, 079.225, 079.227, 079.232, 079.233, 079.241, 079.242, 079.243, 079.244, 079.314, 079.332, 079.336, 079.341, 079.342, 079.343, 079.344, 079.345, 079.346, 079.401, and 079.402

Interior Design

Courses to be deleted:

051.113, 051.114, 051.133, 051.155, 051.158, 051.205, 051.206, 051.207, 051.218, 051.234, 051.240, 051.243, 051.244, 051.245, 051.246, 051.247, 051.248, 051.307, 051.308, 051.309, 051.310, 051.316, 051.322, 051.340, 051.345, 051.346, 051.347, 051.348, 051.413, and 051.449

Faculty of Arts

Policy Statements to be approved:

1. For the purposes of a student applying for a second degree in Arts, the Faculty allows credit for course work from the first degree regardless of when the degree was earned provided it is a University of Manitoba degree.

2. Students seeking a second degree should be eligible for consideration of "With Distinction" the same way as students seeking a first degree and that the following paragraph be adjusted accordingly.

   With Distinction

   Students graduating with a B.A. General degree as a first degree will have their degree granted "With Distinction" if they have a minimum Cumulative Grade Point Average of 3.80 on all coursework taken at the University of Manitoba and provided a minimum of 60 credit hours of acceptable coursework is completed at the University of Manitoba. (Students seeking a second degree will be eligible for this recognition provided they complete a minimum of 60 credit hours of acceptable coursework at the University of Manitoba following admission to their second degree program.)

   Students graduating with a B.A. Advanced degree as a first degree will have their degree granted "With Distinction" if they have a minimum Cumulative Grade Point Average of 3.80 on all coursework taken at the University of Manitoba and provided a minimum of 90 credit hours of

acceptable coursework is completed at the University of Manitoba. (Students seeking a second degree will be eligible for this recognition provided they complete a minimum of 90 credit hours of acceptable coursework at the University of Manitoba following admission to their second degree program.)

The distinction will be noted on the parchment and on the student's transcript.

Faculty of Education

Course to be introduced:

132.5AN The Teaching of Social Studies in the Early and Middle Years +3
This course concentrates on the teaching of social studies in schools from Kindergarten to approximately Grade Nine, with particular reference to the implications of social studies teachers of the characteristics of students at those levels. Not to be held with the former 132.567 and 063.595.

Course to be modified:

132.566 Theoretical Foundations of Social Studies (3)
This course examines recent developments in social studies education. It aims to familiarize students with the debates, the research and the innovations (successful and otherwise) that have characterized social studies curriculum. Not to be held with the former 063.594.

Course to be deleted:

132.567 Teaching of Social Studies in the Early Years -3

Policy Change:

That students who have completed M.Ed. courses which have: not been used to satisfy the requirements of an M.Ed. degree may apply to have these courses transferred into a PBDE program subject to the Statute of Limitations of nine years.

NET CHANGE IN CREDIT HOURS: +3

Faculty of Engineering

Civil Engineering

Courses to be deleted:

023.110, 023.111, 023.112, 023.119, 023.121, 023.125, 023.127, 023.128, 023.130, 023.136, 023.138, 023.145, 023.200, 023.201, 023.206, 023.207, 023.223, 023.226, 023.227, 023.230, 023.262, 023.263, 023.264, 023.265, 023.266, 023.267, 023.268, 023.270, 023.271, 023.272, 023.300, 023.302, 023.303, 023.304, 023.305, 023.309, 023.310, 023.331, 023.343, 023.344, 023.345, 023.346, 023.349, 023.350, 023.351, 023.352, 023.353, 023.358, 023.361, 023.362, 023.363, 023.364, 023.365, 023.366, 023.367, 023.368, 023.372, 023.398, 023.399, 023.400, 023.401, 023.402, 023.406, 023.407, 023.408, 023.409, 023.414, 023.415, 023.416, 023.417, 023.419, 023.424, 023.426, 023.427, 023.430, 023.432, 023.453, 023.469, 023.474, 023.480, 023.482, 023.483, 023.484, 023.485, 023.486, 023.487, 023.488, 023.492, 023.493, 023.494, 023.495, 023.496, 023.497, 023.499, 023.602, 023.603, 023.604, 023.605, 023.708, 023.718, 023.722, 023.723, 023.724, 023.729, 023.733, 023.734, 023.739, 023.752, 023.754, 023.755, 023.763, 026.000, 026.202, 026.225, and 026.405

Electrical and Computer Engineering

Courses to be deleted:

024.101, 024.206, 024.208, 024.210, 024.221, 024.224, 024.225, 024.300, 024.320, 024.326, 024.327, 024.328, 024.329, 024.363, 024.366, 024.400, 024.413, 024.417, 024.422, 024.423, 024.432, 024.434, 024.435, 024.436, 024.441, 024.445, 024.450, 024.473, and 024.489

Mechanical and Manufacturing Engineering

Courses to be deleted:

025.100, 025.217, 025.221, 025.307, 025.308, 025.311, 025.318, 025.321, 025.323, 025.325, 025.332, 025.340, 025.341, 025.402, 025.421, 025.422, 025.423, 025.435, 025.436, 025.437, 025.441, 025.443, 025.444, 025.447, 025.448, 025.449, 025.450, 025.453, 025.459, 025.476, 025.478, 025.484, 025.485, 025.488, 025.494, 025.495, 025.707, 025.725, 025.746, 025.747, 025.750, and 025.763

Faculty of Law

Course to be deleted:

045.266 Introduction to Taxation -3

Course to be introduced:

045.2AA Income Tax Law and Policy +3
The objective of this course is to develop a working knowledge of the basic principles and rules of the income tax system as these apply to individuals. A parallel objective is the discovery of the major policy positions that inform the personal income tax system and the development of the ability to use tax policy analysis to evaluate advantages of, and problems with, the current system.

NET CHANGE IN CREDIT HOURS: 0

School of Medical Rehabilitation

Courses to be introduced:

068.3YY Physical Therapy Neurological Interventions Across the Lifespan 1 +6
A theory and practical course on the basic principles of the application of techniques used in the Physical Therapy management :of clients with neurological conditions, with a focus on neurological assessment and the treatment for spinal cord injured clients :and clients with certain neurological conditions.

068.3XX Physical Therapy Neurological Interventions Across the Lifespan 2 +7
A theory and practical course on the basic principles of the application of techniques used in the Physical Therapy management of clients with neurological conditions, with a focus on neurological treatment.

Courses to be deleted:

068.370 Fundamentals of Physical Therapy Management -11
[effective 06R]

068.409 Independent Study -3

NET CHANGE IN CREDIT HOURS -1

School of Music

Courses to be introduced:

033.3CC Topics in Music Education +3
This course may vary from year to year depending on the needs and interests of instructors and students.

033.3CD Topics in Music Education +3
This course may vary from year to year depending on the needs and interests of instructors and students.

Courses to be deleted:

033.386 Topics in Music -3
033.387 Topics in Music -3

NET CHANGE IN CREDIT HOURS: 0

Faculty of Nursing

Course to be deleted:

090.324 Principles of Disease related to Adult Intensive Care -3

Course to be introduced:

049.3XX Principles of Disease related to Adult Intensive Care +3
Course focuses on advanced physiology and pathophysiology of the following body systems: cardio-vascular, respiratory, neurological, renal and endocrine.

NET CHANGE IN CREDIT HOURS: 0

Courses to be deleted:

049.124, 049.125, 049.201, 049.202, 049.203, 049.204, 049.205, 049.206, 049.209, 049.210, 049.306, 049.310, 049.311, 049.312, 049.313, 049.314, 049.315, 049.316, 049.317, 049.318, 049.401, 049.402, 049.403, 049.404, 049.405, 049.406, 049.407, 049.408, 049.409, 049.411, 049.412, 049.414, and 049.415

Courses to be placed in the 'not currently offered' category:

161.100, 161.200, 161.201, 161.202, 161.302, 161.400, 161.401, and 161.402

Faculty of Pharmacy:

Course to be modified:

046.444 Clinical Pharmacy 2 (6)
This is a problem-based therapeutics course that builds on 46.341. The emphasis is on the provision of pharmaceutical care to enhance the students' ability to identify, resolve and prevent drug-related problems in given clinical scenarios.

NET CHANGE IN CREDIT HOURS: 0

Faculty of Science

Botany

Courses to be deleted:

001.121, 001.333, 001.414, 001.434, and 001.466

Chemistry

Course to be introduced:

002.2XX Chemistry of Biomolecules +3 L
The chemistry of molecules encountered in biochemistry, including their structures, reactions, and physical properties. The concept of metabolic energy in biochemistry. Not to be held with 002.236 or 002.277 (or the former 002.240), 060.236 or 060.277 (or the former 060.240) or the former 002.235 or 060.235. Prerequisite: 002.131 (or the former 002.128) with a minimum grade of "C". This course is available only to students registered in the Chemistry Honours or Four Year Major program.

Courses to be modified:

002.236 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy (3) L
An introductory course dealing with kinds of molecules encountered in biochemistry, and the concept of metabolic energy as a product of catabolism and a requirement for biosynthesis. This course is also given in Microbiology as 060.236. Not to be held with 002.277 (or the former 002.240), or 060.236, or 060.277 (or the former 060.240), or with the former 002.235 or 060.235, or 002.2XX. *Prerequisites:* 002.131 (or the former 002.128) and 071.125, both courses with a minimum grade of "C". NOTE: Students may hold this course for credit in the B.Sc. General degree program, but may not use it to fulfill the minimum requirement of 12 credit hours in 200 level Chemistry.

002.236F Biochimie 1: Les molécules biochimiques et une introduction à l'énergie métabolique (3) L
Introduction aux différents types moléculaires rencontrés en biochimie ainsi qu'au concept d'énergie métabolique comme produit du catabolisme nécessaire à la biosynthèse. Egalement offert par le secteur de microbiologie sous la cote 060.236. On ne peut se faire créditer les 002.277 (ou l'ancien 002.240), ou le 060.236, ou le 060.277 (ou l'ancien 060.240), ou le 002.2XX ou les anciens 002.235 ou 060.235. *Préalables:* une note de C dans le 002.131 (ou l'ancien 002.128) et 071.125 *Ce cours ne peut pas être utilisé pour satisfaire aux exigences de 12 crédits aux niveaux 200 et 300 en chimie dans le B.Sc. général.*

002.237 Biochemistry 2; Catabolism, Synthesis, and Information Pathways (3) L
An introductory course dealing with the basic metabolic processes that occur in living cells, including the production and use of metabolic energy, the breakdown and synthesis of biomolecules; the synthesis of DNA, RNA and proteins; and the regulation of these prcesses. This course is also given in Microbiology as 060.237. Not to be held with 002.278 (or the former 002.240) or 060.237, or 060.204) or with the former 002.235 or 060.235. Prerequisites: 002.236 (or 060.236) or 002.2xx and 002.220), both courses with a minimum grade of "C". Note: Students may hold this course for credit in the B.Sc. General deg. program, but may not use it to fulfill the minimum requirement of 12 c hrs in 200 level Chemistry.

002.237F Biochimie 2: Catabolisme, Synthèse et les voies d'information (3) L
Introduction aux processus métaboliques cellulaires de base incluant la production et l'utilisation de l'énergie métabolique, la dégradation et la synthèse des molécules biochimiques, la synthèse de l'ADN, de l'ARN et des protéines et la régulation de ces processus. Egalement offert par le secteur de microbiologie sous la cote 060.237. On ne peut se faire créditer les 002.278 (ou l'ancien 002.240), ou le 060.237, ou le 060.278 (ou l'ancien 060.240), ou les anciens 002.235 ou 060.235. *Préalables:* une note de C dans le 002.236 (ou le 060.236) ou le 002.2XX et le 002.211 (ou l'ancien 002.220) *Ce cours ne peut pas être utilisé pour satisfaire aux exigences de 12 crédits aux niveaux 200 et 300 en chimie dans le B.Sc. général.*

NET CHANGE IN CREDIT HOURS: +3

Computer Science

Courses to be deleted:

074.123, 074.201, 074.226, 074.339, 074.447, and 074.457

Courses to be placed in the 'not currently offered' category:

074.313, and 074.314

Microbiology

Courses to be modified:

060.236 Biochemistry 1: Biomolecules and an Introduction to Metabolic Energy (3) L
An introductory course dealing with kinds of molecules encountered in biochemistry, and the concept of metabolic energy as a product of catabolism and a requirement for biosynthesis. This course is also given in Microbiology as 060.236. Not to be held with 002.277 (or the former 002.240) or 060.236, or 060.277 (or the former 060.240), or with the former 002.235 or 060.235, or with 002.2XX. Prerequisites: 002.131 (or the former 060.240), and 071.125, both courses with a minimum grade of "C" NOTE: Students may hold this course for credit in the B.Sc. General degree program, but may not use it to fulfill the minimum requirement of 12 credit hours in 200 level chemistry.

060.236F Biochimie 1: Les molécules biochimiques et une introduction à l'énergie métabolique (3) L
Introduction aux différents types moléculaires rencontrés en biochimie ainsi qu'au concept d'énergie métabolique comme produit du catabolisme nécessaire à la biosynthèse. Egalement offert par le secteur de chimie sous la cote 002.236. On ne peut se faire créditer le 060.236 et le 060.277 (ou l'ancien 060.240), ou le 002.236, ou le 002.277 (ou l'ancien 002.240), ou le 002.2XX ou les anciens 002.235 ou 060.235. *Préalables:* une note de C dans le 002.131 (ou l'ancien 002.128) et 071.125 *Ce cours ne peut pas être utilisé pour satisfaire aux exigences de 12 crédits aux niveaux 200 et 300 en chimie dans le B.Sc. général.*

060.237 Biochemistry 2: Catabolism, Synthesis, and Information Pathways (3)L
An introductory course dealing with the basic metabolic processes that occur in living cells, including the production and use of metabolic energy, the breakdown and synthesis of biomolecules; the synthesis of DNA, RNA and proteins; and the regulation of these processes. This course is also given in Chemistry as 002.237. Not to be held with 060.278 (or the former 060.240), or 060.237, or 002.278 (or the former 002.240), or with the former 060.235 or 002.235. Prerequisites: 060.236 (or 002.236) or 002.2XX and 002.221 (or the former 002.220), both courses with a minimum grade of "C." NOTE: Students may hold this course for credit in the B.Sc. General degree program, but may not use it to fulfill the minimum requirement of 12 credit hours in 200 level Chemistry.

060.237F Biochimie 2: catabolisme, synthèse et les voies d'information (3)

Introduction aux processus métaboliques cellulaires de base incluant la production et l'utilisation de l'énergie métabolique, la dégradation et la synthèse des molécules biochimiques, la synthèse de l'ADN, de l'ARN et des protéines et la régulation de ces processus. Ce cours est aussi offert par le secteur de chimie sous la cote 002.237. On ne peut se faire créditer le 060.237 et les 060.278 (ou l'ancien 060.240), ou le 002.237, ou le 002.278 (ou l'ancien 002.240) ou les anciens 060.235 ou 002.235. Préalables: une note de "C" dans le 060.236 (ou le 002.236) ou le 002.2XX et le 002.221 (ou l'ancien 002.220). NOTE:Ce cours ne peut pas être utilisé pour satisfaire aux exigences de 12 crédits aux niveaux 200 et 300 en chimie dans le B.Sc. général.

NET CHANGE IN CREDIT HOURS: 0

Statistics

Course to be deleted:

005.451

Course to be modified:

005.462 Mathematical Probability(3)
Combinatorial and enumerative procedures, occupancy problems, limit theorems, laws of large numbers, characteristic functions. Not to be hold with the former 005.456. Prerequisites: 005.305 or consent of department.

NET CHANGE IN CREDIT HOURS: 0

Courses Offered in Other Faculties and Schools Acceptable for Credit in the Faculty of Science

Introduction of a Minor in Human Nutrition and Metabolism

MINOR

University 1	Year 2	Year 3	Year 4
030.120, 030.121		030.214, 030.330, 030.331, and one of 030.412, or 030.454	

Courses to be added to the list of courses offered in others schools acceptable for credit in the Faculty of Science:

030.214	Basic Principles in Human Nutrition
030.330	Vitamins and Minerals in Human Health
030.331	Macronutrients and Human Health
030.412	Senior Thesis
030.454	Functional Foods and Nutraceuticals
078.454	Functional Foods and Nutraceuticals * not to be held with 030.454

Policy Change

Addition of a third-year entry route to honours

Current: Entrance to Honours Regulation
Students who are ineligible to enter Honours after their first year may establish their eligibility to enter honours in third year on the basis of their academic performance in second year. Students must take at least 24 credit hours int he regular session, and must achieve a minimum "B" average on 18 credit hours of the courses required in the honours program. See a Science student advisor for further information.

Proposed: Entrance to Honours Regulation

Students who are ineligible to enter honours after their first year may establish their eligibility to enter Honours in third year on the basis of their academic performace in second year. Students must take at least 24 credit hours in the regular session, and must achieve a minimum "B" average on 18 credit hours of the courses required in the Honours Program. See a Science student advisor for further information.

Students who are ineligible to enter honours after their first year may establish their eligibility to enter Honours in fourth year on the basis of their academic performace in third year. Students must take at least 24 credit hours in the regular session, and must achieve a minimum "B" average on 18 credit hours of the courses required in the Honours Program. See a Science student advisor for further information.

Extension of the Minimum Performance Level Table
For Student Who are Permitted to Exceed the 138 Credit Hour Limit on the Degree

Minimum Performance Level Table

Column 1 Total number of Credit Hours Attempted at this point	Column 2 Number of Credit Hours on which performance is to be assesses (Best grades included in assessment)	Column 3 Required Minimum Grade point average
141	93	2.00
144	96	2.00
147	99	2.00
150	102	2.00
153	105	2.00
156	108	2.00
159	111	2.00
162	114	2.00
165	117	2.00
168	120	2.00
171	123	2.00
174	126	2.00
177	129	2.00

180	132	2.00
183	135	2.00
186	138	2.00
189	141	2.00
192	144	2.00
195	147	2.00
198	150	2.00
201	153	2.00

SENATE COMMITTEE ON CURRICULUM AND COURSE CHANGES

UNDERGRADUATE TIMETABLE - 2004-2005

Note: There are three separate timetables for submission of new undergraduate programs and curriculum and course changes.

1. Timetable for submission of curriculum and course changes with inter-faculty resource implications.

2. Timetable for submission of curriculum and course changes without resource implications.

3. Procedures and Timetable for submission of new undergraduate programs with or without additional funding.

1. **Timetable for submission of curriculum and course changes with inter-faculty resource implications**

	Department and Faculty Council meetings with respect to proposed changes in curriculum and courses with inter-faculty resource implications.
	Faculty decisions reached on curriculum and course changes.
FRIDAY, August 27, 2004	Information on all proposed course changes forwarded to University Secretariat for consideration by SCCCC. After initial screening, submissions in which possible overlap could exist are forwarded to all interested parties and to SPPC for assessment against proposed new programs. If no objections are received by Friday, September 5, 2003, assent will be assumed.
THURSDAY, September 30, 2004	SPPC provides listing of all courses with resource implications for Senate Executive agenda of October 13, 2004 for debate at the November 3, 2004 meeting of Senate.
WEDNESDAY, October 13, 2004	Meeting of Senate Executive - consideration of course changes with resource implications.
WEDNESDAY, November 3, 2004	Meeting of Senate.

2. **Timetable for submission of curriculum and course changes without resource implications**

	Department and Faculty Council meetings with respect to proposed changes in curriculum and courses, excluding proposed new programs.
	Faculty decisions reached on curriculum and course changes.
FRIDAY, September 24, 2004	Information on all proposed course changes forwarded to University Secretariat for consideration by SCCCC. After initial screening, submissions in which possible overlap could exist are forwarded to all interested parties. If no objections are received by Thursday, October 8, 2004, assent will be assumed.
FRIDAY, October 9, 2004	All faculty comments received by SCCCC.
FRIDAY, November 5, 2004	SCCCC completes deliberations on all proposed course and curriculum changes - preparation of report to Senate.
THURSDAY, November 18, 2004	Agenda sent to printers.
WEDNESDAY, December 1, 2004	Meeting of Senate.

NOTE: Faculties and Schools whose course change proposals involve an increase of more than nine credit hours in any department shall submit such course change proposals to the Senate Planning and Priorities Committee at the same time as to the Senate Committee on Curriculum and Course Changes.

Note: Faculties and Schools whose courses are offered at Approved Teaching Centres are asked to ensure that the teaching centres are apprised of approved course changes.

FRIDAY, February 25, 2005	Information on all proposed minor course changes forwarded to University Secretariat for consideration by SCCCC.
THURSDAY, April 14, 2005	Agenda items due for April 27 Senate Executive Meeting.
WEDNESDAY, May 11, 2005	Meeting of Senate.

3. **Procedures and timetable for submission of new undergraduate programs with or without additional funding**

Note: As of April 1, 1997, the Universities Grants Commission has been replaced by the Council on Post-Secondary Education, which has now formulated its own rules of procedure, as follows. These procedures are also available in electronic format (See Policy #413 *Council on Post-Secondary Education: Program Approval Process* in the Policy and Procedure Manual).

(1) Faculty/School Councils recommend the forwarding of a Statement of Intent.

(2) Dean/Director forwards to the Vice-President (Academic) and Provost a draft Statement of Intent having the content and format required by the Council on Post-Secondary Education (COPSE) as described in the *Program Approval Process: Policies and Procedures* - January 1998.

(3) The Vice-President (Academic) and Provost reaches decision on Statement of Intent.

(4) The President, after receiving the advice of the Vice-President (Academic) and Provost, transmits a formal Statement of Intent to the Council, a copy of which is provided to Senate for its information.

(5) Upon COPSE response to the Statement of Intent, the Faculty/School Council develops a formal proposal as outlined in Appendix B of the COPSE *Program Approval Process: Policies and Procedures* (January 1998), for approval of Council.

(a) Where appropriate, the Vice-President (Academic) and Provost will make arrangements so that the formal proposal includes an external assessment.

(6) Approved program forwarded to the University Secretariat for distribution to SCCCC and SPPC.

At the February 6, 1979 meeting of Senate, the following recommendations were approved:

(a) Submissions for new programs from Faculties and Schools must contain statements from the Directors of Student Records, Admissions, Computer Services, the Instructional Media Centre, and the Director of Libraries regarding possible resource implications which are not immediately apparent;

(b) Before any new program is listed in the *Calendar,* or otherwise published as available, the budgeting faculty or school concerned must provide the Vice-President (Academic) and Provost with satisfactory information about implementation of the program.

(7) Comments to be received by SCCCC on all new programs from interested faculties and schools within one month following distribution of proposed programs by the University Secretariat.

(8) Within one-and-a-half months of the formal proposal for a new program[1] being submitted to the University Secretariat, SCCCC completes deliberations on new program and formulates recommendations to Senate for inclusion in the next Senate Executive agenda.

(9) Meeting of Senate Executive to consider SCCCC's recommendations and SPPC's assessment.

(10) Meeting of Senate - consideration of Senate Executive recommendations on the new program(s).

(11) When Senate has approved a proposal, it is forwarded to the Academic Affairs Committee and then to the Board of Governors.

(12) Once the proposal has been approved by the Board of Governors, it is forwarded to the Council on Post-Secondary Education.

(13) Any new program will be implemented only when the Vice-President (Academic) and Provost is convinced that sufficient financial resources are in place.

S:\REPORTS AND SUBMISSIONS\SenateFourCs\Timelines\Timetable04-05.wpd

[1] NOTE: While SCCCC is willing to consider new proposals as quickly as possible, its responsibility for processing course and curriculum changes in existing programs will limit its ability to act quickly on its consideration of new program proposals from October to December or during customary vacation periods.

UNIVERSITY OF MANITOBA

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March 16, 2004

TO: Mr. Jeff Leclerc, Acting University Secretary

FROM: Joanne C. Keselman, Vice-President (Research) and
Chair, Senate Committee on University Research (SCUR)

SUBJECT: **Notification to Senate**

Policy 1405, *Research Centres, Institutes, and Groups*, section 3.4, Procedures for Establishing Research Groups, states that "the official recognition and designation of a research group is at the approval of the Vice-President (Research), normally on the recommendation of the department head (where applicable) and dean/director".

Accordingly, the Dean of Human Ecology had forwarded a recommendation for the establishment of the Developmental Health Research Group to me as Vice-President (Research). I subsequently reviewed and approved the proposal and informed members of SCUR at the February 11, 2004 meeting of the formation of the research group.

As Chair of SCUR, I am now requesting that Senate be informed of the establishment of the Developmental Health Research Group.

Please contact me should you require further information. A copy of the proposal for the research group is attached for your information.

JCK/wc
Encl.
c.c. Dr. Digvir Jayas, Associate Vice-President (Research)
Dr. Peter Cattini, Associate Vice-President (Research)
Dr. G. Sevenhuysen, Acting Dean, Faculty of Human Ecology
Dr. Joan Durrant, Acting Head, Department of Family Social Sciences
Dr. Rosemary Mills, Department of Family Social Sciences

UNIVERSITY OF MANITOBA | Faculty of Human Ecology
Department of Family Studies

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Fax: (204) 474-7592

Email: rosemary_mills@umanitoba.ca

February 11, 2003.

Dr. Joanne C. Keselman
Vice-President (Research)
University of Manitoba
204 Administration Building

Dear Dr. Keselman:

Proposal to establish the Developmental Health Research Group

We respectfully submit the enclosed proposal for your consideration.

Yours sincerely,

Rosemary Mills

Rosemary S. L. Mills, Ph.D.
Associate Professor

Proposal to Establish a Research Group

1. Name of Research Group

Developmental Health Research Group

2. Objectives and Rationale for Formation of the Group

Child health is an area of strategic importance nationally and internationally. All governments in Canada have committed to supporting the development of Canadian children, because of the key role it plays in health over the life course. This goal requires effective policies and programs based on high-quality research on the linkages between and interactions among the determinants of developmental health, and close collaboration between scientists and the community to improve the translation of new knowledge into useful forms. Current models of human development take a systems perspective, recognizing that development in different domains (physical, psychosocial, cognitive) is interrelated, that developmental processes are "ecological" or nested within influences at multiple levels from "cell to society," and that events early in life influence trajectories of development leading to long-term effects on health in adulthood. To fully investigate these models requires a new way of doing research that is interdisciplinary and multilevel in the assessment of determinants, large-scale and longitudinal starting before birth, comprehensive in the developmental health outcomes examined, and collaborative to ensure effective application. It also requires advanced training of new researchers with an interdisciplinary orientation. To implement this approach, we have formed a multidisciplinary group of scientists in developmental and clinical psychology, education, nutrition, nursing, and family sciences with a shared interest in child developmental health.

The objectives are:

- to establish an ongoing exchange of ideas among group members to facilitate interdisciplinary collaboration
- to engage in collaborative research aimed at a better understanding of how to improve the odds of good health in children
- to ensure the translation of new findings into better policies and programs to improve children's health
- to build a reputation for excellence in research on child health
- to contribute to the establishment of national and international research consortia in the field of child health.

The activities of the group will not detract from any academic programs, and should enhance them by increasing opportunities for the training of future researchers and by helping to attract and retain exceptional scholars at the University of Manitoba.

3. Description of the Constitution of the Research Group

(a) Organizational structure

The group will be comprised of a head, members, graduate students and research assistants, and associate members.

(b) Conditions of membership

- **Head**
  The head will coordinate meetings of the group, facilitate communication among members, liaise between the group and other scholars, participate as a regular member of the group, and submit an annual report to the Vice-President (Research).

- **Members**
  Members will have expertise that is complementary to the group. They must maintain an active program of research, actively engage in collaborative research with other group members (beyond limited projects), and have an affiliation with the University of Manitoba (tenured, tenure-stream, or adjunct professor).

- **Graduate students and research assistants**
  Graduate students and research assistants who are working on collaborative projects of group members over some period of time may become members of the group.

- **Associate members**
  Associate members will be those who meet all the conditions of full membership with the exception of formal affiliation with the University of Manitoba.

(c) Reporting procedures

The head of the group will submit annual reports for review by the Head of the Department of Family Studies, the Dean of Human Ecology, and the Vice-President (Research). The report will describe the group's activities and accomplishments of the past year (grants held, applied for, awarded; progress on studies underway; dissemination and application of new findings; collaborative activities with community members) and plans and objectives for the next year.

4. List of Members and Abbreviated Curriculum Vitae (SEE APPENDIX)

Christine Ateah, Nursing
Joan Durrant, Family Studies
Wendy Freeman, Psychology
Lorna Jakobson, Psychology
Gail Marchessault, Human Nutritional Sciences
Rosemary Mills, Family Studies
Caroline Piotrowski, Family Studies
Loretta Secco, Nursing

continues . . .

John Walker, Clinical Health Psychology
Hope Weiler, Human Nutritional Sciences
Dickie Yu, Nursing (Adjunct Professor)
Associate Member: Laura Sokal, Bachelor of Education Program, University of Winnipeg

5. Statement of Understanding

It is the understanding of the research group and the Dean of Human Ecology, that the establishment of this research group carries with it no commitment to provide space or any other resources, grant any release from teaching, or share the recovery of indirect costs on contract research.

Rosemary Mills
Head, Developmental Health Research Group

Dean, Faculty of Human Ecology

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April 2, 2004

TO: Mr. Jeff Leclerc, Acting University Secretary

FROM: Joanne C. Keselman, Vice-President (Research) and Chair, Senate Committee on University Research (SCUR)

SUBJECT: **Notification to Senate**

Policy 1405, *Research Centres, Institutes, and Groups*, section 3.4, Procedures for Establishing Research Groups, states that "the official recognition and designation of a research group is at the approval of the Vice-President (Research), normally on the recommendation of the department head (where applicable) and dean/director".

Accordingly, the Dean of Engineering has forwarded a recommendation for the establishment of the Composite Materials and Structures Group to me as Vice-President (Research). I have now reviewed and approved the proposal and by copy of this memo am notifying the group's proponents. At the March 31st, 2004 meeting of SCUR, members were informed of the formation of the research group.

As Chair of SCUR, I am now requesting that Senate be informed of the establishment of the Composite Materials and Structures Group.

Please contact me should you require further information. A copy of the proposal for the research group is attached for your information.

JCK/wc
Encl.
c.c. Dr. Digvir Jayas, Associate Vice-President (Research)
Dr. Peter Cattini, Associate Vice-President (Research)
Dr. Douglas Ruth, Dean, Faculty of Engineering
Dr. S. Balakrishnan, Head, Mechanical & Industrial Engineering
Dr. Ragjavan Jayaraman, Assoc. Prof. Mechanical & Industrial Engineering
Ms. Kimberley Stefaniuk, Marketing & Communications Officer

- - 47

UNIVERSITY OF MANITOBA | Faculty of Engineering
Office of the Dean

349 Engineering Building
Winnipeg, Manitoba
Canada R3T 5V6
Telephone (204) 474-9806/7
Fax (204) 275-3773

9 March 2004

Dr. Joanne Keselman
Vice-President (Research)
207 Administration Building

Dear Dr. Keselman:

We strongly support the formation of the Composite Materials and Structures Group described in the attached proposal. Currently, composite materials are receiving a great deal of attention locally, nationally and internationally. With both ISIS and the Composites Innovation Centre located at the University of Manitoba, it is important that the Faculty of Engineering and its partners have a visible unit contributing to research and innovation in this area. The proposed group would offer exactly that visibility.

This group has the potential to focus inter-faculty research on the emerging field of the use of composites in a range of applications. As such it would contribute to many areas of our University strategic plan. It is also encouraging to see that many of our more junior staff members have joined in this initiative. The group could provide a focus that will assist them in tying their research to local business interests. If one of the goals of our Province is to be a world recognized "composites cluster," this group provides just the structure for the University to play its role.

Sincerely,

S. Balakrishnan, P.Eng.
Professor and Head
Mechanical and Manufacturing Engineering

Douglas Ruth, P.Eng., Ph.D.
Professor and Dean
Engineering

SB/DR/jk

Attach.

Inter-Office Memorandum

To: Dr. D. Ruth, Dean, Faculty of Engineering

From: Members of the Composite Materials & Structures Research Group

Date: 02/04/04

Re: Formation of CMS Research Group

We are approaching you to seek your support and approval to form Composite Materials and Structures (CMS) Research Group. During our meeting yesterday, we unanimously approved the formation the CMS Research Group and the draft proposal attached herewith. We have also unanimously approved the designation of Dr. R. Jayaraman to be the Director of this group.

We look forward to hearing from you.

Dr. S. Balakrishnan

Dr. Y. Chen

Dr. R. Jayaraman

Dr. G. Naterer (on Sabbatical; His e-mail is appended herewith)

Dr. D. Polzois

Dr. N. Rattanawangcharoen

Dr. M. Singh

Dr. D. Svecova

Dr. G. Wang (on Sabbatical)

- 49

Raghavan Jayaraman

From: G. F. Naterer <natererg@cc.UManitoba.CA>
To: Raghavan Jayaraman <rags@cc.UManitoba.CA>
Sent: Wednesday, February 04, 2004 1:52 PM
Subject: Re: Formation of CMS Research Group

Hi Raghavan,

As we discussed today, I will be glad to support this group and join your team. I trust that my input regarding thermal processing of the composite materials during manufacturing processes could be a useful contribution. I look forward to this opportunity.

Greg

At 08:09 AM 2/2/2004 -0600, you wrote:
>Dear All
>I have discussed with most of you (except Ying Chen) before about formation
>of CCMS (Center for Composite Materials & Structures) As per suggestions
>from our dean, the first step towards realizing this goal is official
>formation of Composite Materials and Structures (CMS) Research Group.
>Herewith I am appending a draft copy of the proposal for your perusal and
>input. In this regard, I would appreciate if we can meet tomorrow or on
>Wednesday to discuss this draft. I and Dimos are meeting with Dean on
>Thursday and we very much would like to have our proposal by then. Can you
>please let me know if you are available for a meeting and prefered time.
>Even if you can't make it to the meeting, is it possible for you to provide
>your input via e-mail.
>
>I have indentified some of you as affiliate members based on either your
>expressed interst or my assessment. If that assessment is wrong, please
>accept my apologies and correct me.
>
>Please note that I haven't completed the section on group constitution, for
>which I need input from you.
>
>Look forward to hearing you.
>
>Regards
>Raghavan
>
>
>Attachment Converted: "c:\eudora\attach\CCMS-Research-Group.doc"
>
Greg F. Naterer, Ph.D., P.Eng.
Associate Professor, Department of
Mechanical and Industrial Engineering,
University of Manitoba, 15 Gillson Street,

A Proposal for the Creation of

COMPOSITE MATERIALS AND STRUCTURES RESEARCH GROUP (CMSRG)

Feb.1st 2004

1.0 Vision

To develop and promote the University of Manitoba to be a globally recognized center of excellence for research and education in the area of advanced composite materials and composite structures

2.0 Objectives

- To strive for the realization of the above mentioned vision through strengthening, promoting, and sustaining fundamental and applied inter-disciplinary research and training in the areas of advanced composite material development, advanced composite processing, and design and development of composite structures
- To strengthen, promote, and sustain interaction, collaboration and communication among researchers from various disciplines within the University of Manitoba, outside the University, and industries in order to provide an academically stimulating and enriching environment for both researchers and students.
- To leverage the collective interest, expertise and facilities available at the University of Manitoba to play a key role in the technological leadership of composite cluster industries in Manitoba and elsewhere in Canada;
- To enhance the visibility of research and researchers, in the area of advanced composite materials and structures, at the University of Manitoba, which is expected to increase the research group's ability to attract the brightest students and experts and cause a domino effect in enriching the research and training environment, and in enhancing its visibility.

3.0 Rationale

Establishment of the CMSRG can be justified based on great benefits and opportunities that are likely to result in the following four important areas. The establishment of this group will not detract from existing academic programs.

3.1 Building on Strengths

"Composites" is truly a multi-disciplinary field that is at the crossroads of a number of disciplines, materials science (including fiber science), chemical engineering, mechanical engineering (including thermal science, mechanics and manufacturing), and aerospace engineering. With expanding applications, additional disciplines such as civil engineering and textile engineering are also contributing to this field. Currently, there are a number of researchers at the University of Manitoba with their core research interest focused in the area of composite materials and structures. However, the scope of their current research is limited to one or two of the above-mentioned disciplines in which they are experts. Increasingly, these

researchers are embarking on research that is complex and that requires a multi-disciplinary and integrated approach as well as collaboration among a number of researchers including those whose core research interest is not in composites. For example, a recent research initiative on biocomposites development involves participation of researchers from plant science, bio-systems engineering, mechanical engineering, clothing and textiles, and civil engineering. Another envisaged project on composite windmill towers requires collaboration of researchers with expertise in civil engineering, composite materials and processing, automation, and non-destructive testing. In view of such increasing emphasis on the inter-disciplinary nature of composites research to achieve new heights of innovation, the benefits of establishing the CMSRG are obvious: it would build on existing strengths to provide significant opportunities for (a) focussed and enhanced communication and interaction among researchers from various disciplines, (b) strengthening, promoting, and sustaining collaboration among the researchers, and (c) focussing and leveraging the collective expertise to facilitate conception and execution of complex multi-disciplinary and highly innovative research projects in the area of composite materials and composite structures.

3.2 Enrichment of Research and Training Environment

This is envisaged to be one major benefit of the proposed CMSRG. Enhanced interaction and communication, through collaborative projects and group activities such as seminars and symposiums is envisaged to provide a stimulating academic environment for both researchers and students alike. It would provide a great opportunity for (a) exposure to perspectives from various disciplines, (b) cross-fertilization of ideas / minds from various disciplines to yield innovative solutions, and (c) coordination of training activities by researchers to provide a unique and enriched training in the area of composite materials and structures.

3.3 Enhancement of University – Industry Interaction

The province of Manitoba is home to a vibrant composite manufacturing community with members from all types of industries: aerospace, automobile, infrastructure, and recreation / sports. Their recent interest and efforts in creating a globally recognizable "Composite Cluster" has given the University of Manitoba a unique opportunity (a) to play a key role in the technological leadership of this cluster and its global recognition and (b) to enhance the global visibility of research done at the University of Manitoba. Hence, establishment of the CMSRG at this opportune time is required to take full advantage of the above opportunity and would be highly beneficial. The CMSRG would complement the efforts of the industries and would focus and leverage the expertise and facilities at the University to significantly enhance the interaction between the University of Manitoba and composite cluster industries.

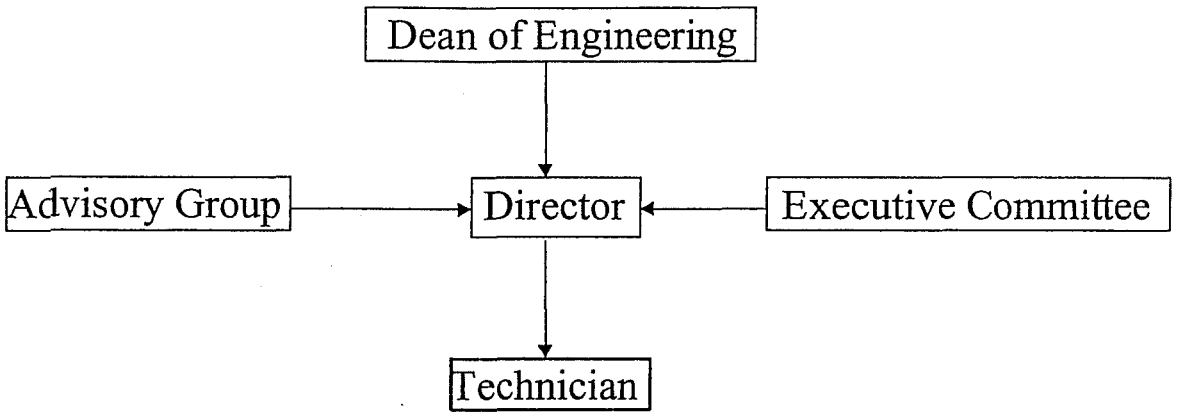
3.4 Collective Maintenance of State-of-the-art Facility for Composite Research & Training

Establishment of the CMSRG would provide researchers with a great opportunity to (a) identify additional equipment required to support their research and justify their requirement to funding agencies as a group, (b) collectively maintain the facility containing all the common equipment through cost sharing, (c) raise funds through programs like NSERC's MFA grant for support of technician time required for such maintenance, etc.

4.0 Constitution

4.1 Organizational Structure

The tentative organizational structure is shown in the schematic.



- The research group will be guided by an Advisory Group consisting of Dean of Engineering (or designated person), Director of the CMS group, and industrial representatives (preferably one from each of aerospace, automotive, building / construction, and infrastructure sectors). This group will provide general guidance on research focus, facility acquisition, interaction with industry, group promotion, and fund raising activities.

- The Director of the group will be responsible for the following

  (i) Liaison between advisory group and research group members
  (ii) Annual reporting to Vice-president (Research) and advisory group on group's progress and financial statement (if any)
  (iii) Overall promotion of the research group and its members within and outside the University
  (iv) Fund raising for such things as facility development and recruitment of technician.
  (v) Overall functioning of the group

- The executive committee will be made up of core group members. This committee will be responsible for
  (i) Implementation of recommendations of advisory group
  (ii) formulating policies regarding usage of facility such as accessibility, user fee, and technician time.
  (iii) Facility development

4.2 Membership

A researcher with research interest in composite materials and structures will be eligible for membership into one of the following three categories.

Core Member: A researcher with composites as his / her core research interest

Affiliate Member: A researcher with composite as his / her secondary research interest

Industrial Member: An industry with interests in composite materials and structures

The category of membership will determine the benefits such as facility user fee and access to research results. The executive committee will be responsible for developing policies regarding member benefits.

4.3 Mechanism of Review and Assessment, and Reporting Procedure

The group will organize an annual workshop to showcase their performance during the year to everyone within and outside the University. This will be in addition to monthly seminars for exchange of ideas and communication among the group members. Each core member will provide a short review of his / her team's progress to the director who in-turn would compile them and submit an annual progress report to the Dean of Engineering and the Advisory Group along with a financial statement of expenses related to running of group's activities such as maintenance of facility, technician, and seminar / workshop expenses. The mechanism of review and assessment will be as per the procedure established by the Dean of Engineering.

5.0 List of Members

The CVs (NSERC Form-100) of all the core members of the team are attached herewith.

5.1 Core members

1. Dr. Raghavan Jayaraman, Associate Professor, Department of Mechanical & Manufacturing Engineering
   Research Interest: Development of Novel Composite Materials, Structure – Processing – Property – Service Environment Relationship Studies, Composite Process Modeling, Bonding and Repair
2. Dr. Dimos Polyzois, Professor, Department of Civil Engineering
   Research Interest: Design and Application of Composites, Composite Housing, Composite Wind Mill Towers, Filament Wound Composite Structures
3. Dr. Dagmar Svecova, Assistant Professor, Department of Civil Engineering
   Research Interest: Application of FRP for reinforcing and pre-stressing concrete structures as well as for strengthening of existing structures such as concrete bridge decks and timber bridge stringers, Long-term Durability of these FRP
4. Dr. Meera Singh, Assistant Professor, Department of Mechanical & Manufacturing Engineering
   Research Interest: Fatigue of composites with and without notches under multi-axial loading, life predictions.
5. Dr. Nipon Rattanawangcharoen, Assistant Professor, Department of Civil Engineering
   Research Interests: Material characterization and defect detection for laminated composite structures using ultrasonic guided waves technique

5.2 Affiliate Members

6. Dr. Greg Naterer, Associate Professor, Department of Mechanical & Manufacturing Engineering
7. Dr. Gary Wang, Associate Professor, Department of Mechanical & Manufacturing Engineering
8. Dr. S. Balakrishnan, Professor, Department of Mechanical & Manufacturing Engineering
9. Dr. Ying Chen, Associate Professor, Department of Bio-Systems Engineering

5.3 Industrial Members: Will be reported after the establishment of the research group.

UNIVERSITY OF MANITOBA

OFFICE OF THE VICE-PRESIDENT (RESEARCH)

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March 16, 2004

TO: Mr. Jeff Leclerc, Acting University Secretary

FROM: Joanne C. Keselman, Vice-President (Research) and Chair, Senate Committee on University Research (SCUR)

SUBJECT: **Notification to Senate**

Policy 1405, *Research Centres, Institutes, and Groups*, section 3.4, Procedures for Establishing Research Groups, states that "the official recognition and designation of a research group is at the approval of the Vice-President (Research), normally on the recommendation of the department head (where applicable) and dean/director".

Accordingly, the Dean of Medicine had forwarded a recommendation for the establishment of the Mood and Anxiety Disorders Research Group to me as Vice-President (Research). I subsequently reviewed and approved the proposal and informed members of SCUR at the February 11, 2004 meeting of the formation of the research group.

As Chair of SCUR, I am now requesting that Senate be informed of the establishment of the Mood and Anxiety Disorders Research Group.

Please contact me should you require further information. A copy of the proposal for the research group is attached for your information.

JCK/wc
Encl.
c.c. Dr. Digvir Jayas, Associate Vice-President (Research)
Dr. Peter Cattini, Associate Vice-President (Research)
Dr. Brian Hennen, Dean, Faculty of Medicine
Dr. Patrick Choy, Associate Dean (Research), Faculty of Medicine
Dr. Samia Barakat, Professor and Head, Department of Psychiatry
Dr. Brian Cox, Canada Research Chair in Mood and Anxiety Disorders and Associate Professor Psychiatry

Vice-President (Research)
Policy 1405
University Designation of Research Group Status

1. Name of Research Group: Mood and Anxiety Disorders Research Group

2. Objectives and Rationale for Formation of the Research Group:

- The MADRG was originally formed in 1997 in response to a request for applications for official recognition of Research Groups in the Faculty of Medicine. This initiative was largely motivated by the launching of the Medical Research Council Regional Partnership Program. The MRC-RPP and University of Manitoba decided that funds from this program should be allocated in a strategic way to existing areas of research strength. The MADRG proposal successfully met the stringent requirements of the Faculty of Medicine in formally recognizing research groups. These requirements included the identification of a Group leader (Director) who had an internationally recognized research profile (Dr. Cox), collective evidence of significant external funding ($500,000) for the Group, and a substantial and sustained record of publication in peer-reviewed journals.

- The original objective of the Group is still valid today: To facilitate communication and collaboration among active researchers in the areas of mood disorders and anxiety disorders in the region. Prior to the formation of the MADRG, specialized concentrations in the areas of mood disorders, anxiety disorders and related topics had existed in separate clinics and Departments at the two major teaching hospitals in Winnipeg, and in the two university of Manitoba campuses. The MADRG brought these active but relatively isolated researchers together for the first time. The Group continues to expand and flourish and has become a leading research presence in mental health field in the region.

3. Description of the Research Group in terms of:

a) Organizational Structure

- When it was originally formed, the core members of the Group consisted of the Director of the Mood Disorders Program at the Health Sciences Centre (Dr. Murray Enns) and the Director of the Anxiety Disorders Program at the St. Boniface Hospital (Dr. John Walker). These two individuals and the other members of the MADRG nominated Dr. Brian Cox (Canada Research Chair in Mood and Anxiety Disorders) to be the Director of the MADRG. Dr. Cox continues to serve in this role and Drs. Enns and Walker serve as the Associate Directors of the Group. The structure of the Group consists of the Director and Associate Director, full-time faculty members, adjunct faculty members, and graduate student affiliates. Several University Departments are represented in the MADRG. These include Clinical Health Psychology, Community Health Sciences, Family Studies, Psychiatry, and Psychology. Several graduate students are actively involved in ongoing MADRG research projects and hold fellowships and other awards. There are

two adjunct faculty members who are both graduates from the University Manitoba and who serve as co-investigators on operating grants from national councils with MADRG members (Drs. G. Asmundson and M. Stein). A third adjunct member (Dr. Ron Norton, Professor Emeritus at the University of Winnipeg) is a former Full Member who is now retired but still active on several MADRG research projects.

b) Conditions of Membership

- Members are recruited by formal invitation from the Director of the MADRG in consultation with the other group members. Potential members must be active and independent researchers in the area of mood and anxiety disorders, broadly defined. Operational definitions of active and independent research activity include evidence of senior authorship on papers published in peer-reviewed journals and principal investigator on external peer-reviewed grants.

c) Reporting Procedures

The intent of the group is to promote intellectual stimulation and fraternity. Therefore, a rigid form of hierarchical reporting procedure that might be required in some organizations and institutions is not applicable in this context. Individual members, as well as subgroups formed to work on operating grants, regularly report to the entire Group as part of scheduled MADRG meetings. Minutes are recorded and circulated by email. Members also provide updates on new publications and grants on the official MADRG website (mts.net/~wolven/madrg).

d) Mechanisms for Regular Review and Assessment (which should include a brief annual report to the V-P (Research))

- The Department of Psychiatry houses the largest concentration of MADRG members. Drs. Cox and Enns have been editing an annual Department of Psychiatry Research Report since 1998. This report contains detailed information on peer-reviewed journal publications, operating grants, and other indicators of research productivity. A copy of this report is sent annually to the Office of the Vice-President (Research), other senior university and hospital officials, and all Chairs of Departments of Psychiatry in Canadian universities. MADRG member Dr. Murray Enns is the Director of Research for the Department of Psychiatry. Dr. Enns routinely updates the Chair of the Department of Psychiatry (Dr. Barakat) on significant new MADRG developments. Dr Barakat in turn corresponds with the office of the Associate Dean of Medicine (Research) and the office of the University Vice-President (Research) to provide information on these developments (e.g., acquisition of new research grants). A Research Report is also prepared and circulated by the Department of Clinical Health Psychology, which has the second largest concentration of MADRG members.

4) List of Members and Abbreviated CVs

List of Members an Abbreviated Curriculum Vitae

Head:
Brian Cox, Ph.D., C.Psych

Associate Head:
Murray Enns, M.D., F.R.C.P.C.
John Walker, Ph.D., C. Psych.

Members:
Wendy Freeman, Ph.D.
Patricia Furer, Ph.D., C.Psych.
Laurence Katz, M.D., F.R.C.P.C.
Kevin Kjernisted, M.D., F.R.C.P.C.
Mark Lander, M.D., F.R.C.P.C.
Rosemary Mills, Ph.D.
Jeff Reiss, M.D., F.R.C.P.C.
Jitender Sareen, M.D., F.R.C.P.C.
Norah Vincent, Ph.D., C.Psych.
Nancy Yu, M.D., Ph.D.

Associate Members:
Gordon Asmundson, Ph.D., Regina Health District
Murray Stein, M.D., University of California at San Diego
Ron Norton, Ph.D., C.Psych., Professor Emeritus, University of Winnipeg

Graduate Students:
Sharon Borger, M.A.
Ian Clara, M.A.
Mariette Chartier, R.N., M.Sc.
Paula MacPherson, M.Ed, M.A.
Lachlan McWilliams, M.A.
Tracie Olfrey, M.Sc.

- Abbreviated CVs of faculty members are appended.

5) Statement signed by Director of Research Group, Department Head, and Dean detailing an understanding among the Group, Head, and Dean, including provision of space, teaching release, and sharing of resources.

- Signed statement is appended

The majority of the members of the MADRG have significant amounts of ongoing protected

research time as part of their university contracts. In addition, the Director of the Group holds a Canada Research Chair that is used to protect his time and research time for two other members of the MADRG (Drs. Enns and Sareen). One of the junior members of the Group (Dr. Sareen) recently secured an establishment grant from the Manitoba Health Research Council which contains a significant buyout of teaching time. Dr. Cox is also a member of a Canadian Institutes of Health Research New Emerging Team strategic grant and has allocated additional funds to secure Dr. Sareen's protected research time. There is existing and sufficient lab space to meet the needs of the MADRG. The centrepiece of this allocated research space is the new computer lab for the analysis and storage of large mental health databases located on the 4th floor of the PsycHealth Centre on the Bannatyne Campus. This research lab was developed by Dr. Cox with funding from the Canada Foundation for Innovation and it directly facilitates the research program of several members and students in the MADRG.

Signed Statement of support from the Chair of the Department of Psychiatry and Dean of the Faculty of Medicine:

WE SUPPORT THE APPLICATION OF THE MOOD AND ANXIETY DISORDERS RESEARCH GROUP, WHICH HAS HELD OFFICIAL RECOGNITION AS A FACULTY OF MEDICINE RESEARCH GROUP SINCE 1997, TO NOW RECEIVE A UNIVERSITY OF MANITOBA DESIGNATION AS A RESEARCH GROUP. WE DO SO WITH THE UNDERSTANDING THAT NO ADDITIONAL RESOURCES OR SPACE REQUIREMENTS ACCOMPANY THIS APPLICATION.

S. Barakat

Dr. Samia Barakat
Chair, Department of Psychiatry

Dr. Brian Hennen
Dean, Faculty of Medicine

Report of the Senate Committee on Awards respecting Awards - April 12, 2004

Preamble

The Senate Committee on Awards (SCOA) terms of reference include the following responsibility:

> "On behalf of Senate, to approve and inform Senate of all new offers and amended offers of awards that meet the published guidelines presented to Senate on November 3, 1999, and as thereafter amended by Senate. Where, in the opinion of the Committee, acceptance is recommended for new offers and amended offers which do not meet the published guidelines or which other wise appear to be discriminatory under Policy No. 419, such offers shall be submitted to Senate for approval." (Senate, April 5, 2000)

At its meeting on April 12, 2004 SCOA reviewed 11 new awards offers, 10 award amendments, and one award withdrawal and reports as follows.

Observation

On behalf of Senate, the Senate Committee on Awards approved and recommends that the Board of Governors approve 11 new awards, 10 award amendments and one award withdrawal as set out in Appendix "A" of the Report of the Senate Committee on Awards (dated April 12, 2004). These award decisions comply with the published guidelines of November 3, 1999, and are reported to Senate for information.

Respectfully submitted,

Diana Kasperson (for)

Professor R. Baydack, Chair
Senate Committee on Awards

APPENDIX "A"

CATHERINE (CAYE) SCOTT MEMORIAL SCHOLARSHIP IN EDUCATION

The University Women's Club of Winnipeg offers to provide an annual scholarship in memory of Catherine (Caye) Scott who died in August 2003 at the age of 96. The funds for this award were made available through a bequest to the Scholarship Trust Fund of the Club. After obtaining her teaching certificate at Brandon Normal School, Caye Scott earned two degrees from the University of Manitoba. She began her teaching career in rural schools, Edwin and Belmont, Manitoba, then taught in the Winnipeg School Division in several elementary and junior high schools. She was principal at Sir Sam Steele and Clifton Schools and ended her career as principal of Weston School. Caye Scott was a long time member of the University Women's Club.

An annual award of $600 will be awarded to a student who:

(1) is enrolled full-time or part-time in the second year of study in the regular After-Degree Bachelor of Education or Weekend College program at the University of Manitoba;

(2) is registered in either the Early Years or Middle Years program;

(3) has completed one year of the program (minimum 30 credit hours) with a minimum cumulative grade point average of 3.5;

(4) has demonstrated excellence in student teaching.

Selection will be based on a candidate's cumulative grade point average and teaching promise, as indicated in their student teaching reports.

The selection committee shall be named by the Associate Dean (undergraduate) of the Faculty of Education.

MPhA / WILLIAM G. EAMER GRADUATE SCHOLARSHIP IN PHARMACY

Mr. William Eamer, B. Comm (Hon.), MBA, CA, in consultation with Mr. Ronald Guse F., B.Sc.(Pharm.), registrar of the Manitoba Pharmaceutical Association (MPhA), established in 2004 an endowment fund of $50,000 to provide scholarship support to graduate students in the Faculty of Pharmacy at the University of Manitoba. The Manitoba Scholarship and Bursary Initiative has made a contribution to this fund.

A Chartered Accountant by profession, Mr. Eamer received both his Bachelor of Commerce Honours (1972) and Master of Business Administration (1973) degrees from the University of Manitoba. A founding subscriber to the Class of '72 Scholarship at the Asper School of Business as well as the William G. Eamer Professional Scholarship, he served as Director and President of the Western CA Services Association, Director of the College of Registered Nurses of Manitoba, and as a member of the Council of the Institute of Chartered Accountants

of Manitoba. Following a wide-ranging professional career in both the public, private, and not-for-profit sectors he retired as Executive Director of the Manitoba Society of Pharmacists.

The scholarship of $2000 will be offered to a student who:

(1) is enrolled as a full-time Master's or Ph.D. student in any year of study in the Faculty of Graduate Studies, and whose research project is conducted in the Faculty of Pharmacy;

(2) has achieved a minimum cumulative grade point average of 3.5 in their previous program of study.

The scholarship was designed to recognize students who have not only a good academic record, but who have made a significant contribution to their profession, university and community as an undergraduate.

Applicants will submit a "curriculum vitae", as well as a written presentation addressing their particular research interests. Candidates may be requested to make an oral presentation. The first award will be formally presented at a Manitoba Pharmaceutical Association function.

The selection committee will be chaired by the Dean of the Faculty of Pharmacy and will include a representative from the Manitoba Pharmaceutical Association. The Dean and MPhA representative are jointly authorized to amend the financial and other terms of the scholarship as changing circumstances may require.

MAGDA HULSBOSCH SKETCH CAMP AWARD

The Manitoba Association of Architects has established an annual award of $250 in memory of Magda Hulsbosch whose passion for drawing was promoted through her work in the Faculty of Architecture.

This prize will be available to a student in the Faculty of Architecture, Environmental Design Progam annual sketch camp exhibition whose work graphically communicates an exceptional skill of working in appropriate representation media.

The selection committee for this award will be named by the Environmental Design coordinator of the Faculty of Architecture.

MICHAEL COX SCHOLARSHIP

Michael Wan, an alumnus of the Faculty of Architecture (BID 1979), has pledged to make annual contributions of $5,000 to establish an endowment fund in support of an undergraduate scholarship in the Faculty of Architecture in honour of Dean Emeritus Michael Cox. From the annual gift, $3,000 will be added to the capital of the fund and $2,000 designated for the annual award. With an additional contribution of $500, the annual award will be valued at $2,500.

The scholarship will be offered to a student who:

(1) is enrolled full-time in the third year of the Environmental Design program at the University of Manitoba, Faculty of Architecture;

(2) has achieved the highest combined grade in Design Studio 1 (79.163), and Design Studio 2 (79.164).

In the case of a tie, the highest cumulative grade point average will be used as a tie-breaker.

The selection committee will be named by the Environmental Design Coordinator.

EVELYN SHAPIRO AWARD FOR HEALTH SERVICES RESEARCH

An endowment fund has been established at the University of Manitoba by Dr. Evelyn Shapiro. The first award will be made once the capital balance of the fund reaches $200,000 or the accumulated unspent revenue exceeds $10,000. The available annual income from the fund shall provide an annual award which will be offered to the student who:

(1) is enrolled full-time in the Faculty of Graduate Studies (Master's or Ph.D. program) at the University of Manitoba, in a program delivered by the Faculty of Medicine;

(2) is conducting research in the area of health services that requires expenditures associated with the use of the Data Repository and other resources of the Manitoba Centre for Health Policy such as programming support, secretarial support, computer hardware and conference travel.

The recipients of this award may hold it with any other award. Eligible students will be required to submit a letter of application to the Director of Manitoba Centre for Health Policy (MCHP) who will set the deadline date for applications each year.

If a suitable candidate cannot be identified in any given year, the award will not be given out. Should this occur, the selection committee will have the discretion to offer an additional award in future years or to direct the unspent revenue to the capital balance.

Should the Manitoba Centre for Health Policy cease to exist, administration of the award will revert to the Department of Community Health Sciences.

The selection committee will be named by the Director of Manitoba Centre for Health Policy, who will also act as Chair. (Once Dr. Noralou Roos is no longer Director of the Centre, she will continue to be invited to participate on the selection committee in an *ex officio* capacity.)

SENATE COMMITTEE ON AWARDS REPORT TO SENATE - APRIL 12, 2004

J. EDGAR REA PRIZE IN HISTORY

In memory of James Edgar (Ed) Rea, his family, friends and colleagues have established an endowment fund at the University of Manitoba to provide an annual undergraduate prize in studies in Canadian History 1: History of Winnipeg. The prize will first be offered in 2005.

Dr. Ed Rea began his forty year teaching career in the Department of History at St. Paul's College and later joined the faculty at University College. He was an accomplished author specializing in western Canadian political history. Most notably, he wrote a book on the Winnipeg General Strike as well as a prize-winning biography of Manitoba Senator T.A. Crerar. Dr. Rea was a dynamic lecturer who developed popular courses on the history of Manitoba and Winnipeg at the University of Manitoba.

A prize, valued at $100, will be offered to a student who:

(1) is enrolled as a full-time student in any Faculty or School at the University of Manitoba;

(2) has achieved the highest grade in the course Studies in Canadian History 1 (currently numbered 11.378), when it is offered as History of Winnipeg.

If History of Winnipeg is not taught during an academic year, the prize will be offered in Modern Canada: 1921 to the present (currently numbered 11.297).

The selection committee will be named by the Head of the Department of History.

J. EDGAR REA MEMORIAL BURSARY

In memory of James Edgar (Ed) Rea, his family, friends and colleagues have established an endowment fund at the University of Manitoba to provide support to graduate students in the Department of History.

Dr. Ed Rea began his forty year teaching career in the Department of History at St. Paul's College and later joined the faculty at University College. He was an accomplished author specializing in western Canadian political history. Most notably, he wrote a book on the Winnipeg General Strike as well as a prize-winning biography of Manitoba Senator T.A. Crerar. Dr. Rea was a dynamic lecturer who developed popular courses on the history of Manitoba and Winnipeg at the University of Manitoba.

A bursary, valued at $300, will be offered to a student who:

(1) is enrolled as a full-time student in the Faculty of Graduate Studies, in the Master's or the pre-Master's program in the Department of History;

(2) has achieved a sessional grade point average of at least 3.25 in the academic session preceding the session in which the bursary is awarded;

(3) has demonstrated financial need on the standard University of Manitoba bursary application form.

Preference will be given to applicants pursuing studies in Canadian History. A recipient may hold this bursary a maximum of two times.

The selection committee will be named by the Head of the Department of History.

ENID NEMY BURSARY

In honour of Enid Nemy, an endowment fund of $10,000 has been established in support of a bursary for a student with an interest in journalism. The first award will be offered in the 2005-2006 academic session.

Ms. Enid Nemy began her journalism career at the Canadian Press. Her career took her to Bermuda for several years to work as a reporter at the Mid Ocean News and to Montreal where she ran her own public relations business. Ms. Nemy was a reporter and columnist for the New York Times for forty years before retiring in 2003, although she continues to work for them on an occasional basis. During her career she worked on several free-lance projects for various major publications and also won several awards for her reporting.

The award, valued at the available annual interest, will be offered to a student who:

(1) is enrolled as a full-time student in the third or fourth year of study in any undergraduate Faculty or School or in any year of study in the Faculty of Graduate Studies;

(2) has achieved a minimum grade point average of 3.0;

(3) demonstrates an interest in pursuing a career in journalism;

(4) demonstrates financial need on the University of Manitoba bursary application form.

Along with the bursary application, applicants must submit a maximum one-page statement outlining their journalism career goals and how their degree relates to these goals.

The selection committee will be named by the Director of Enrolment Services.

PAUL WASNEY SCHOLARSHIP IN ELECTRICAL ENGINEERING

In memory of Mr. Paul Wasney, P.Eng, a 1966 electrical engineering graduate from the University of Saskatchewan, his widow, Mrs. Josephine Wasney, has established an endowment fund of $10,000 at the University of Manitoba.

Mr. Wasney began his career with Manitoba Hydro. After his semi-retirement, he continued working as a consultant with his own company, Wexford Group. He travelled to San Salvador and Costa Rica on behalf of CIDA and Hydro International. Mr. Wasney was also an active member of the Illuminating Engineering Society (I.E.S.) and was bestowed with Member Emeritus Status by the I.E.S. of North American in 2003.

This scholarship, valued at the available annual interest, will be offered to an undergraduate student who:

(1) has completed their first year of study (minimum 28 credit hours) at The University of Manitoba in either the Faculty of Engineering or University 1 and have elected to continue in the Electrical Engineering program;

(2) has achieved a minimum grade point average of 3.5 on all courses completed.

The selection committee shall be the Scholarships, Bursaries, and Awards Committee in the Faculty of Engineering.

COOL FM JAZZ AWARDS

Cool FM Jazz Radio has made a contribution of $40,000 to establish an endowment fund in support of Jazz awards in the School of Music. The annual interest will be used to offer four separate awards.

Cool FM Jazz Major Scholarship

This scholarship will be offered to a student who:

(1) is enrolled as a full-time student (minimum 80% course-load) in any year of study in the Jazz Major program in the School of Music at the University of Manitoba (including incoming students just entering the program);

(2) achieves a minimum sessional grade point average of 3.0 (incoming students entering the program must achieve a minimum high school grade 12 average of 75%);

(3) demonstrates a high degree of performance ability and potential for further musical development.

The award will be offered at a minimum value of $400. At the discretion of the selection committee, more than one award may be offered or the award value may be increased.

In instances where several students of approximately equal merit are being assessed, the highest cumulative grade point average (or cumulative high school average for incoming students) may be used as a tie-breaking mechanism.

The selection committee will be the full-time Jazz faculty members at the School of Music.

Cool FM Summer Jazz Camp Prize

This prize, valued at $200, will be offered to a student who:

(1) is a high school (Senior 1, 2, 3, or 4) or university undergraduate student registered full-time in the Summer Jazz Camp through the School of Music at the University of Manitoba;

(2) demonstrates a high degree of performance ability and potential for further musical development.

The selection committee may choose not to declare a recipient of the scholarship in a given year depending on the quality of applicants.

The selection committee will be the full-time Jazz faculty members at the School of Music.

Cool FM Senior High School Honour Jazz Band Prize

This prize, valued at $50, will be offered to a student who:

(1) is a high school student (Senior 1, 2, 3, or 4) registered full-time in the Senior High School Honour Jazz Band through the School of Music at the University of Manitoba;

(2) demonstrates a high degree of performance ability and potential for further musical development.

The selection committee may choose not to declare a recipient of the scholarship in a given year depending on the quality of applicants.

The selection committee will be the full-time Jazz faculty members at the School of Music.

Cool FM Jazz Combo Prize

This prize, valued at $125, will be offered to a high school that has registered a band in the University of Manitoba Jazz Combo Festival through the School of Music at the University of Manitoba and whose band demonstrates a high degree of performance ability.

The selection committee may choose not to declare a recipient of the scholarship in a given year depending on the quality of applicants.

The selection committee will be the full-time Jazz faculty members at the School of Music.

SENATE COMMITTEE ON AWARDS REPORT TO SENATE - APRIL 12, 2004

BARKMAN CONCRETE SCHOLARSHIP

Barkman Concrete has pledged to make an annual contribution of $6,000 for five years beginning in 2004 to provide scholarship support to graduate students in the Department of Landscape Architecture. The selection committee will determine the individual value of scholarships up to a maximum value of $3000.

The scholarships will be offered to students who:

(1) are enrolled full-time in the Faculty of Graduate Studies, in the Masters program in the Department of Landscape Architecture;

(2) have demonstrated academic excellence with a minimum cumulative grade point average of 3.5 (or equivalent).

Scholarship recipients will be honoured at an annual reception at Barkman Concrete.

The selection committee will be named by the Head of the Department of Landscape Architecture.

AMENDMENTS

MANITOBA BLUE CROSS BURSARY FOR STUDENTS WITH SPECIAL NEEDS
MANITOBA BLUE CROSS ENTRANCE BURSARY
MANITOBA BLUE CROSS TRAVELLERS BURSARY
MANITOBA BLUE CROSS DENTAL SCHOLARSHIP
MANITOBA BLUE CROSS STUDENT ACCIDENT PLAN SCHOLARSHIP

The above listed awards will all be increased to $550 (from $500). In addition, the general terms and conditions of the Manitoba Blue Cross awards state that recipients cannot hold any of these awards with other awards from the University with a value of $500 or more. This value will be increased to $750. Lastly, the Student Accident Plan no longer exists. As such, the Manitoba Blue Cross Student Accident Plan Scholarship will undergo a name change to MANITOBA BLUE CROSS MEDICAL REHABILITATION SCHOLARSHIP.

UNIVERSITY OF MANITOBA ALUMNI ASSOCIATION ENTRANCE BURSARY

This bursary was established on a one-time basis for the 2003-2004 academic session. It will now be amended to reflect that the award will be offered on a continuing basis. The Alumni Association will contact the Financial Aid and Awards Office each spring to confirm availability of the bursary for the next academic session.

SENATE COMMITTEE ON AWARDS REPORT TO SENATE - APRIL 12, 2004

MEXICO STUDY TERM BURSARY

This bursary established by the Faculty of Arts will undergo one amendment. Currently any University of Manitoba student participating in the exchange with Universidad Latina de America is eligible for the bursary. At the request of the Faculty of Arts, eligibility will now be restricted to participating students from the Faculty of Arts.

ICS STUDENT EXCHANGE SCHOLARSHIP

At the request of the donor, these scholarships will now be funded with annual contributions of $5,000. Unspent funds may be carried over into the next fiscal year. In any given year, only the annual $5,000 contribution and any carried over amounts may be awarded. The award values will be determined by the selection committee and will be affected by such factors as the length of the exchange and the geographic location of the exchange.

FACULTY OF ARTS GOLD MEDAL
FACULTY OF ARTS PROGRAM MEDALS

The terms of reference will undergo two amendments. In order for students seeking a second degree to be eligible for consideration for these medals in the same way as students seeking a first degree, in the paragraph following the numbered criteria the words "from other institutions" will be removed. A second editorial change will be made so that the statement "30 hours of transfer credit or less" will be changed to "30 or fewer hours of transfer credit".

DAVID AND MYRNA BOWMAN PRIZE IN LAW

A bequest from Mr. David Bowman has increased the value of the endowment fund supporting this award to $10,000 (from $5,000). One prize valued at $100 has been offered annually to section 2A of the Evidence course. As a result of the increase in the endowment fund, the terms of reference will be amended to offer one award in each of the two sections of the Evidence course. The prizes will be valued at $250 each.

WITHDRAWAL

JACK HART MEMORIAL SCHOLARSHIP

With the awarding of the 2003 scholarship to a student in the School of Art, the fund supporting this award has been exhausted. As such, it is now being withdrawn.

208 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Fax (204) 275-1160

UNIVERSITY OF MANITOBA | Office of the President

Memorandum

To: Mr. J. Leclerc, Acting University Secretary

From: D. R. Morphy, Vice-Provost (Student Affairs)

Date: April 8, 2004

Re: Student Advocacy Annual Report 2001/2002 and 2002/2003

Further to the above, please find attached a copy of the Student Advocacy Annual Report for the periods 2001/2002 and 2002/2003 together with Dr. Lynn Smith's memorandum dated April 5, 2004. As Dr. Smith states in her memorandum, we would appreciate if this report could be placed on the April 28, 2004 Senate Executive agenda and also included as information on the May 12, 2004 Senate agenda.

Please do not hesitate to contact me should have any questions or concerns.

DRM:md
Attachment

cc: Dr. Robert Kerr, Vice-President (Academic) and Provost
Dr. Lynn Smith, Director, Student Advocacy/Student Resource Services

UNIVERSITY OF MANITOBA | Student Advocacy/Student Resource Services

519 University Centre
Winnipeg, Manitoba
Canada R3T 2N2

Tel: (204) 474-7423
in Manitoba 1-800-432-1960
Fax: (204) 474-7567

MEMORANDUM

DATE: April 5, 2004

TO: Dr. D.R. Morphy, Vice-Provost, Student Affairs

FROM: Lynn M. Smith, Director, Student Advocacy

RE: **Student Advocacy Annual Report 2001/2002 and 2002/2003**

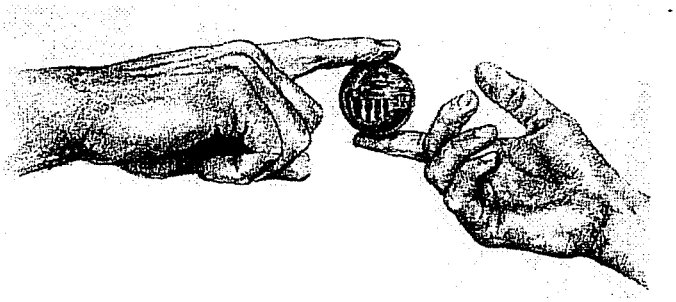
The terms of reference for the Student Advocacy office state that the Director of the office should report to the Board of Governors and Senate, at least annually, on the activities of the office. As you know, the 2001-2002 annual report was significantly delayed due to the increased demand for advocacy services and educational initiatives. With your authorization, the decision was taken to combine the information for the two reporting periods into one document.

Enclosed, please find the Student Advocacy office's annual report for 2001-2002 and 2002-2003. The report was a joint effort and was written by Ms Nancy Callaghan, Ms Brandy Usick and myself.

It would be sincerely appreciated if you would forward this report to Mr. Jeff Leclerc, Acting Secretary, Senate and request that the report be placed on the Senate Executive agenda of April 28th. It is also our hope that the report will be included as 'information' in the May 12th Senate agenda.

Please do not hesitate to contact me if you have any questions or concerns regarding the attached report.

LMS/jb
attach. (1)



The University of Manitoba
Student Advocacy Office
Annual Report

September 1, 2001 to August 31, 2002
and
September 1, 2002 to August 31, 2003

Preamble

This edition of the Student Advocacy office Annual Report, submitted to the Board of Governors and Senate, summarizes the activities of the office for the time periods of September 1, 2001 to August 31, 2002 and September 1, 2002 to August 31, 2003. Due to an increased caseload, the submission of the annual report for 2001/02 was delayed and a decision was made to combine the two reports into one document. Therefore, this report forms the official record of the caseload activity within the office for two years; statistics and commentary for both years is provided throughout.

Each year, in addition to the work directly related to student caseload and staff consults, Student Advocacy staff develop and present a substantial number of educational projects such as Integrity Week and workshops and orientations. Please refer to Appendices B and C for a list of these presentations. In 2002/03 Student Advocacy created and delivered 41 workshops/orientations for students and staff on diverse topics such as student rights and responsibilities, civility, inappropriate and disruptive student behaviour, and plagiarism. Additional information regarding the educational mandate of the Student Advocacy office can be found in the Student Affairs Annual Reports for the corresponding years.

The staff in the Student Advocacy office maintain a student-centered approach to resolve issues or concerns brought forward by students and other university community members. One of the principal functions of the office is to constructively tackle students' concerns and complaints. In doing so the staff educates and assists students through all stages of their dealings with the University to ensure that they receive fair treatment and have access to fair processes. To achieve this aim, the office staff

adheres to principles grounded in student development theory and administrative law within the higher education setting. The complete Terms of Reference are found in Appendix A.

The Student Advocacy staff are dedicated to providing all members of the University community with excellent service. This dedication to offering a very high quality of assistance presents ongoing challenges as increases are evident in numbers of student contacts and numbers of consultations while the human resources and physical space remain fixed. Currently there are two full time advocates and two part-time advocates, one support staff and the director of the office. The office also provides a placement for the Peer Advisors program whereby students receive professional development opportunities and introductory advocacy training.

Discussion

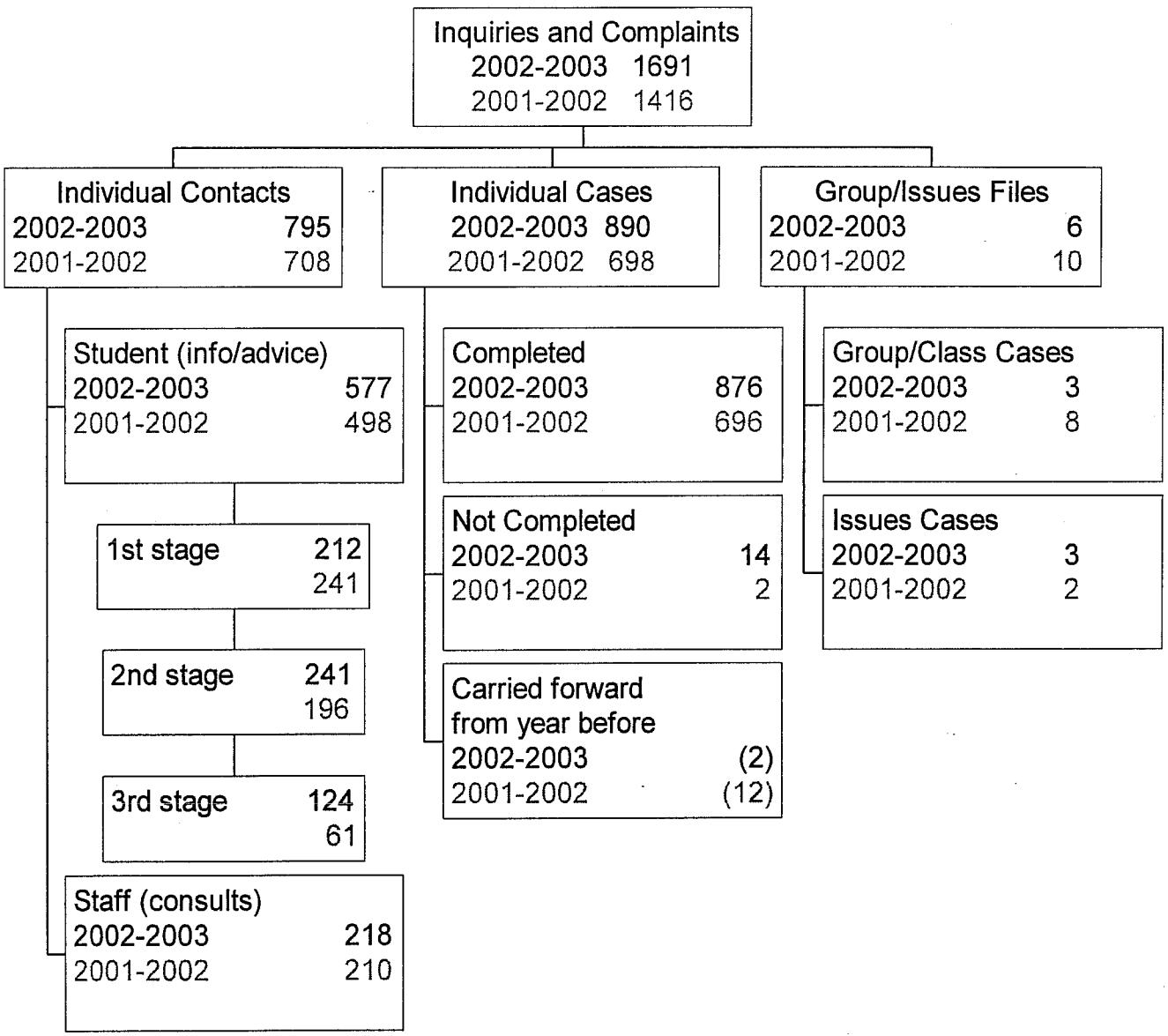
In 2002/03 there was an increase in the number of contacts made with the office over the previous years. Knowledgeable staff are often able to immediately provide students with the specific information they seek or make referrals to other appropriate services. Therefore, many student contacts did not require a formal case file to be opened.

Much of the daily activity in the office centers on meetings with individual students. As part of the initial intake process, students make an appointment to discuss a particular issue, concern or complaint. Based upon the information provided by the student, the advocate then outlines a series of possible options for the student to consider. Depending upon the complexity of the case, additional contacts or follow-up meetings may be required with the student and/or other members of the University community. Email is an increasingly common means of providing follow-up services to both the students and other parties involved in a particular case. As a result, the management of high volumes of email and the expectation of students to receive expeditious responses to their email queries has emerged as an ongoing challenge for staff and has prompted changes in the way staff work and communicate with students.

The following figures and tables present detailed information regarding the nature and numbers of issues contained within both the 2001/02 and 2002/03 caseloads. In addition, they provide an overview of the kinds of resolutions implemented for these issues. The management of the caseload statistics has undergone some transformations because in 2002/03 the office changed from using Excel to using Access software. The new data management system has resulted in an improved and streamlined method for entering, analyzing, and presenting the case statistics. The tables and figures highlight the complexity of the work undertaken by the Student Advocates while serving students and the University community.

Figure 1 displays the total number of presenting or initiating contacts made with the Student Advocacy office for the last two academic years. It describes the volume of inquiries and complaints and places them into distinct groups and subgroups.

Figure 1 Contacts and Caseload



Note: University of Manitoba Student Population
24,981 Undergraduate and Graduate Students; Institutional Statistics (IS) Book 2002/03
23,618 Undergraduate and Graduate Students; Institutional Statistics (IS) Book 2001/02

The uppermost box states the total number of student and staff contacts received during the two reported years. The counts of **1416** in 2001/02 and **1691** in 2002/03 include only the initiating or presenting contacts. These data represent an increase of **11%** and a **19.7%**, respectively, in each of the reporting periods over the preceding year. (There were 1275 contacts in 2000/01).

The contacts are then divided into three sub-categories: *Individual Contacts*, *Individual Cases* and *Group/Issues* files. The heading of *Individual Contacts* refers to contacts which do not result in a case file being opened, whereas *Individual Cases* are official cases.

Individual Contacts are broken down into two separate categories: Student (information/advice) and Staff (consults). Student contacts are further sub-grouped according to three stages of activity, based upon the nature of the information they receive and the potential for the issue to become a formal case. Students who receive information or referrals to resources that may allow them to independently resolve issues are classified as the first stage contacts. The second and third stages contain student contacts who present with more complex or serious concerns and receive direction from an advocate but who do not require a formal case to be pursued on their behalf. The final group within the 'Individual Contacts' classification reflects the number of consults requested by university staff, such as faculty members and administrators.

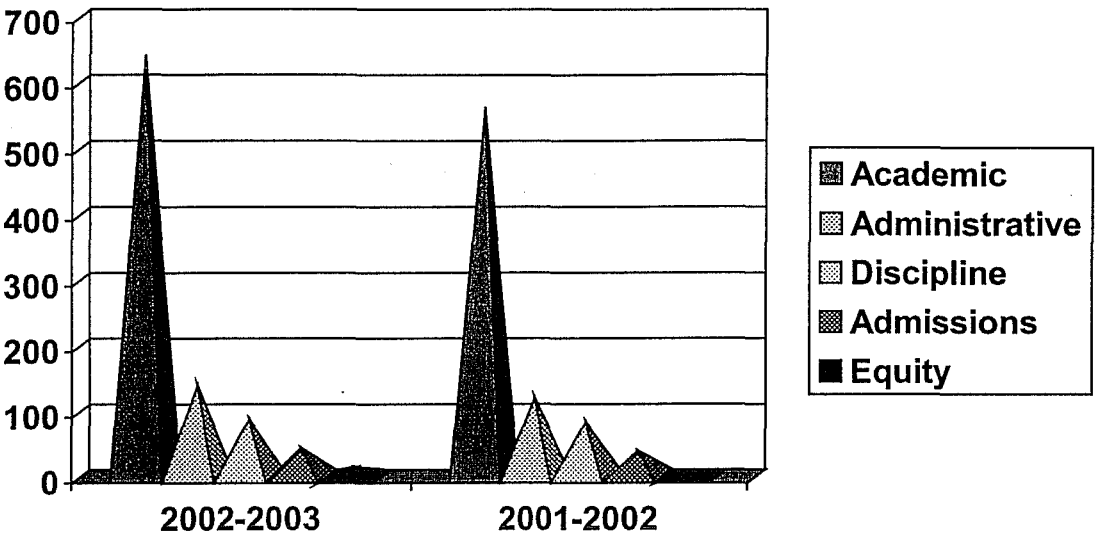
The *Individual Cases* designation indicates that more in-depth assistance from the advocate was required than preliminary information or advice. This classification is comprised of the cases that demand the most substantial amount of work to be performed by the advocates.

The final category represents *Group* or *Issues* based cases. These cases are classified separately from the individual cases in order to reflect that an advocate reviewed the concern on behalf of more than one student or that the issue affected more than one student.

The demographic profile of our student caseload has remained, for the most part, similar from year to year. For 2002/03 the cases were presented by 47% males and 53% females. Students present from a wide range of faculties and schools. The top four faculties for both reporting years were: Science, University 1, Arts and Graduate Studies. The substantial number of students received from these faculties is likely due to the large enrollments and to referral mechanisms.

Figure 2 represents the individual cases according to the general nature of the presenting issue. Students' concerns and complaints can be grouped into five major categories: academic, administrative, discipline, admissions, and equity. Although the total number of cases has increased this year and last, the distribution of these cases across the five categories has remained consistent with previous years.

Figure 2 Categories of concerns and complaints



The great majority of the student issues pursued through the Student Advocacy office pertain to academic matters: **562** cases in 2001/02 and **641** cases in 2002/03. Students are often referred to Student Advocacy by university staff or by other students in order to receive assistance about academic rights and responsibilities, and/or to discuss whether routes for an academic appeal or other types of requests are available to them.

The remaining four categories, discipline, administrative, admissions, and equity collectively form a relatively small proportion of the overall caseload: **252** cases in 2001/02 and **285** cases in 2002/03. However, the features of the cases in these categories are often complex and can contribute disproportionately to the advocates' actual workload. A more concise breakdown of the issues presented by students for the discipline and administrative groupings are found in Table 1 and academic concerns are found in Table 2.

Table 1 identifies the number of issues that emerged from the caseloads in the two reporting years. Upon closing a case file, the principle issue(s) are identified and placed within each of the five major categories of concerns and complaints. This table further illustrates the kinds of specific issues that are presented by students for the discipline and administrative categories, both of which are quite varied. Sometimes students require assistance with more than one issue, resulting in the number of issues exceeding the actual number of cases each year. For example, a student may seek assistance with a request for an authorized withdrawal and also pursue a fee appeal.

Table 1 Types of Concerns and Complaints

Concern/Complaint	# of cases/ issues 2002/03	# of cases/ issues 2001/02	# of cases/ issues 2000/01
Academic	**641**	**562**	509
Discipline	**87**	**83**	52
Academic Misconduct			
Cheating	**27**	**24**	8
Plagiarism	**26**	**27**	19
Inappropriate Collaboration	**14**	**14**	5
Academic Fraud	**4**	**3**	2
False Admissions Information	**4**	**2**	1
False Documents	**1**	**0**	1
Non-Academic Misconduct			
Residence Issues	**6**	**7**	5
Inappropriate Behaviour	**3**	**2**	11
Inappropriate Computer Use	**1**	**0**	0
Other	**1**	**4**	0
Administrative	**139**	**120**	108
Academic Fees/Cancellation	**94**	**79**	68
Registration	**20**	**13**	5
Complaints re: staff or students	**8**	**14**	16
Transcript Notation Removal	**5**	**4**	5
Cancellation/Reinstatement	**3**	**0**	0
FIPPA/PHIA	**3**	**0**	0
Parking	**2**	**5**	4
Library	**0**	**2**	2
Graduation/Convocation	**2**	**2**	4
Other	**2**	**1**	4
Admissions	**44**	**39**	30
Equity	**15**	**10**	9
Total *	**926**	**814**	708

*Note: 926 issues from 890 cases (2002 - 2003) and 814 issues from 698 cases (2001 - 2002)

Of note in this table is the increase in disciplinary cases handled by the office for the two reporting years: **83** cases (2001/02) and **87** cases (2002/03) from **52** disciplinary cases reported in 2000/01. The approximately threefold increase for cheating (from 8 to 24,27) and inappropriate collaboration (from 5 to 14,14) is the most striking change in the disciplinary case figures for academic misconduct.

The number of cases involving plagiarism also increased slightly over the 2000/2001 statistics: from **19** to **27** in 2001/02 and **26** in 2002/03.

The number of cases involving inappropriate behaviour of students decreased dramatically from 2000/01, returning to the incidence rates reported in previous submissions.

Administrative issues are the second largest aspect of the advocates' caseload. In the last two years, students most commonly presented administrative concerns about fees and registration. There was a modest decline in the number of complaints made against staff or other students, most notably in 2002/03. A new administrative category 'FIPPA/PHIA' was recently added to our records in response to the introduction of the Freedom of Information and Protection of Privacy Act and Protection of Health Information Act.

Table 2 identifies the types of academic issues that are presented to the office.

Table 2 Types of Academic Concerns and Complaints

Concern/Complaint	# of cases/ issues 2002/03	# of cases/ issues 2001/02	# of cases/ issues 2000/2001
Authorized Withdrawal	**251**	**178**	134
Grade Appeal	**130**	**144**	126
Deferred Exam	**29**	**36**	19
Professor/Student Conflict	**28**	**31**	42
Requirement to Withdraw	**26**	**15**	5
Academic Suspension	**19**	**8**	12
Voluntary Withdrawal (Retroactive)	**18**	**14**	7
Reinstatement	**17**	**24**	18
Time Extension (Incomplete/CO)	**16**	**12**	9
Advisor/Student Conflict	**16**	**9**	6
General Information/Advising	**10**	**0**	27
Transfer of Credit	**7**	**14**	20
Program Change/ Waive Requirement	**7**	**10**	8
Practicum Issues	**7**	**7**	11
Leave of Absence	**7**	**5**	3
Debarment	**6**	**2**	6
Theses/Comprehensives	**6**	**2**	1
Fellowship/Scholarship	**4**	**1**	1
Professional Unsuitability	**3**	**0**	3
Syllabus Changes	**2**	**3**	0
Letter of Permission	**2**	**1**	3
Graduation	**1**	**7**	4
Fresh Start	**1**	**4**	1
Ineligible to Proceed	**0**	**3**	2
Intellectual Property	**0**	**2**	0
Attempt Hours	**0**	**1**	3
Exam Schedule Changes	**0**	**0**	1
Other	**28**	**29**	37
Total	**641**	**562**	**509**

The number of requests for academic forgiveness submitted by students increased in both years, and there was a notable increase in the number of requests for authorized withdrawals pursued in 2002/03. However, the number of cases in which students were assisted with grade appeals decreased slightly from the 2001/02 year.

The number of graduate students presenting with issues such as advisor/student conflict, time extension and theses/comprehensives has increased slightly overall. Although the total numbers do not reflect a concern, they do indicate that graduate students are seeking out assistance for the issues they encounter within their programs. Ongoing initiatives to inform graduate students about their rights and responsibilities may be a contributing factor in the number of graduate students seeking the assistance of an advocate.

Table 3 provides a summary of the resolutions for the caseload. Outcomes of cases are placed under one of three categories: *Completed within an Informal Process, Completed within a Formal Process*, and *Other*. In keeping with the philosophy of the office, resolutions of student concerns are attempted at the lowest possible level. Further, a resolution is usually sought through an informal process, before a more formal process is utilized. These aims were achieved in both reporting years as over half of the resolutions, **57%** in 2002/03 and **58%** in 2001/02, were completed using informal processes. The use of informal processes to address students' concerns can be more expeditious and less adversarial than other means of resolution.

Table 3 Outcome of Issues

Process/Outcome	2002/03		2001/02	
Completed outside formal process	**Subtotal 526**		**Subtotal 476**	
Information /Advice		428		372
Request/Mediation		86		94
Referrals		9		5
Appeal not pursued		3		5
Completed within formal process	**Subtotal 397**		**Subtotal 329**	
Upheld		259		209
Modified outcome		22		25
Denied		102		95
Other		14		0
Not Completed *		14*		2**
Other	**Subtotal 3**		**Subtotal 7**	
Student withdrew appeal		2		3
Student retained a lawyer		1		1
Advocate withdrew		0		3
Individual cases	**Total**	**926**	**Total**	**812**
Group & Issues Cases	**Completed**	**6**	**Completed**	**10**

Note:* Cases incomplete as of February 2004; **Cases Incomplete as of summer 2003

Overall, the caseloads for 2001/02 and 2002/03 resemble the issues and concerns addressed in previous years. While there have been significant increases in volume of caseload, there have been no substantial changes to the type of work undertaken by the advocates on behalf of students.

Contemporary Issues and Recommendations

The issue of academic integrity is of tremendous significance to our institution. As such, the view that plagiarism and inappropriate collaboration are on the rise is disconcerting. In the last year and as a follow-up to a recommendation previously made by Student Advocacy, the university struck a committee that is currently exploring the merit of introducing plagiarism detection software. This undertaking and other activities have focused on the University's current efforts to educate students about their role in producing scholarly work and to proactively discourage students from breaching our academic policies and standards.

As part of a Canadian research consortium, Student Advocacy conducted on-line surveys of students, faculty and teaching assistants regarding academic dishonesty in the fall of 2002. The findings of the survey indicate that more academic dishonesty occurs on this campus than is documented in either the University Disciplinary Committee's annual report or is represented in Student Advocacy's office's statistics. As such, even though the numbers reported herein have increased over the last two years, it is likely that they still do not capture the full extent of academic misconduct that takes place. Fortunately, the increased numbers of students who are presenting to this office signals to us that professors and administrators are giving attention to matters of academic dishonesty.

It is recommended that campaigns underscoring the value of academic integrity at the University of Manitoba be encouraged and supported by faculty and administrators as well as by students.

Challenging and stemming the incidence rates of inappropriate collaboration requires equal attention as curbing plagiarism or cheating if academic misconduct is to be fully addressed. Ongoing communication between students and faculty is critical to clarify whether sharing information with other students is or is not acceptable in a particular class or for a particular assignment. Once the expectations and rules have been established, students, in particular, need to be diligent in upholding them to avoid allegations of wrongdoing.

It is recommended that discussions about inappropriate collaboration continue to be initiated by professors at the beginning of each term for each course to establish the rules for assignments regarding group versus independent work.

The Freedom of Information and Protection of Privacy Act and the Protection of Health Information Act have changed the landscape of our institutional record keeping. Critical assessments about why personal information is collected, how it is secured, and who

has access to this information should now be familiar aspects of managing records regarding students, which include grades, registration lists, medical certificates, and the like. The securing and disclosing of student information continues to be a challenge for all those who work with students.

It is recommended that academic staff, teaching assistants and academic advisors review current practices and processes regarding FIPPA. For example, they should review how evaluated academic work is to be returned to students because leaving papers and assignments in public areas such as hallways violates FIPPA.

Summary

The Student Advocacy office provides information and assistance to students and other members of the university community regarding policies and procedures, as well as student rights and responsibilities. Formal and informal meetings and the regular delivery of workshops and presentations are ways that the advocates deliver their educational mandate. Additionally, the Student Advocacy website offers a helpful method of communicating with students and staff regarding important student matters. The website promotes academic integrity and provides information and links to other key websites. The Student Advocacy brochures about inappropriate collaboration, cheating, plagiarism and fraud, and grade appeals are also available on-line. Several initiatives to further improve the website are ongoing.

The professional and confidential services offered by the office staff assist us in maintaining positive relationships with students and the academic and administrative units across campus. The work undertaken on behalf of students is highly rewarding for the Advocacy staff. The ongoing support throughout the University community for the Student Advocacy role on campus is strong and is greatly appreciated by the entire staff of the Student Advocacy office.

Appendix A

STUDENT ADVOCACY OFFICE
TERMS OF REFERENCE

The Student Advocacy office (the "Office") shall:

1. be under the general charge of a Director who shall report to the Board of Governors and Senate at least annually on the activities of the Office and to the Vice-Provost (Student Affairs) for routine financial, logistic and administrative matters;

2. serve as a general information unit for students, former students, or those who have applied to become students, and provide them with information on their rights, responsibilities, and the procedures to follow to resolve problems or concerns resulting from actions or decisions, arising from University of Manitoba rules and regulations, as taken by officers of the University that may be unfair, unjust, discriminatory or create undue hardship; and,

   2.1 in carrying out its information function, the Student Advocacy office will receive student complaints and refer complainants, as appropriate, to other University officers or staff, including, without limitation, Equity Services; the Ombudsman; faculty members and academic or support service administrators;

3. investigate or facilitate the investigation of any concern or complaint presented by a student or former student or applicant;

4. review policies, procedures, regulations, rules and criteria and recommend any changes thereto that are necessary to ensure prompt decision making, appropriate procedures and protection of the rights of students;

5. subject to clause 5.2 hereof, provide assistance or representation to students who are appealing an academic or disciplinary action and are appearing before a residence, faculty, Senate or University committee; and,

   5.1 in discharging its representational function, be responsible for the recruitment, selection, training and assigning of 'student advocates' recruited from the student body;

   5.2 withhold or withdraw representation if, in the opinion of the Director of the Office, the case has no merit; the student is not co-operative; the student has retained legal counsel; and/or the circumstances indicate that such involvement would be counterproductive;

6. have access to such information as is appropriate having regard to the representational functions of the Office, while at all times respecting confidentiality and only releasing confidential information after written permission is given by the affected parties for such release;

7. keep suitable records of complaints, findings and recommendations as may be necessary; such records shall be accessible only to members of the Office, as per FIPPA legislation.

March 18, 2002

Appendix B
STUDENT ADVOCACY ORIENTATION/WORKSHOP SCHEDULE
September 1, 2001 - August 31, 2002

DATE	WORKSHOP/ORIENTATION	TOPIC
SEPTEMBER 4th	Social Work Orientation	Student Advocacy & Student Rights/Responsibilities
5th	Fall U1 Orientation	Skills for Success
5th	TA Workshop/Science	Before You Begin: University Policies & Procedures to Guide You
7th	TA Workshop/Engineering	Before You Begin: University Policies & Procedures to Guide You
10th	TA Workshop/Arts General	Before You Begin: University Policies & Procedures to Guide You
12th	Dentistry 1st Year Orientation	Student Advocacy & Student Rights/Responsibilities
12th	Sedaya Orientation	Student Advocacy & Student Rights/Responsibilities
14th	School of Agriculture 1st Year Orientation	Student Advocacy & Student Rights/Responsibilities
20th	Graduate Students Orientation	Student Advocacy & Student Rights/Responsibilities
20th	Disability Services Orientation	Student Mentoring Program
27th	Agriculture/Diploma Program	Academic Dishonesty/Plagiarism
OCTOBER 15th –19th	Integrity 5	Academic Integrity Awareness & Education
NOVEMBER 6th	99.111	Academic Integrity & Rights & Responsibilities
7th	99.111 Instructors	Academic Integrity
13th	New Graduate Students Orientation	Student Advocacy & Student Rights/Responsibilities
DECEMBER 10th	UTS Noon Hour Series/New Faculty Workshops	Student/Professor Relationships

JANUARY 24th	UTS New Faculty Workshop	Student/Professor Relationships
24th	2nd Year Agriculture Degree Students	Plagiarism Workshop
MARCH 12th	ELC Workshop	Disruptive Students
APRIL 25th	CHET Workshop	Plagiarism
MAY 21st	Dentistry/Clinical Assistants & Staff	Dentistry Code of Conduct
25th	Parents Program Orientation	Student Advocacy & Student Rights/Responsibilities
JUNE 25th & 26th	Dentistry Workshop	Dentistry Code of Conduct
3rd	Aboriginal Education Authority	Student Advocacy & Student Rights/Responsibilities
AUGUST 21st	Dentistry 1st Year Orientation	Student Advocacy & Student Rights/Responsibilities
26th	Medical Rehabilitation/1st Year Physio Therapy Freshie Luncheon	Student Advocacy & Student Rights/Responsibilities
28th	New Faculty Orientation	Managing Student/Professor Relationships
29th	Aboriginal Student Orientation	Student Advocacy & Student Rights/Responsibilities
29th	ACCESS Student Orientation	Student Advocacy & Student Rights/Responsibilities
30th	CHET New Academic Administrators	Student Matters/ Role of Student Advocacy Office

Appendix C
STUDENT ADVOCACY ORIENTATION/WORKSHOP SCHEDULE
September 1, 2002 - August 31, 2003

DATE	WORKSHOP/ORIENTATION	TOPIC
SEPTEMBER 3rd	Social Work 1st Year Students	Role of Student Advocacy & Student Rights/Responsibilities
4th	U1 Skills for Success	Role of Student Advocacy & Student Rights/Responsibilities
6th	UTS/TA Workshop for Engineering	Policies & Procedures to Guide You
10th	Native Studies Graduate Orientation	Role of Student Advocacy & Student Rights/Responsibilities
10th	Dentistry F/T&P/T Academics	Community Code Orientation
11th	UTS/TA Workshop for Faculty of Arts	Policies & Procedures to Guide You
13th	Agriculture Diploma Orientation	Role of Student Advocacy & Student Rights/Responsibilities
19th	Graduate Studies Orientation	Role of Student Advocacy & Student Rights/Responsibilities
19th	Sedaya Student Orientation & Reception	Welcome and Role of Student Advocacy Office
26th	Graduate Student Association Council Meeting	Role of Student Advocacy & Student Rights/Responsibilities
27th	Bannatyne Graduate Students Welcome	Role of Student Advocacy & Student Rights/Responsibilities
OCTOBER 3rd	99.111 Presentation	Campus/Student Affairs Resources
17th	Agriculture Diploma Workshop	Plagiarism/Academic Dishonesty
22nd	Evening of Excellence	Role of Student Advocacy & Student Rights/Responsibilities
29	Continuing Medical Education	Thesis Writing
NOVEMBER 4th to 8th	Integrity 6	Academic Integrity Awareness and Education
8th	English Language Centre	Plagiarism
13th	CHET Workshop	Incivility & Disruptive Students
DECEMBER 10th	Faculty of Nursing	Angry, Disruptive & Abusive Students
11th	UTS Workshop	Challenging Classroom Scenarios: Issues & Strategies
JANUARY 30th	Physiology/Graduate Program Review	Role of Student Advocacy & Student Rights/Responsibilities
FEBRUARY 6th	Agriculture Degree Program	Plagiarism Workshop
FEBRUARY 14th	AEPUCE	Plagiarism Workshop
18th & 19th	Information Days	Role of Student Advocacy & Student Rights/Responsibilities

18th	Follow-up Workshop in Faculty of Nursing	Angry, Disruptive & Abusive Students
MARCH 4th	Oral Biology/Graduate Program Review	Role of Student Advocacy & Student Rights/Responsibilities
15th	Faculty Retreat/Department of English	Session on Plagiarism
19th	Display at Bannatyne with Disability Services & Counselling	Role of Student Advocacy & Student Rights/Responsibilities
21st	Medical Microbiology/ Graduate Program Review	Role of Student Advocacy & Student Rights/Responsibilities
APRIL 30th	UTS Instructor Training	Teacher Training for 99.111
MAY 14th	UTS Instructor Training	Teacher Training for 99.111
15th	Deans/Directors/Department Heads Workshop	How to Conduct Fair Hearings
16th	ICS Orientation for New Students	Role of Student Advocacy & Student Rights/Responsibilities
24th	Parents' Orientation	'Been There Done That' Workshop
JUNE 4th	Deans/Director/Department Heads Workshop	How to Conduct Fair Hearings
9th	UTS Spring Workshops	Cyber Plagiarism
20th	AEPUCE Students	Plagiarism
JULY 18th	Security Services New Constables Orientation	Role of Student Advocacy & Student Rights/Responsibilities
AUGUST 20th	Dentistry Orientation (1st Years & Dental Hygiene)	Role of Student Advocacy & Student Rights/Responsibilities
25th	Medical Rehabilitation 'Freshie' Luncheon	Role of Student Advocacy & Student Rights/Responsibilities
25th	Human Ecology	Role of Student Advocacy & Student Rights/Responsibilities
26th	ICS Orientation for New Students	Role of Student Advocacy & Student Rights/Responsibilities
27th	UTS New Faculty Orientation	Managing the Student/Professor Relationship
28th	Bison Football Orientation	Role of Student. Advocacy & Student Rights/Responsibilities
28th	Native Studies Department/Aboriginal Student Centre/Aboriginal Education Program	Role of Student Advocacy & Student Rights/Responsibilities
29th	ACCESS Orientation	Plagiarism & Role of Student Advocacy & Student Rights/Responsibilities

Building Cabling Upgrades
To Be Done
Mar-04

These priorities are guidelines. Actual priorities may change depending on environmental issues, changes in research and instructional requirements and source of funding

	Health of the Building Network	Volume of backbone traffic	High bandwidth specialized needs	Readiness to upgrade	Teaching spaces	Computing Labs and Libraries	Size of Building (#people)	Presence of Research	Anticipated network growth	Score	Cabling Costs (estimated)	Network Electronics cost (estimated)	Total capital costs (estimated)	Maintenance (estimated)
Weights	9	9	8	8	7	7	3	7	6					
Robson	3	5	7	10	8	8	4	4	6	396	$147,493	$91,589	$239,082	$12,129
Isbister	7	2	5	5	9	5	8	9	8	394	$261,108	$164,770	$425,878	$18,574
Drake	3	10	1	5	10	8	8	6	5	387	$112,119	$112,264	$224,383	$13,887
Dentistry	1	6	10	4	7	7	5	7	6	373	$186,476	$98,481	$284,957	$12,715
Parker	9	1	10	1	8	3	7	9	5	369	$264,651	$119,156	$383,807	$14,473
Education	7	2	4	7	9	7	7	4	6	368	$246,006	$148,359	$394,365	$17,402
Plant science	9	8	10	1	2	1	3	9	4	358	$87,110	$24,288	$111,398	$1,758
Agriculture	2	2	5	10	7	7	7	7	5	354	$0	$159,533	$159,533	$20,244
Fitzgerald	7	6	7	5	7	6	2	2	4	348	$101,622	$24,288	$125,910	$1,758
Human ecology	5	3	2	10	8	5	3	5	7	345	$107,107	$30,195	$137,302	$2,344
Roblin	7	2	4	5	5	6	8	8	5	340	$399,482	$152,642	$552,124	$19,658
Entymology	9	2	6	5	5	1	6	7	7	338	$156,691	$30,195	$186,886	$2,344
Buller	8	1	6	1	8	3	6	8	8	336	$205,409	$84,697	$290,106	$11,543
Med Rehab	3	5	9	5	6	4	4	5	5	331	$70,512	$22,646	$93,158	$1,758
Ellis	9	6	5	1	5	3	6	6	5	329	$300,773	$98,481	$399,254	$12,715
Medical services	6	4	7	4	4	0	4	7	7	309	$97,765	$91,589	$189,354	$12,129
Dafoe	3	2	4	8	4	9	9	1	5	298	$357,573	$178,895	$536,468	$22,002
Tier	8	2	1	10	7	0	4	4	4	291	$127,261	$90,932	$218,193	$12,129
Fine arts annex	7	6	7	5	7	0	1	0	4	289	$2,795	$9,191	$11,986	$586
Taché - east	5	8	5	5	1	3	4	0	7	279	$78,587	$85,341	$163,928	$12,715
Basic science	8	4	9	1	1	0	4	7	3	274	$147,467	$77,805	$225,272	$10,957
Fletcher Argue	7	1	7	2	5	0	8	4	7	273	$374,368	$119,158	$493,526	$14,473
Botany green house	8	1	1	1	8	3	6	6	4	258	$630	$9,191	$9,821	$586
St Pauls	8	2	1	3	7	4	5	2	4	252	$259,861	$91,589	$351,450	$12,129
Music	7	1	5	1	6	4	2	1	6	239	$95,114	$24,288	$119,402	$1,758
Pharmacy	7	4	1	1	5	1	3	6	4	232	$138,190	$30,195	$168,385	$2,344
St Johns	7	2	1	1	7	5	4	2	4	231	$202,129	$84,697	$286,826	$11,543
Armes lecture building	1	1	1	10	10	0	3	0	7	227	$0	$15,097	$15,097	$1,172
Pathology	7	4	2	1	1	0	4	5	6	213	$140,342	$30,195	$170,537	$2,344
Chancellor's hall	8	1	1	10	0	0	1	0	4	196	$0	$9,191	$9,191	$586
Immunology	5	4	2	1	0	0	1	7	4	181	$62,784	$9,191	$71,975	$586
Plant science field stn	1	1	0	10	0	0	1	2	4	139	$13,515	$9,191	$22,706	$586
St Andrews	1	1	0	1	4	5	4	1	4	132	$185,059	$77,805	$262,864	$10,957
Alumni house	8	1	0	1	0	0	3	0	4	122	$54,662	$9,191	$63,853	$586
Dairy Science	1	1	0	1	1	2	1	2	4	88	$66,943	$15,097	$82,040	$1,172
High voltage lab	0	0	0	1	1	0	0	4	4	67	$50,516	$9,191	$59,707	$586
Taché - west	0	0	0	0	0	0	5	0	7	57	$261,895	$15,097	$276,992	$1,172
Pembina Hall	1	1	0	1	0	0	2	0	4	56	$66,077	$106,016	$172,093	$14,473
Ceramics	0	0	0	0	4	0	1	0	4	55	$44,087	$9,191	$53,278	$586
Visitor centre	1	1	0	1	0	0	1	0	4	53	$50,831	$9,191	$60,022	$586
St Johns residence	0	0	0	0	0	0	4	0	4	36	$156,271	$84,697	$240,968	$11,543
Animal Science resear	0	0	0	0	0	0	1	1	4	34	$45,924	$9,191	$55,115	$586
Taché Hall - centre	0	0	0	0	0	0	1	0	4	27	$1,837	$9,191	$11,028	$586
Music annex	0	0	0	0	0	0	0	0	4	24	$54,190	$9,191	$63,381	$586
											$5,635,737	$2,598,780	$8,234,517	$313,217

208 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Fax (204) 275-1160

UNIVERSITY OF MANITOBA | Office of the President

scans

14 April 2004

Ms Louise Gordon
Acting Executive Director
Council on Post-Secondary Education
410 - 330 Portage Avenue
Winnipeg, Manitoba R3C 0C4

Dear Ms Gordon,

Statement of Intent:
Master of Public Health Sciences

On behalf of The University of Manitoba, I am pleased to submit the attached Statement of Intent to establish a new Master of Public Health Sciences degree program, to be located within the Department of Community Health Sciences.

The purpose of this new applied masters program is to offer postgraduate training to residents, practicing clinicians, and employees of government and non-government community health agencies. More specifically, the objective is to provide students with a foundation in the fundamental sciences of community health and the opportunity to gain insight in the application of this knowledge through a combination of formal coursework and field placement. During the first five years following implementation of this program, enrolments would be limited to four per year.

As shown in the attached materials, there is significant unmet need for such specialists in Manitoba and throughout Canada. We are confident that this Master of Public Health Sciences will afford graduates the skills required to succeed in these specialized professional positions.

This new program can be offered with resources now available to the University, and accordingly no additional financial support is sought from COPSE.

.....2

My colleagues and I will be pleased to provide any other information that your Council may require during its consideration of this Statement of Intent.

Sincerely,

Richard A. Lobdell
Vice-Provost (Programs)

RAL/dg

Encl.

cc Emőke J. E. Szathmáry, President
Robert Kerr, Vice-President (Academic) and Provost
Tony Secco, Dean, Faculty of Graduate Studies
Brian Hennen, Dean, Faculty of Medicine
John O'Neil, Head, Community Health Sciences
Jeff Leclerc, Acting University Secretary

STATEMENT OF INTENT

Institution

❑	Brandon University	❑	Assiniboine Community College
X	University of Manitoba	❑	Keewatin Community College
❑	University of Winnipeg	❑	Red River Community College
❑	Collège Universitaire de Saint-Boniface		

Program Overview

●Program Name: Applied Masters Degree in Community Health Sciences

●Credential to be offered: Master of Public Health (MPH)

●Does the program require accreditation from a licensing group? ❑ YES X NO

●Length of the program: One Year

●Proposed program start date: 01 / 09 / 05
Day/Month/Year

●Which department(s) within the institution will have responsibility for the program?

The Department of Community Health Sciences

●As compared to other programs your institution will be proposing, the priority of this program is:

X High
❑ Medium
❑ Low

●Is this a new program? X YES ❑ NO

●Is this a revision of an existing program: ❑ YES X NO

●Will the program be available to part-time students? X YES ❑ NO

●Will this program have a cooperative education component? ❑ YES X NO

●Will the program contain an option to assess the prior learning of students, to grant credit for the skills/knowledge already present? ❑ YES X NO

Equivalent graduate level courses completed at another university may be considered by the Program Director and the Faculty of Graduate Studies for possible exemptions from the required courses.

●Will there be distance delivery options? X YES ❑ NO

One elective course (93.757: Managing Health Systems) is offered through distance delivery, and videoconferencing is available for attendance at some sessions of the core courses (93:751: Current Topics in Community Health). Most of the program, however, will be delivered on-site at the Bannatyne Campus.

●Will this program be delivered jointly with another institution? ☐ YES X NO
If YES, name the institution

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●Are similar programs offered in Manitoba or other jurisdictions? ☐ YES X NO
If YES, indicate why this program is needed (e.g., area of specialization)

●What articulation, block transfer or credit transfer arrangements will you be looking at developing for this program?

There is no intention of developing credit transfer arrangements with other institutions or programs for the Applied Masters in Community Health Sciences program.

Specific Program Information

1. Program Description

●Describe the program and its objectives:

The University of Manitoba is the only Canadian university with a Department of Community Health Sciences, or equivalent, that does not currently offer a non-thesis-based Masters degree for individuals whose career direction is primarily in the area of community health practice. Our existing thesis-based MSc and PhD graduate degrees are designed to train graduates for future roles in research and academia. Residents, practicing clinicians, and employees of both governmental and non-governmental community health agencies have expressed interest in an applied Masters degree. Hence, we are proposing a new Master of Public Health (MPH) degree program.

Specifically, the objective of the new program is to provide students with a foundation in the fundamental sciences of community health and the opportunity to gain insight in the application of this specialized knowledge, through a combination of coursework and a field placement.

●Provide an overview of the content to be taught in this program:

There are two major components to the proposed program, coursework and field placement:

Coursework: Core (required) courses will include: Epidemiology, Biostatistics, Research Methods, and Current Topics in Community Health. Elective courses may include any of the current course offerings in the Department. *Examples*: Health Policy and Planning, Health Administration, Prevention and Health, Economic Evaluation of Health Care, and Epidemiology of Chronic Diseases.

Field Placement: Site and content of field placement with a Preceptor in an approved health agency will be determined by the Program Committee. The field placement will be designed to fit with the career goals and objectives of the student, and will be determined in consultation with the student prior to commencement of the program. The three month field placement will occur after completion of coursework, and is intended to provide the student with an opportunity to integrate and apply knowledge and skills acquired during coursework. A mid-term review and final written evaluation of the student's field placement performance will be conducted by the Preceptor and Faculty Advisor. The student will prepare a final written report and an oral presentation on the field placement.

There will be a final comprehensive oral examination consisting of a series of questions regarding the integration and application of theory and skills of community health sciences.

2. Enrollment

●What is the program's initial projected enrollment?

The initial projected enrollment is 4 students per year, based on re-distribution of students from the existing thesis-based M.Sc. program.

●What is the projected enrollment for the 2nd and 3rd years?

The enrollment will be capped at 4 students per year during the first 5 years of the program, to ensure that total Graduate Student enrollment in the Department does not exceed current levels during this period.

●Describe the expected student profile?

We expect our students to be individuals coming with an interest in the application of community, public and population health principles, in contrast to students applying to our Master of Science degree program, who are primarily interested in research. The profile of potential students will include:

- Physician specialists-in-training (e.g. Community Medicine Residents)
- Other health professionals (e.g. practicing physicians and nurses)
- Existing health administrators and managers (e.g. employees of Regional Health Authorities)
- Recent graduates of undergraduate programs in allied fields, e.g. statistics, microbiology

3. Labour Market Information

●What labour market need is the program expected to meet?

There is an unmet demand in the rapidly changing health care environment in Manitoba for professionals with Masters-level training and relevant practical experience in applied community health sciences. Recent major emerging public health issues in Canada, such as the SARS outbreak, West Nile Virus, and the threat of bio-terrorism, have generated national recommendations for increased training and capacity in applied community health, and the demand for such training is likely only to increase further.

●Are there currently jobs in Manitoba in this field? X YES ☐ NO
If yes, where (geographic location and industry)?

University of Manitoba MPH graduates would be well-suited to take on leadership, administrative and consultant roles with agencies including Manitoba Health, Regional Health Authorities (both Winnipeg and rural/northern), Health Canada and non-governmental community health agencies.

●What is the future job forecast for individuals with this education/training/credential?

Emerging public health issues and decisions by Health Canada have led to the creation of new jobs in Manitoba for individuals with appropriate training. Examples include:

- New positions for individuals with Masters-level training were posted by Manitoba Health to respond to West Nile Virus
- The location of the new Health Canada microbiology laboratory in Winnipeg has created a demand for appropriately-trained individuals.
- Recent announcements regarding a National Public Health Agency, components of which may be located in Winnipeg, indicate that future job prospects in this area will escalate.

●How does this program fit with Manitoba's stated economic, social and other priorities?

The program would be a very timely contributor to Manitoba's recently-stated health and economic development priorities.

●What agencies, groups, institutions will be consulted regarding development of the program?

We have had ongoing input into the development of the program from representatives of Manitoba Health, Winnipeg Regional Health Authority, and one rural regional health authority, in addition to consultation with the Faculties of Medicine and Graduate Studies of the University of Manitoba.

● Is there any other information relevant to this program?

We feel that the proposed MPH program represents an opportunity for Manitoba to proactively respond to current and anticipated increasing need for well-trained public health professionals. This can be accomplished with minimal demand on existing resources.

4. Financial Information

The new program will be cost/revenue neutral. It is based on the existing Graduate Studies administrative infrastructure and course offerings of the Department of Community Health Sciences. No new academic or support staff will be required to administer the new program. In the first year of the program, student enrollment will consist of re-distribution of a small number of students from the existing M.Sc. program. Subsequently, we anticipate intake of a maximum of 4 new MPH students per year, who would previously have entered the M.Sc. program.

●Projected Program Costs:	Salary
	Operating
	Capital
	Total cost
●Projected Program Revenue:	Tuition
	Other_
	Total revenue

Submitted by:

Dr. Anthony Secco, Dean, Faculty of Graduate Studies

Anthony Secco

Signature

Date: March 25, 2004

March 17, 2004

Annual Report of the Senate Committee on Academic Computing

Preamble

1. The terms of reference for the Senate Committee on Academic Computing are found in Section 8.9 of the *Senate Handbook* (revised 2000).

2. The Committee is charged with providing advice and recommendations to Senate on:
   a) the University's general policies relating to the development and use of computing and networking in instruction and research;
   b) prioritizing support for the development and delivery of computing and network services; and
   c) computer services policies and their effect on faculty and students.

Observations

1. Members of the Committee for 2003-2004 were: Dr. D. Jayas (Associate Vice-President Research), Mr. G. Miller (Executive Director of Information Services & Technology), Ms. C. Presser (Director of Libraries Administration), Dean D. Witty (Architecture), Dean D. Collins (Pharmacy), Professor M. Doob (Science), Professor B. Luterbach Professor M. Matthews (School of Music), Professor D. Thomson (Engineering) Professor M. Brabston (Management), Professor E. Scott (Dentistry), Mr. P. Tittenberger (University Teaching Services), Mr. K. Adane (Student), Ms. G. Thompson (Student), Mr. G. Stewart (Student), Mr. M. Puri (Student) and Dr. R. Lobdell as Chair.

2. The Committee was involved in commenting on Policy 238 "Use of Computer Facilities".

3. The Committee was also involved in commenting on IST's "Building Cabling Priorities" and "Classroom Upgrading Criteria".

Respectfully submitted,

Dr. R. Lobdell, Chair
Senate Committee on Academic Computing.

/lrjl

March 11, 2004

ANNUAL REPORT OF THE SENATE COMMITTEE ON ACADEMIC DRESS 2003-2004

Preamble

The Terms of Reference for the Senate Committee on Academic Dress are found in Section 8.10 of the *Senate Handbook*.

Observations

1. The Senate Committee on Academic Dress met once on December 1, 2003, during the reporting term.

2. Members of the Senate Committee on Academic Dress for the 2003-2004 reporting term were: Prof. D. Amundson, Chair (to July 1, 2003), Dr. C. Rabinovitch, Chair (from July 1, 2003), Prof. L. Chalmers, Mr. N. Marnoch, Prof. L. Horne, Ms. T. Desrochers, Mr. M. Banman.

3. The Committee recommended four hood colours for four new degrees. The following hood colours were approved by Senate:

    a) Bachelor of Environmental Science
    b) Bachelor of Environmental Studies
    c) Bachelor of Arts in Geography
    d) Bachelor of Science in Geological Sciences

Respectfully submitted,

Dr. C. Rabinovitch, Chair
Senate Committee on Academic Dress

/lrjl

March 15, 2004

Annual Report of the Senate Committee on Academic Review

Preamble

The Terms of Reference for the Senate Committee on Academic Review were not revised in the 2003-2004 year; the terms of reference are found in Section 8.13 of the online *Senate Handbook.*

Observations

1. The membership of the Committee for 2003-2004 included: Dr. R. Lobdell, (Vice-Provost Programs), Dr. R. Kerr, (Vice-President Academic and Provost), Dr. A. Secco (Dean, Faculty of Graduate Studies), Dr. J. de Vries, (Dean, Faculty of Dentistry), Dr. D. Witty, (Dean, Faculty of Architecture), Mr. Kunaal Jindal, (student member of Senate), Ms. O. Famuyide (student member of Senate), Prof. J. Van Rees, (Science), Prof. B. Dronzek (Agricultural and Food Sciences).

2. The Committee met once during the reporting period and reviewed a draft policy which would govern academic program reviews. Procedural documents for Graduate and Undergraduate Program Reviews are currently being developed.

Respectfully submitted,

Richard Lobdell, Chair
Senate Committee on Academic Review

/jml

ANNUAL REPORT OF THE SENATE COMMITTEE ON ADMISSIONS (SCADM) FOR THE YEAR FROM MAY 1, 2003 TO APRIL 30, 2004

The terms of reference for the Senate Committee on Admissions are found on pages 10.5, 10.6, and 10.7 of the Senate Handbook (1990).

Subsequent to the 2003 Annual Report the committee met on September 23, 2003, November 13, 2003, and March 8, 2004. The following matters were addressed by the Committee:

1. Continuing Education Division — SCADM reviewed the entrance requirements for the General Studies program and recommended an amendment such that any student admitted directly from high school must meet the minimum entrance requirements established for admission to University 1. Approved by SCADM, September 23, 2003. Approved by Senate November 5, 2003.

2. Faculty of Social Work — SCADM reviewed a proposal of the Faculty of Social Work to amend the entrance requirements for its Fort Garry campus program to allow any unused educational equity priority spaces to be distributed by lottery among the remaining such groups. Approved by the Senate Committee on Admissions, September 23, 2003. Approved by Senate November 5, 2003.

3. Faculty of Education — SCADM reviewed a proposal of the Faculty of Education to amend the admission requirements by adding Native Studies as a teachable major or minor in the Bachelor of Education program. Approved by the Senate Committee on Admissions, September 23, 2003. Approved by Senate November 5, 2003.

4. Faculty of Education — SCADM reviewed a proposal of the Faculty of Education to set its advanced standing policy for its Bachelor of Education program, such that students will not receive advanced standing for any Education course which is more than six years old at the point of admission. Approved by the Senate Committee on Admissions, September 23, 2003. Approved by Senate November 5, 2003.

5. Faculty of Nursing — SCADM reviewed a proposal to require all applicants to the Bachelor of Nursing program to declare whether or not they have an adult criminal record or are listed in the Child Abuse Registry and to submit, prior to registration in courses, an Official Adult Criminal Record Statement and Child Abuse Registry check. Approved by the Senate Committee on Admissions, November 13, 2003. Approved by Senate December 3, 2003.

6. Transfer Credit Policy — SCADM reviewed a proposal from its Ad-Hoc Sub-Committee on Transfer Credit to simply the general policy on transfer credit for applicants who have completed courses at a community, technical, Bible or other accredited college. Approved by the Senate Committee on Admissions, November 13, 2003. Approved by Senate January 7, 2004.

7. School of Dental Hygiene — SCADM reviewed a proposal from Dental Hygiene to give priority to applicants from Manitoba in the Special Consideration Category and on the alternate list and to eliminate interviews in the Regular Applicant Category. Approved by the Senate Committee on Admissions, November 13, 2003. Approved by Senate January 7, 2004.

8. Faculty of Pharmacy — SCADM reviewed a proposal from Pharmacy that would add Canadian aboriginals who meet the residence requirements of the Faculty to those eligible for consideration in the Special Consideration Category and increase from two to five the maximum

number of applicants admitted in this category. Approved by the Senate Committee on Admissions, November 13, 2003. Approved by Senate January 7, 2004.

9. School of Medical Rehabilitation (Department of Respiratory Therapy) — SCADM reviewed a proposal to add a second category of applicants (in case all available seats are not filled with applicants meeting the Category One requirements) and to set a minimum interview score of 65 percent for all applicants. Approved by the Senate Committee on Admissions, March 8, 2004. Approved by Senate April 7, 2004.

Respectfully submitted,
Dr. Robert Kerr, Chair,
Senate Committee on Admissions

2004.04.01

SENATE COMMITTEE ON ADMISSIONS (SCADM)
COMMITTEE LISTING
FOR THE YEAR FROM MAY 1, 2003 TO APRIL 30, 2004

Dr. Robert Kerr	Chair
Dr. David Morphy	Vice-Chair
Mr. Peter Dueck	Enrolment Services, Director
Mr. Erik Fraser	Faculty of Law Student Representative
Ms. Sandra Gessler	Faculty of Nursing
Dr. Dennis Hrycaiko	Faculty of Physical Education
Ms. Rochelle Jaramilla	Faculty of Management Student Representative
Dr. Charles Mossman	Faculty of Management
Dr. Tom Nesmith	Faculty of Arts
Dr. John Perry	Faculty of Dentistry
Ms. Laura Porcelli	Faculty of Law Student Representative
Dr. Gordon Robinson	Faculty of Science
Dr. Ahmed Shalaby	Faculty of Engineering
Dr. George Tabisz	Faculty of Science
Dr. Lori Wallace	Distance Education
Dr. John Whiteley	Faculty of Arts
Dr. John Wiens	Faculty of Education
Ms. Jane Lastra	Enrolment Services, Recording Secretary

Annual Report of the Senate Committee on Admission Appeals March 23,2004

Preamble

1. The terms of reference for the Senate Committee on Admission Appeals are found in Section 8.15 of the *Senate Handbook*.

2. The Committee is charged to hear and determine appeals from:
   a) decisions of faculty and school Selection Committees;
   b) administrative decisions affecting the admission process;
   c) decisions related to the transfer of credit policy of the faculty/school; and
   d) the possible granting of advance standing;

3. The Committee is to report to Senate on the determination of all appeals submitted to it; and recommend on any changes in admission policies and procedures which should be considered as a result of the appeal.

Observations

1. Members of the Committee for 2002-2003 were Dr. A. Gerhard (Science), Dr. J. Dean (Arts), Dr. M. Abrahams (Science), Dr. N. Fetterman (Human Ecology), Professor R. Burleson (Music), Professor. A. Sloane-Seale (Continuing Education), Professor D. Bracken (Social Work), Dr. R. W. Menzies (Engineering), Dr. D. Jenkinson (Education), Mr. M. Story (Student - Law), Mr. D. Rempel (Student - Law) and Professor P. Osborne as Chair.

2. Sections 10.3.1 of the *Handbook* outlines the requirement that all Standing Committees of the Senate prepare an annual report to represented normally at the May meeting of Senate. The Senate Committee on Admission Appeals is one which reports to Senate on an ongoing basis as appeals are heard. These reports, which are contained in the Senate minutes are summarized below:

During the period from April 1, 2003 to March 31, 2004 the Committee received 5 appeals 4 being heard during this time period.

FACULTY	DECISION
Management	denied
Management	denied
Medicine	denied
Pharmacy	denied

Respectfully submitted,

Professor P. Osborne
Chair of the Senate Committee on Admission Appeals

April 2, 2004

ANNUAL REPORT OF THE SENATE COMMITTEE ON ANIMAL CARE
for the period March 2003 to March 2004

The Senate Committee on Animal Care (SCAC) consists of:

Digvir Jayas, Associate Vice-President (Research) and Chair
Ed Kroeger (for B. Hennen), Faculty of Medicine
Geoff Eales (for J. Jamieson), Faculty of Science
Roger Wilson (for R. O'Kell), Faculty of Arts
Harold Bjarnason, Faculty of Agricultural and Food Sciences
Don Smyth, (for T. Secco), Faculty of Graduate Studies
Elliot Scott, Faculty of Dentistry
Jim House, Department of Animal Science
Carla Taylor, Department of Human Nutritional Sciences
Ann Charter, Faculty of Social Work (on leave)
Susan Shefchyk, Department of Physiology
Lloyd Campbell, Department of Animal Science
Richard Hodges, Clinical Veterinarian
Nora Lewis, Acting University Veterinarian
Randy Aitken, St. Boniface General Hospital Research Centre
Sandeep Chandana, Graduate Student Representative
Robert Borgersen, Undergraduate Student Representative
Brent Thomas, Community Representative

During the 2003-04 year, the SCAC has:

1. Conducted the spring meeting of the committee on March 25th, 2003. This meeting focussed on the receipt and review of reports on the activities of the PMRCs (Fort Garry and Bannatyne Campus), the Education Sub-Committee (ESC), the Infrastructure Planning Committee (IPC), and the activities of the Local Animal Users Committees (LAUCs). The SCAC accepted the recommendations presented for new and renewed committee membership. Other business included:

   i informing the SCAC of the external review of the university's animal care program which was conducted on February 18-20th 2003. This review was done at the request of the Vice-President (Research) following the resignation of the University Veterinarian. The external reviewers were asked to consider the U of M structure as it relates to a) administrative relationships (both internal and external)/organization; and b) evaluation of possible consolidation (administration/animal care personnel) of animal care services (Fort Garry campus) and provision of services at the various units at the Bannatyne campus.

   ii informing the SCAC that a Memorandum of Understanding (MOU) between the institutions and the three federal granting agencies as it relates to the ethical review of research involving animals is now in place. The MOU contains a schedule specific to research involving animals, which outlines policy and legislation, the responsibilities of the institutions and the agencies, and resolution of issues of non-compliance.

   iii informing the SCAC that the Animal Alliance of Canada questioned the university's contract with the City of Winnipeg Pound, advising that because the university has a contract with the pound to obtain dogs for use in acute studies, the pound is not doing all it should to reunite

dogs with owners. Due to public pressure, the city cancelled their pound dog agreement with the university. Alternative dog sources are being pursued.

2. Conducted an emergency meeting on Friday, September 5th, 2003 to review allegations by the Animal Alliance of Canada and Environment Voters to the City of Winnipeg and Dr. Emőke J.E. Szathmáry, regarding the University of Manitoba's alleged non-compliance with the 1993 city contract for the sale of lost pet dogs from the city shelter to the university for use in research. The SCAC reviewed a draft response prepared by Dr. Digvir Jayas for consideration by Senate Executive. The SCAC suggested some minor revisions. D. Jayas advised that these revisions would be incorporated and forwarded a revised letter to Dr. Szathmáry for her consideration.

3. Conducted the fall meeting of the committee on January 6th, 2004. Verbal reports from the Chairs of the PMRCs, the ESC and the IPC were heard. Written facilities inspection reports and the co-ordinating responses from the animals holding facilities were reviewed and accepted. Other business included:

   i informing the SCAC that the memo which was reviewed by this committee at the September 5th, 2003 meeting regarding the Allegations made by Animal Alliance of Canada and Environment Voters was forwarded to the Senate Executive (SEC). The SEC struck a small independent committee to look at this issue in more detail. The SEC then reported to Senate that the university had not violated any of the policies related to animal care and use. The SEC recommended that Senate approve the report and that Dr. Szathmáry reply to AAC on the basis of the report. The SEC did recommend that "the SCAC review current policies and procedures regarding the use of animals for research and teaching, with particular emphasis on ensuring that our policy 1404 maintains consistency with CCAC guidelines, as these are continuously being revised." D. Jayas advised that this is done on a continuous basis.

   ii informing the SCAC that one of the recommendations contained in the external review included the need for additional veterinary staff. D. Jayas reported that in light of these findings, a clinical veterinarian and two animal health technician practitioners were hired. D. Jayas advised that a university veterinarian will also be hired in the near future.

4. The spring 2004 meeting of the SCAC will be held on April 6, 2004. The meeting will focus on the receipt and review of reports on the activities of the PMRCs (Fort Garry and Bannatyne Campus), the ESC, the IPC, and the activities of the Local Animal Users Committees (LAUCs). The SCAC will also review the recommendations presented for new and renewed PMRC membership.

Respectfully submitted,

Dr. Digvir S. Jayas, Associate Vice-President (Research)
and Chair, Senate Committee on Animal Care

Annual Report of the Senate Committee on Appeals March 23, 2004

Preamble

1. The terms of reference for the Senate Committee on Appeals are found on page 10.16 of the *Senate Handbook* (Rev. 1992).

2. The Committee is charged to hear and determine appeals from:
   a) decisions made by academic administrators involving Senate regulations in which faculty or school councils have no jurisdiction; and
   b) appeals against decisions taken by Awards Selection Committees of faculties and schools.
3. The Committee is to report to Senate on the determination of all appeals submitted to it; and advise the Executive Committee of any Senate regulations affecting students which appear to be creating particular difficulties.

Observations

1. Members of the Committee for 2003-2004 were, Dean. D. Hrycaiko (Physical Education and Recreation Studies), Dean. J. deVries (Dnetistry), Dean. J. Weins (Education), Professor. B. Stimpson (Engineering), Professor A. Young (Arts), Professor C. Mossman (Management), Professor J. Page (Science), Professor M. Tobin (Counselling Services), Professor W. Watson, Professor P. Patterson, Dean L. Rivard, (St. Boniface College), Mr. S. Kemp (Student), Mr. L. Alghoul (Student), Mr. A. Mohamed (Student), Mr. P. Olownia (Student), Mr. J. Ahorro (Student), Mr. S. Bajaj (Student), Mr. R. Lafond (Student) and Dr. J. Hoskins as Chair.

2. Sections 10.3.1 of the *Handbook* outlines the requirement that all standing committees of Senate prepare an annual report to be represented normally at the May meeting of Senate. The Senate Committee on Appeals is one which reports to Senate on an ongoing basis as appeals are heard. These reports, which are contained in the Senate minutes are summarized below:

During the period from April 1, 2003 to March 31, 2004 the Committee received 12 appeals with 6 being heard during this time period.

FACULTY	DECISION
Arts	granted
Law	denied
Law	withdrawn
Medicine	denied
Nursing	granted
Nursing	granted

Respectfully submitted,

Dr. J.A. Hoskins, Chair
Senate Committee on Appeals

March 15, 2004

Annual Report of the Senate Committee on Approved Teaching Centres

Preamble

The Terms of Reference for the Senate Committee on Approved Teaching Centres (SCATC) are found on pages 10.10 and 10.11 of the *Senate Handbook*.

Observations

1. The current Approved Teaching Centres are:

   Prairie Theatre Exchange
   William and Catherine Booth College

2. In 2003-2004 the SCATC conducted its regular spring business of reviewing cross-registered courses to be offered by the Approved Teaching Centres, together with the proposed instructors, and recommending the same to Senate at its June meeting.

Respectfully submitted,

Senate Committee on Approved Teaching Centres

/jml

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Financial Aid & Awards
422 University Centre
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474-9531
Fax (204) 474-7554
awards@umanitoba.ca

April 12, 2004

ANNUAL REPORT OF THE SENATE COMMITTEE ON AWARDS

1. The Committee met nine times between May 1, 2003 and April 30, 2004 (in the same time period last year, we met nine times).

2. The terms of reference for the Senate Committee on Awards are found in the Senate Handbook on pages 10.10-10.11.

3. The Committee members are:

   Professor R. Baydack, Faculty of Environment (Chair of the Committee)
   Professor B. Dronzek, Faculty of Agricultural and Food Sciences
   Professor D. Punter, Faculty of Science
   Dean A. Secco, Faculty of Graduate Studies (or his designate)
   Professor B. Ferguson, Faculty of Arts
   Professor W. Diehl-Jones, Faculty of Nursing
   Professor A. Louka, Faculty of Dentistry
   T. Mariash, Student, I.H. Asper School of Business
   L. Benningen, Student, Faculty of Architecture
   Mr. P. Dueck, Director, Enrolment Services
   Ms. C. Richardson, Awards Selection Coordinator, Enrolment Services
   Ms. D. Kaspersion, Awards Establishment Coordinator, Enrolment Services / Private Funding (Secretary of the Committee)

OBSERVATIONS

1. The Senate Committee on Awards (SCOA) terms of reference include the following responsibility:

   "On behalf of Senate, to approve and inform Senate of all new offers and amended offers of awards that meet the published guidelines presented to Senate on November 3, 1999, and as thereafter amended by Senate. Where, in the opinion of the Committee, acceptance is recommended for new offers and amended offers which do not meet the published guidelines or which otherwise appear to be discriminatory under Policy No. 419, such offers shall be submitted to Senate for approval." (Senate, April 5, 2000)

2. The Committee reported to Senate on the following:

(a) the approval of 73 new awards (compared to 92 new awards last year);
(b) the approval of amendments to 90 existing awards (compared to 68 amendments to existing awards last year);
(c) the withdrawal of 11 awards previously approved by Senate (compared to 7 withdrawals last year).

3. There were six requests (compared to one last year) for exemptions to the University policy on Non-Acceptance of Discriminatory Bursaries and Scholarships. The Committee continues to monitor requests for special consideration of acceptance of awards in this category.

Respectfully submitted,

Diana Kasparson (for)

R. Baydack, Chair
Senate Committee on Awards

March 15, 2004

Annual Report of the Senate Committee on the *Calendar*

Preamble

1. The terms of reference for the Senate Committee on the *Calendar* are found in Section 8.20 of the *Senate Handbook* (revised 2000).

2. The Committee is charged with preparing the University Calendars and providing advice on matters referred to it concerning the University Calendars.

Observations

1. Members of the Committee for 2003-2004 were: Professor P. Hultin (Science), Ms. J. Horner (Libraries), Ms L. Hamilton (*Calendar* editor), Ms. E. Prosser (student), Mr. N. Marnoch (Director of Student Records), Dean A. Secco (Graduate Studies), and Mr. J. Leclerc (Acting University Secretary) as the Chair.

2. The Committee met on two occasions during the reporting period, on October 24, 2003 and on February 4, 2004.

3. At its meeting on October 24, 2003, the Committee observed the following:

   - the *Calendar* budget is still under-funded;
   - students continue to heavily use the web *Calendar* and web registration; and
   - the future of the mass distribution of the paper *Calendar* also needs to be re-evaluated.

   The Committee was also informed of Student Records plan to greatly reduce the size of the registration guide, as most students are using web registration.

4. At its meeting on February 4, 2004, the Committee conducted a review of the events and dates that are included in the Academic Schedule and provided direction to the *Calendar* Editor. This matter was referred to the Committee by the Senate Executive Committee in December of 2003.

5. The Committee also received an update on *Calendar* production efforts including:
   - due to the increasing use of the web for registration, and in an effort to save money, fewer copies of the *Calendar* are being printed in 2004;
   - it is not yet possible to eliminate the paper version of the *Calendar*, as it is used by advisors and faculty in meetings.
   - a much smaller registration guide is being produced in 2004, as the timetable included in the current version of the registration guide is out of date as soon as it is printed and is not a very functional document. The *Calendar* Editor noted that any student who claimed not to have access to the web would be provided with a hard copy of the timetable.

Respectfully submitted,

Mr. Jeff M. Leclerc, Chair
Senate Committee on the *Calendar*

April 9, 2003

Annual Report of the Senate Committee on Curriculum and Course Changes

Preamble

The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are found in Section 8.21 of the *Senate Handbook* (revised 2000). SCCCC is "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".

Observations

1. Members of the Committee for 2003-2004 were: Professor G. Robinson (Science), Professor U. Rempel (Music), Professor H. Davidson (Continuing Education), Professor J. Cooper (Medical Rehabilitation), Professor D. Stewart (Arts), Professor J. Bond (Human Ecology), Dr. R. Lobdell (Vice-Provost (Programs)), Ms. J. Horner (Libraries), Mr. K. Yost (student), Ms. L. Benningen (student), Ms. E. Prosser (student) and Professor B. Dronzek (Agricultural and Food Sciences) as Chair.

2. During the reporting period the Committee reported to Senate on:

May 14, 2003	-	course changes from departments totaling less than nine credit hours in Architecture, Dental Hygiene, Education, Engineering, Human Ecology, Law, Management, Music, Physical Education and Recreation Studies and Science.
November 5, 2003	-	change in designation - Post-Baccalaureate Diploma in Education.
	-	re-numbering of courses in Medical Rehabilitation.
August 14, 2003	-	program proposal for an International Dentists Degree Program
December 4, 2003	-	course changes from departments totaling less than nine credit hours in Agricultural and Food Sciences, Architecture, Art, Arts, Education, Engineering, Human Ecology, Law, Management, Medicine, Music, Pharmacy, Physical Education and Recreation Studies, Science and University 1.
	–	course changes from departments totaling more than nine credit hours in Arts, Education and Engineering
	–	proposal for a Bachelor of Allied Health Science (Radiation Therapy).
	–	proposal for a Post-Baccalaureate Diploma in Performance.
January 7, 2004	-	program proposal for a Bachelor of Allied Health Science (Medical Laboratory Science)
	-	program proposal for a Bachelor of Allied Health Science

(Medical Imaging)

February 4, 2004 - change in the name of the Faculty of Human Ecology Program.

March 3, 2004 - course changes totaling less than nine credit hours from the Faculty of Environment.

Supporting documentation for these reports is available for inspection in the Office of the University Secretary (312 Administration Building) upon request.

Respectfully submitted,

Dean B. L. Dronzek, Chair
Senate Committee on Curriculum and Course Changes

/jml

ANNUAL REPORT OF THE SENATE COMMITTEE ON THE ETHICS OF RESEARCH INVOLVING HUMAN SUBJECTS (SCERIHS)
for the period May 2003 to April 2004

The **Senate Committee on the Ethics of Research Involving Human Subjects** (SCERIHS) consists of:

Peter Cattini, Associate Vice-President (Research), (*ex-officio*), Chair
Michael Thomas, Faculty of Arts
Denny Smith, Faculty of Dentistry
John McCoshen, Faculty of Medicine
Brian Rice, Continuing Education
Len Spearman, Faculty of Social Work
Sandra Ingram, Faculty of Engineering
Irma McKay, Health Sciences Centre
John Irvine, Faculty of Law
Scott McCulloch (undergraduate student)
Adam Allentuck (graduate student)

and, **Research Ethics Boards (REBs) Chairs** (*ex-officio*), appointed by SCERIHS:

Nick Anthonisen (Faculty of Medicine), Chair of **Biomedical Research Ethics Board (BREB)**
Ken Brown (Faculty of Medicine), Chair of **Health Research Ethics Board (HREB)**
Stan Straw (Faculty of Education),Chair of **Education/Nursing Research Ethics Board (ENREB)**
Karen Duncan(Faculty of Arts), Chair of **Joint-Faculty Research Ethics Board (JFREB)**
Jacquie Vorauer (Faculty of Arts), Chair of **Psychology/Sociology Research Ethics Board (PSREB)**

1. The EPIC sub-committee (Ethics Policy Implementation Committee) met five times between April 1, 2003 and March 31, 2004. The sub-committee consists of the five REB chairs and is chaired by Dr. Peter Cattini (the EPIC committee was previously chaired by Dr. Karen Grant, Ethics Policy Coordinator, until December 2003). EPIC has developed an assessment checklist to assist both researchers and reviewers in the protocol submission process. This checklist has been posted on the Human Ethics website. Members of EPIC continue to investigate ways to provide educational opportunities for both reviewers and researchers alike, in an effort to improve the protocol submission and review process. The EPIC sub-committee met in response to issues as they occurred, and was available as a resource for the many questions that arose during the year.

2. One instance of non-compliance with Policy #1406 (The Ethics of Research Involving Human Subjects) occurred during the 2003 - 2004 year. It was satisfactorily resolved at the appropriate Dean level.

3. The REBs meet and review protocols on a monthly basis. The Bannatyne Campus REBs reviewed 407 protocols between January 1 and December 31, 2003. The Fort Garry Campus REBs reviewed 392 protocols between January 1 and December 31, 2003.

Respectfully submitted,

Dr. Peter Cattini, Associate Vice-President (Research)
and Chair, Senate Committee on the Ethics of Research Involving Human Subjects

March 29, 2004

Annual Report of the Senate Committee on Honorary Degrees

Preamble

The terms of reference for the Senate Committee on Honorary Degrees are found in Section 8.25 of the *Senate Handbook* (revised 2000).

Observations

1. The membership of the Committee for 2003-2004 included: Dr. E. J. E. Szathmáry (President), Mr. S. Alwis (President of UMSU), Dr. N. Pizzi (President of Alumni Association), Prof. J. Stapleton (St. Paul's College), Professor J. E. Cooper (Medicine), Dean J. Gray (Management), Dean R. O'Kell (Arts), Mr. E. B. Pollard (community representative) and Dr. W. Norrie (Chancellor) as Chair.

2. The Committee on Honorary Degrees reports to Senate as required in closed session on candidates for honorary degrees, special convocations, and the naming of buildings, parts of buildings, roadways and special units.

3. During the period April 1, 2003 to March 31, 2004, the Committee reported to Senate on three occasions: April 2, 2003, May 14, 2003, and December 3, 2003. Details of these reports are available in the Office of the University Secretary (312 Administration Building) upon request by eligible members of Senate.

Respectfully submitted,

Dr. W. Norrie, Chair
Senate Committee on Honorary Degrees

Terms of Reference: *Senate Handbook* (revised 2000), Section 8.25.

/cpk

March 10, 2004

Annual Report of the Senate Committee on Instruction and Evaluation

Preamble:

The terms of reference for the Senate Committee on Instruction and Evaluation (SCIE) are found in Section 8.26 of the *Senate Handbook* (revised 2000).

Observations:

1. Members of the Committee for 2003-2004 were: Dr. Susan Arntfield, Dr. George Baldwin, Dr. Cheryl Kristjanson, Mr. Jason Dueck, Mr. Eric Fraser, Ms. Erin Prosser, Ms. A. Lenoski, Dr. Cheryl Kristjanson, Dr. John Long, Dean Anne Percival, Dr. John Rempel, and Dr. Loretta Secco. *Ex-officio* resource members of the Committee were: Dr. Lynn Taylor (until December 31, 2003), Mr. Sherman Greenberg, Dr. Lynn Smith, Dr. Tony Secco and Mr Shawn Alwis. Professor Karen Ogden was chair until June 30, 2003, and Dr. Karen Grant was chair beginning July 1, 2003.

2. The Committee met on one occasion during the reporting period, November 4, 2003.

3. At its meeting on November 4, 2003, the Committee
   a. reviewed an interim report on the work of the sub-committee investigating the use of software to detect plagiarism; a final report is pending;
   b. recommended changes to the voluntary withdrawal and limited access policy, and the scholastic progress requirements applicable to students in the Faculty of Nursing;
   c. made recommendations on the appeal deadlines for final grades in regular session and summer session in light of Senate approved releasing of grades on the web; and
   d. established an *ad hoc* WebCT Advisory Group to report to the Committee from time to time on matters related to instruction and evaluation for courses delivered through WebCT.

Respectfully submitted,

Dr. Karen R. Grant, Chair
Senate Committee on Instruction and Evaluation

April 15, 2004

Annual Report of the Senate Committee on the Libraries

Preamble

The Terms of Reference of this Committee enable it to make broad assessments of the status of the libraries, their fiscal support, and their effect on faculty and students (see *Senate Handbook* Section 8.29).

Observations

1. Since its last annual report the Committee met on February 19, 2004 at which time it received a report from the Director of Libraries and received updates on the Acquisitions Budget, the Review of Graduate Programs Collection Assessments, Indirect Costs of Research funding and the Libraries, and a Technology update.

2. The Committee expressed its pleasure with the efforts being undertaken by the Libraries to enhance user services and further integrate the use of technology in Library services.

Respectfully submitted,

Dr. Robert Kerr, Chair
Senate Committee on the Libraries

jml

UNIVERSITY OF MANITOBA | Faculty of Medicine

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DATE: March 3, 2004.

TO: Jeff M. Leclerc, Acting University Secretary

FROM: Dr. Judy E. Anderson, Chair, Senate Committee on Medical Qualifications

SUBJECT: Annual Report to Senate

Dear Mr. Leclerc:

The Senate Committee on Medical Qualifications met once in the academic year 2003-2004, on September 5, 2003.

The qualifications of 3 individuals were considered for possible recommendation for licensure under Section 64 of the Medical Act of the Province of Manitoba. To date, two of the individuals were recommended for licensure, as since brought to Senate Executive (September 17, 2003) and Senate (October 1, 2003).

Current membership of the committee is as follows.

Dr. S. Barakat
Dr. G. Bristow
Dr. A. Chochinov
Dr. B. Kirk
Dr. K. Grant
Dr. W. Pope
Dr. J. Anderson (Chair)

The committee anticipates meeting once or twice in the upcoming year.

Sincerely

Dr. Judy E. Anderson, Ph.D.,
Associate Dean (Academic).

April 15, 2004

Annual Report of the Senate Committee on Nominations

Preamble

1. The Terms of Reference for the Committee are found in Section 8.31of the *Senate Handbook* (online version).

2. The Senate Committee on Nominations is responsible for recommending academic staff and student nominees for standing, *ad hoc* and special committees of Senate, as well as recommending Senate representatives on other University committees and outside boards. The Committee's recommendations are forwarded to Senate for consideration and approval.

Observations

1. Members of the Committee for 2003-2004 were: Dr. D. Hrycaiko, Professor R. Burleson, Dr. W. Christie, Dr. W. Kops, Dr. N. Hunter, Dr. D. Bracken, Professor A. Tate, Professor A. McGillivray, Professor A. Young, Ms. E. Prosser, Ms. Suzanne Ronald and Dr. B. Dronzek as Chair.

2. The Committee reported to Senate at the June 25, 2003 and October 1, 2003 Senate meetings to consider academic staff nominees for vacancies on standing committees of Senate.

3. Student nominees for standing committees of Senate are prepared by a special sub-committee. Membership of the sub-committee includes three members of the student Senate caucus, three members of UMSU Council and the President (or designate) of UMSU. A list of nominees was received from this group and recommendations were made by the Senate Committee on Nominations at the October 1, 2003 meeting.

Respectfully submitted,

B. Dronzek, Chair
Senate Committee on Nominations

/lrjl

March 15, 2004

Annual Report of the Senate Planning and Priorities Committee - April 1, 2003 to March 31, 2004

Preamble

The terms of reference for the Senate Planning and Priorities Committee are found in section 8.32 of the *Senate Handbook*.

Observations

1. Membership of the Committee changed during the reporting period; during the first part it was as reported for 2002/3. The membership from October, 2003, included:

Elected by Senate:

Prof. J. Svenne (Acting Chair from July, 2003; Chair from November, 2003)
Prof. A. Angel
Prof. M. Bartell
Prof. M. Gabbert
Prof. R. Menzies
Prof. A. Tate
Prof. D. Bailis
Ms. A. Ducas
Prof. N. Hunter
Prof. B. O'Neill

Student Members:

Mr. P. Fernandes
Ms. S. Ronald
Mr. A. Ortega

***Ex-officio* Members:**

Dr. R. Lobdell Vice-Provost (Programs) – designate for President
Prof. K. Grant, Vice-Provost (Academic Affairs)
Ms. D. McCallum, Vice-President (Administration)
Dr. D.R. Morphy, Vice-Provost (Student Affairs)
Dr. D. Jayas, Associate Vice-President (Research) – designate for VP (Research)

2. The work of the Committee is carried out by three subcommittees:

Program and Curriculum Planning - chaired by D. Bailis
Space Planning - chaired by A. Tate
Finance Planning - chaired by J. Svenne

3. During the period April 1, 2003 to March 31, 2004, the following matters have been referred to the Committee and have been reported to Senate:

Program and Curriculum Planning Area:

SPPC reported to Senate on the following dates regarding program and curriculum matters:

May 14, 2003	Master of Science in Management
August 13, 2003	Master of Science in Pediatric Dentistry
November 5, 2003	Change the designation "Post-Baccalaureate Certificate in Education" to "Post-Baccalaureate Diploma in Education"
December 4, 2003	Undergraduate course changes with potential resource implications or course changes beyond nine credit hours
	School of Music: Post-Baccalaureate Diploma in Performance
	Bachelor of Environmental Studies
	Diploma in Labour Relations and Workplace Studies
January 7, 2004	Ph.D. Program in Cancer Control
	Bachelor of Allied Health Science (Medical Laboratory Science)
	Bachelor of Allied Health Science (Medical Imaging)
	Course changes in Graduate Studies beyond nine credit hours
March 3, 2004	New Master of Environment program

Space Planning Area:

SPPC reported to Senate on the following dates regarding space planning matters:

September 3, 2003	Site of the planned Centre for Music, Art and Design
January 7, 2004	Site of the proposed new building for Pharmacy on the Bannatyne Campus

Finance Planning Area:

The Chair of SPPC and the members of the Finance Planning subcommittee are members of the President's Budget Advisory Committee (BAC). This committee contributed to discussion of the University Budget at four meetings held on Jan.14, Feb. 13, 16, and 23, 2004. These involved extensive presentations from all budget units, academic and administrative, at the University. The Committee has had an opportunity to provide input on the University's budget at each step of the resource allocation process. The Committee has had the opportunity to review faculty priorities in the context of University planning and resource allocation. The Committee also commented on the list of capital priorities.

4. In addition to these normal activities, the Committee:

Examined its terms of reference and composition at the meetings on January 27, March 31, and April 28, 2003. The terms of reference were found to be an appropriate description of the responsibilities of the committee and the work it does. However, because the responsibilities of the committee could also have an impact on research, it was recommended that the Vice-President (Research), or designate, be added to the committee. In addition, we recommended that the number of faculty members on the

committee be increased by two, and that at least one of the faculty members be from the Bannatyne Campus. Also, changes were suggested for the selection of student members of SPPC. These recommended changes in membership were endorsed by Senate at its meeting of August 13, 2003.

5. I wish to thank the members who served on SPPC during the period covered by this report for their hard work, enthusiasm and dedication to the task. I also thank the University senior administration for attending meetings and providing the Committee with all pertinent information. And finally, sincere thanks to the secretary of the committee, who remained with us even after he took on the more onerous duties of Acting University Secretary.

Respectfully submitted,

Juris P. Svenne, Chair
Senate Planning and Priorities Committee

/jml

Annual Report of the Senate Committee on Rules and Procedures March 23, 2004

Preamble

The terms of reference for the Committee on Rules and Procedures are found on page 10.22 of the *Senate Handbook* (1993).

1. The Committee is charged with providing advice and making recommendations to Senate on:
   (a) proposed rules and procedures governing Senate and its Standing Committees; and
   (b) proposed amendments to Faculty/School Council Bylaws.

3. On behalf of Senate, the Committee reviews new or amended bylaws proposed by department councils prior to consideration by a Faculty or School Council.

Observations

1. Members of the Committee for the 2003-2004 were: Dr. J. Long (Education), Dr. A. Percival (Continuing Education), Dean H. Secter (Law), Ms. E. Prosser (Student) and Dr. A. Secco as Chair.

2. Requests to consider amendments to Department Council Bylaws were received from the departments of English, and Preventative Dental Science; comments were solicited from the Committee members and relayed to the appropriate individuals.

3. Requests to consider changes to Senate Governing Documents were received from the Senate Planning and Priorities Committee.

Respectfully submitted,

Dr. A. Secco, Chair
Senate Committee on Rules and Procedures

SENATE REPORT ON UNIVERSITY RESEARCH
For the period April 2003 to March 2004

During April 1, 2003 to March 31, 2004, the Senate Committee on University Research (SCUR):

1. Received status reports on Canada Research Chairs Program allocation and nominations.

2. Received status reports on the Canada Foundation for Innovation competitions and results.

3. Reviewed and recommended to Senate the continuation of the Institute for the Humanities for a five year term.

4. Discussed the University's New Strategic Plan in terms of identifying priorities and actions to promote the University's research enterprise.

5. Approved the composition of the Rh Award Selection Committee for the 2003 Winnipeg Rh Institute Foundation Award.

6. Learned of the recipient of the Winnipeg Rh Institute Foundation Award for the year 2003: Dr. Naranjan Dhalla, Distinguished Professor of Physiology and Director of the Institute of Cardiovascular Sciences at the St. Boniface General Hospital Research Centre.

7. Discussed the challenges of securing matching funds for federal research funding programs.

8. Learned of the Year 2003 recipients of the Winnipeg Rh Institute Award: Drs. Rene Van Acker, Department of Plant Science; Yvonne Myal, Department of Pathology; Tim Schroeder, Department of Philosophy; Abba Gumel, Department of Mathematics; Samar Safi-Harb, Department of Physics and Astronomy; and Yoshi Iwasaki, Faculty of Physical Education and Recreation Studies.

9. Learned of the establishment of three Research Groups; Developmental Health Group; Mood and Anxiety Disorders Research Group; and Composite Materials and Structures Group.

10. Learned of and discussed the proposed transformation of SSHRC from a Granting Council to a Knowledge Council.

11. Received the results for the University Research Grants Program and UM/SSHRC Awards for the October 2003 competition.

12. Established sub-committees to review activities of the following Research Centres and Institutes: Centre for Research and Treatment of Atherosclerosis; Centre for Hellenic Civilization; Institute for Industrial Mathematical Sciences; and Manitoba Nursing Research Institute.

13. Reviewed Federal Budget 2004 highlights.

The committee membership list for 2003/04 is attached for information.

Respectfully submitted,

Joanne C. Keselman
Vice-President (Research) and
Chair, Senate Committee on University Research

SENATE COMMITTEE ON UNIVERSITY RESEARCH: Membership - 2003/04

		Phone #
CHAIR	Dr. Joanne C. Keselman Vice-President (Research)	9404
EX-OFFICIO	Emőke Szathmáry President and Vice-Chancellor	9345
	Dr. Karen Grant Vice-Provost (Academic Affairs) (Designate for VP (Academic)	9051
	Dr. Digvir Jayas Associate Vice-President (Research)	6860
	Dr. Don Smyth, Associate Dean (Academic) Faculty of Graduate Studies	7207
(Non-voting)	Ms. Barbara Crutchley Director, Research and Contract Services	9373
(Non-voting)	Ms. Nancy Klos Research Development Officer, ORS	3672
MEMBERS/TERMS		
	Dr. Johann de Vries, Dean (05/06) Faculty of Dentistry	3249
	Dr. Doug Ruth (05/05) Dean, Faculty of Engineering	9806
	Dr. Harold Bjarnason (05/06) Dean, Faculty of Agricultural and Food Sciences	9380
	Dr. Robert Mullaly (05/04) Dean, Faculty of Social Work	9869
	Dr. Peter Cattini (05/05) Department of Physiology	3735
	Dr. Michael Freund (05/06) Department of Chemistry	8772
	Dr. Jim Davie (05/05) Department of Biochemistry & Medical Genetics	787-2137
	Dr. David Barber (05/05) Department of Geography	9081

	Dr. Mary Kinnear (05/06) Department of History	8129
	Dr. Rick Linden (05/06) Department of Sociology	8457
	Dr. Rachael Scarth (05/04) Department of Plant Science	6082
	Dr. Douglas Thomson (05/04) Assoc. Dean, Faculty of Engineering	9835
STUDENTS	Graduate Students' Association (10/03) (To be appointed)	
SECRETARY	Mrs. Gail Cornock Office of the Vice-President (Research)	7859
OBSERVER	Ms Carolynne Presser Director, Libraries	8749

Revised 10/03

End of term is shown in brackets for each Senate-appointed member

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MEMORANDUM

DATE: April 15, 2004

TO: Members of Senate

FROM: Jeff M. Leclerc, Acting University Secretary

SUBJECT: Annual Reports - Senate Committees 20030-2004

This report is submitted on behalf of the following standing Committees of Senate:

Senate Committee on Academic Freedom

Terms of Reference are found in the *Senate Handbook*, page 10.5. No matters were referred to the Committee for consideration, therefore, no meetings were held during the reporting period.

Joint Senates Committee on Joint Master's Programs

The Committee did not meet during the reporting period, nor did it report to Senate.

Joint Senates Committee on Joint Master's Program Appeals

The Committee did not meet during the reporting period, nor did it report to Senate.

/jml

PRESIDENT'S REPORT May 12, 2004

My last report to Senate was submitted for its meeting on April 7, 2004. Part A of this report is organized into sections on General, Academic, Research, Administrative and External matters. Part B contains a list of significant external engagements during the time period of this report.

I. GENERAL

1. Provincial Budget

The Provincial Budget announced April 19, 2004, and subsequent allocations by COPSE to individual institutions for 2004-05, can be summarized as:

For Post-Secondary Education (across the province)

- an increase of 3.8% to the post-secondary sector, or 4.7% when property tax savings are factored in

- the capital envelope for universities and colleges is $18,549,500 (18,330,900 in 2003-04)

For the University of Manitoba

- the operating grant for 2004-05 is:

Base Operating grant	$199,835,700
ACCESS programs	2,582,400
Strategic Programs funding approved in 2003/04	445,500
Total Operating grants	$202,863,600

The operating grant consists of a 1% increase in base grant and an increase of $1,384,000 (2% of tuition fee revenue projected for 2003-04) to recognize that tuition fees have been maintained at 1999-00 levels. The addition of this amount to the 1% base increase provides an overall operating grant increase of approximately 1.8%.

- The capital grant allocation for renovations and equipment is $3,020,000 (same level as previous years)

- major capital project funding is:

Roof replacements	$1,038,000
Fort Garry Chiller System	1,500,000
Capital Campaign Projects	6,000,000
Asbestos Abatement	329,400
Total Major Capital Projects	$8,867,400

- tuition rebate grants will continue to be paid, based on invoices submitted for 10% of the tuition fees collected for credit programs.

2. Federal Budget

The Federal Budget delivered March 23, 2003 focussed on two key themes: sound fiscal management and delivering on throne Speech Commitments. A number of the initiatives in the Budget were of direct interest to the University, including:

- Initiatives to improve and facilitate access to post-secondary education, including the introduction of Canada Learning Bonds (designed to help low income families save for their children's education by providing $500 at birth and $100 annually thereafter). There were also changes in the Federal contribution rates for RESP (Registered Education Savings Plan). For low income families, twenty thousand, $3,000 grants will be made available to first year students. In addition, the Canada Student Loans Program will be restructured by increasing the size of the loan ceiling from $165 to $210 weekly, as well as broadening eligible expenses to include computers, and easing family income thresholds, and financial requirements.

- Budgets for granting councils increased by $90 million ($39 million each for CIHR and NSERC and $12 million SSHRC). A portion of the new funding is expected to be allocation to commercialization efforts. A further $3 million will be provided to SSHRC for the Community University Research Alliance (CURA) program.

- In addition to the previous commitment of $225 million for a permanent fund for the indirect costs of research, an additional $20 million was added to this program.

3. *"Our Students are taking centre stage"*

Analyses of reputational surveys have led to the conclusion that little is known about the University of Manitoba among our academic colleagues outside of the province of Manitoba. One of the strategies to address this is a direct mail contact with Presidents, Vice-Presidents, Deans and Department Heads at Canadian universities. I have sent letters to each and enclosed a brochure *"Our Students are taking centre stage"* (a copy is enclosed with your agenda package). The brochure highlights some accomplishments of our students and related information. I note in my covering letter that "at the University of Manitoba we bring out the best in our students, and we know that they take their place among the best university graduates anywhere in the world. We know this, but to our chagrin, many of our academic colleagues outside of the province of Manitoba do not." Subsequent mailings will include brochures on research, teaching and learning, and the University's strategic plan.

4. Student Evaluation of Educational Quality (SEEQ)

All courses and sections (with five or more students) are evaluated by students each time they are offered using the SEEQ questionnaire. This Senate policy was implemented beginning in 1996-1997. Results are available for review in the libraries, and if approval is given by

specific instructors, on the web. A summary of the results of the term 1 courses for 2003-2004 session is attached to Part A of this report as Appendix A. The report indicates a response rate of 70% and the majority of responses to questions are in the "agree" or "strongly agree" categories.

5. UMSU Election

I offer my congratulations to Amanda Aziz (Environment) and Cathy Van De Kerchove (Environment) on their election as President and Vice-President of the University of Manitoba Students' Union. I look forward to working with them over the next year. I would also like to express my personal appreciation and that of the University community for the contributions that Shawn Alwis and Erin Prosser have made during their past year as President and Vice-President of UMSU. Best wishes are extended to them in their future endeavours.

II. ACADEMIC MATTERS

Faculty of Arts

- Film student Daniel Eskin was awarded the Manitoba Emerging Filmmaker Award for his script *The Salt Pillar*. The award consists of $10,000 from the Manitoba Department of Culture, Heritage and Tourism, $7,500 in services from PS Manitoba and $2,500 from the Winnipeg Film Group for facility and equipment rental. The $20,000 award is to be used to turn the script into a film to be shown at the 2005 Film Exchange Festival.

- Dr. Robert Kroetsch, English and Distinguished Professor Emeritus, received the Manitoba Arts Council Award worth $30,000. The award honours the artistic excellence and career achievement of a professional Manitoba artist. Dr. Kroetsch has authored twelve volumes of poetry, nine novels, and numerous academic articles. His most recent publication is The Hornbooks of Rita K, a collection of poems published in 2001 by the University of Alberta Press. Among many other awards, Dr. Kroetsch won the Governor General's Award for Fiction in 1969 for his novel The Studhorse Man.

- Dr. William Lee, Asian Studies, has had his book Fifteen Views of a Japanese Village, published (Cowan & Tetley, Cumberland, BC; 2004). It is a limited edition publication with only 37 copies printed made, as the work was printed with handset type and contains a series of birch wood block prints.

Continuing Education

- The Continuing Education Division's downtown campus (at Place Promenade, adjacent to Portage Place) is currently undergoing an expansion and major renovation. Scheduled to open in September 2004, this initiative will contribute to

the renewal of downtown Winnipeg. The new facility, renamed "The University of Manitoba - Downtown: Aboriginal Education Centre" will create a learning environment that is comfortable for and supports Aboriginal students studying in community-based formats.

Faculty of Dentistry

- Dean Johann de Vries has been elected President of the International Federation of Dental Education Associations (IFDEA) for a two-year term. The IFDEA coordinates the functions of all regional dental education associations in Canada, the USA, South America, Africa, Asia, Europe, and Australia. Worldwide, there are currently 700 dental schools training dentists and other oral health professionals.

- Prof. Salme Lavigne, Director of the School of Dental Hygiene, has received a Distinguished Service Award from the Canadian Dental Hygienists Association in recognition of her many years of work in support of that organization.

- Five students have been accepted into the International Dentist Degree Program for 2004. There were 102 applications, and 20 candidates were selected for an onsite assessment in December 2003. The International Dentist Degree Program is designed to give graduates of international dental programs the opportunity to become licensed in Canada.

- The Faculty held the annual Alumni Luncheon on January 29, 2004, during the annual meeting of the Manitoba Dental Association. The program included the presentation of the Alumni of Distinction awards for 2004. This year's recipients were Dr. Serge Vanry, Dentistry Class of 1966, and Mrs. Diane Gallagher, Dental Hygiene Class of 1973. The Faculty also presented certificates of appreciation to 20 part-time faculty members who have each given more than 20 years of service.

Faculty of Education

- Laurelyn Cantor (a Ph.D. student in Inclusive Special Education) is coordinating the Campus Life Manitoba Program, which gives students with intellectual disabilities the opportunity to audit university classes. Two students are currently enrolled in this pilot program.

Faculty of Engineering

- Justin Umlah, an electrical engineering student, is part of a Management Team from the I.H. Asper School of Business that has established a remarkable track record in business plan competitions with other business-schools from across Canada and the United States.

In February, "The Young Presidents' Organization in Winnipeg plan" took first place and won $1,500.00. Later that month they took first place at the University of British Columbia Enterprise Competition, winning $5,000.00. In March, as the only team from Canada, they took first place at the Northwest Venture Challenge at Boise State. Over the last weekend in March, the students took the top prize at the Enterprise Creation Competition at Ball State University in Indiana. The students' business plan topped teams from Purdue, Michigan and Carnegie Mellon Universities.

- The new structures laboratory was officially opened on April 14. It will proudly retain the name of its original founder, W.R. McQuade, to honour his outstanding contributions to the University of Manitoba, and to the Faculty of Engineering.

Human Ecology

- Dr. Joan Durrant, Family Social Sciences, has recently returned from London, England where she presented two briefings in the Houses of Parliament. The first was a briefing for MPs and members of the House of Lords. For the second, Dr. Durrant was the main speaker on a panel of MPs and Lords, briefing representatives of major UK child-serving organizations. Her insights were requested because a bill has been introduced to the British Parliament that would remove the criminal defence of "reasonable chastisement," which provides a defence to physical assault for parents who use physical punishments with their children. The bill is the outcome of public reaction to some high-profile child abuse deaths in England.

I.H. Asper School of Business

- An Asper School team won the "Golden Phone Award" in San Diego for its ability to successfully sell a venture capitalist on its company during a telephone conversation. This is the second time in five years that a team from the I.H. Asper School of Business has won this award.

Faculty of Medicine

- Dr. Paul Kerr was recognized as "Teacher of the Year" by the medicine residents at their Residents' Annual Dinner/Dance.

School of Music

- School of Music students once again performed in top form during the Winnipeg Music Festival. For the second year in a row, UM students won first prize, were runners up for the Rose Bowl and won the Tudor Bowl. During the three-week

festival, School of Music students won seven trophies, placed first in 41 categories, with 19 as runners-up. Nine were recommended to the 2004 Provincial Music Finals, with two as alternates.

- Brian Wehrle, fourth-year student, has been selected for the competitive Banff Arts Centre, "Opera as Drama," program. Over 200 applicants auditioned nation-wide, and only 18 were selected, many of them graduate students.

Faculty of Science

- Dr. Michael Freund, Chemistry, has been recognized by the Royal Society of Chemistry as a Global Emerging Investigator in the field of Analytical Chemistry. His research in the area of chemical sensing and conducting polymers has been highlighted in a special issue of the journal, *The Analyst*.

St. John's College

- Planning is underway for the 3rd annual Canadian Studies Conference. The conference, entitled "The Prairies: Lost and Found" will take place September 23 - 25, 2004. The keynote speakers for the conference will be novelist, Aritha van Herk, and historian, Sarah Carter, from the University of Calgary.

- Filmmaker Norma Bailey delivered the 22nd Marjorie Ward Lecture in February. Her first film, *The Performers*, won the Special Jury Award at the Cannes Film Festival in 1980.

- St John's College and Jane Franklin Hall at the University of Tasmania have recently signed an agreement. This agreement formalizes a very successful arrangement that has existed between the two institutions for about ten years. If a St John's College residence student chooses to study at the University of Tasmania, under its student exchange agreement with the University of Manitoba, the student can take up a residence room at Jane Franklin Hall, while paying residence fees to St John's. Jane Franklin, sends students to Manitoba under a reciprocal arrangement.

III. RESEARCH MATTERS

1. Honours and Distinctions

- Six young investigators have each received the annual Rh Award. The purpose of the Rh Award is to support researchers who are in the early stages of their research careers and who display exceptional innovation, leadership and promise

in their respective fields. The Rh Awards program was established in 1973 by the Winnipeg Rh Institute, which is now the Winnipeg Rh Institute Foundation.

- The 2003 winners of the Rh Awards are:

  - Dr. Timothy Schroeder, Philosophy, for two ongoing lines of research. His work on the nature of desire suggests that the essential nature of our wants is to guide us in a certain direction of learning. His work on teleosemantics is in studying natural processes in the development of mind and the history of natural selection, while his most recent investigations are in the ultimate nature of "right" and "wrong" behaviours and how our actions are regulated by some sort of internal process. Among his awards is a four-year Social Sciences and Humanities Research Council (SSHRC) grant in 2001 for his study of human desire.

  - Dr. Rene Van Acker, Plant Science, for contributions to weed science and agriculture. He has been researching the problem of genetically-modified (GM) crops transferring traits to non-GM crops, particularly Roundup Ready tolerance. He also was involved in the movement to promote pesticide-free crop management in Western Canada and has been instrumental in developing the Agriculture Renewal Alliance, a group to discuss and implement the rejuvenation of rural farm economies. In addition to well over $1 million of his own research funds, he was one of nine researchers to share $1.7 million in Canada Foundation for Innovation (CFI) funding for sustainable crops infrastructure in 2000.

  - Dr. Yvonne Myal, Pathology and Physiology, for her work on novel biomarkers for the early detection of breast cancer. She has received more than $1.2 million in research funding during the past six years from the Natural Sciences and Engineering Research Council (NSERC), Canadian Institutes for Health Research (CIHR) and other institutions, some of it for developing a knockout mouse model for monitoring tumour growth. Her research may in fact lead to the design of a drug that would specifically target cancer cells and "turn them off".

  - Dr. Abba Gumel, Mathematics, for his work on the use of mathematical modelling to gain insight into the dynamics and spread of high-profile human diseases such as HIV, SARS, influenza, tuberculosis and West Nile virus. He has advised on the feasibility and effectiveness of public health strategies in combatting epidemics through education, awareness campaigns, clinical concerns and accelerated laboratory tests. An advocate of applying mathematics to everyday life problems and issues, Dr. Gumel received NSERC Discovery Grants for 2000-2004.

- Dr. Samar Safi-Harb, Physics and Astronomy, for her studies on neutron stars, black holes and supernova remnants. Using NASA's orbiting Chandra X-ray observatory, she is examining high-energy emissions from pulsars and supernovae to understand the dynamics of newborn stars and stellar evolution, and their interaction with the interstellar medium. She is credited as a co-discoverer of the largest magnet in the universe, a supernova remnant known as a magnetar. Dr. Safi-Harb has received awards from NSERC and NASA for her astrophysics research, and currently holds a prestigious NSERC Women's Faculty Award.

- Dr. Yoshitaka Iwasaki, Physical Education and Recreation Studies, for his work on leisure, health and how we can better cope with stress in our everyday lives. He has been studying how gender, class, ethnicity and age differences affect how we recover mentally and physically from traumatic events, and has examined leisure activities for reducing stress in specific populations such as Aboriginal peoples, the physically disabled, homosexuals, police and emergency response personnel. Dr. Iwasaki has received more than $1.2 million in research funding from SSHRC, CIHR and the Manitoba Health Research Council.

- Dr. Terry Galloway, Entomology, has been honoured by having a previously unknown species of mite named after him. Officially named *Granulocheyletus gallowayi*, the tiny bug was found in the nests of a diminutive, endangered species of penguin that Dr. Galloway was studying on an island near New Zealand ten years ago. The species of aphid, *Aphis gallowayi*, which Dr. Galloway collected in 1988, also bears his name.

2. Appointments

- Dr. Michael Eskin, Foods and Nutrition, was appointed a 2004 American Oil Chemists' Society (AOCS) Fellow in recognition of his contribution to AOCS and the industry.

3. Grants Received and/or Applied For

- Two of the University of Manitoba's teams received more than $6 million from the Canada Foundation for Innovation (CFI) Innovation Fund to support their research projects:

  - Dr. Michael Freund, Chemistry, was awarded $2,976,080 to support the "Manitoba Regional Materials and Surface Characterization Facility." The funds will be used to purchase instruments that will accelerate research and development in diverse areas ranging from aerospace and electronics to biotechnology. The new instrumentation will create an

environment at the University where researchers from different disciplines can work together to develop new materials and processes.

- Dr. John Wilkins, Internal Medicine, Immunology, Biochemistry and Medical Genetics, was awarded $3,043,630 for a "Program in Systems Biology." The program will serve as a training site for Manitoba's growing biotechnology field. The grant will go towards research equipment and building a 10,000 square foot laboratory and some equipment for the Faculty of Science. The new laboratory will host about 20 researchers working in diverse fields as genome research, kidney transplants and rheumatology.

- Twenty-one awards, 3 more than last year, were made in the recent Standard Research Grant competition of the Social Sciences and Humanities Research Council (SSHRC), totalling $1,507,727 over three years. Fifteen of these awards are to first-time recipients of SSHRC program funding. Grants were awarded to researchers in the Faculties of Arts, Education, Environment, Law, and Management as follows:

  - Dr. Susan Frohlick, Anthropology, received $51,500 over three years for the project "Gender, Globalization, and Women's Adventure Travel."

  - Dr. Mark Lawall, Classics, received $52,895 over three years for the project "Amphoras in the Eastern Mediterranean: a Multi-site, Ceramic Perspective on Ancient Economies ca. 550-50 BC."

  - Dr. Judith Owens, English, received $44,035 over three years for the project "Scenes of Instruction: Early Modern English Literature and Pedagogical Culture."

  - Dr. Eric Annandale, French, Spanish and Italian, received $64,025 over three years for the project "Etude critique de la creation litteraire dans l'Ouest canadien-francais."

  - Dr. David Churchill, History, received $38,313 over three years for the project "The Politics of Being Queer: Paul Goodman and the History of Sexual Liberation in Post-Ware US."

  - Dr. Peter Kulchyski, Native Studies, received $144,125 over three years for the project "Aboriginal Self-Government and Natural Resource Management in Canada."

  - Dr. Ben Caplan, Philosophy, received $47,350 over three years for the project "Understanding Frege."

- Dr. Andrew Woolford, Sociology, received $121,285 over three years for the project "A Sociography of Genocide Reparations."

- Dr. Dawn Wallin, Education, received $52,264 over three years for the project "Rural Education and School Reform: The Missing Voice in Educational Policy Development in Canada."

- Dr. Geoffrey De Verteuil, Geography, received $71,092 over three years for the project "Clean and Sober Places: Exploring the Therapeutic Landscapes of Addiction Recovery."

- Dr. Iain Davidson-Hunt, Natural Resources Institute, received $135,890 over three years for the project "Learning to Understand Changes in the Land: The Dynamics of Cultural Landscapes."

- Dr. Emdad Haque, Natural Resources Institute, received $157,125 over three years for the project "Indigenous Floodplain and Fishery Knowledge and Management Practices in Bangladesh: Application in Livelihood Improvement in Bangladesh."

- Dr. Lorna Turnbull, Law, received $$73,000 over three years for the project "Mothers-in-Law: Mothering Discourses and Legal Responses to Motherwork."

- Dr. Rajesh Manchanda, Marketing, received $89,253 over three years for the project "Understanding Feelings of Guilt in a Retail Purchase Context."

- Dr. Sarah Elvins, History, received $38,000 over three years for the project "Crisis Currency: A Cultural History of Great Depression Scrip in America."

- Results from the Natural Sciences and Engineering Research Council's (NSERC) recent Discovery Grants competition indicate that 60 University of Manitoba researchers were awarded grants totalling $1,909,165 for the 2004-05 fiscal year. Eighteen of these were to new faculty as follows:

  - Dr. R. Daniel Gietz, Biochemistry and Medical Genetics, received $150,000 over 5 years for the project "The Genetic Analysis of Transformation in Yeast."

- Dr. Torsten Hegmann, Chemistry, received $120,000 over 3 years for the project "Self-assembly of Nanoparticles using Thermotropic Liquid Crystal as Matrices."

- Dr. Jeannette Montufar, Civil Engineering, received $85,000 over 5 years for the project "The Safe Accommodation of Large Commercial Vehicles and Vulnerable Road Users in Urban Areas."

- Dr. Jamie Van Gluck, Civil Engineering, received $120,000 over 5 years for the project on "Characterizing and Modelling Clogging in Engineered Landfill Systems."

- Dr. Carson Leung, Computer Science, received $62,100 over 3 years for the project "Interactive Constrained Data Mining."

- Dr. Yanni Liu, Computer Science, received $53,100 over 3 years for the project "Resource Management in Computer Communication Networks."

- Dr. Jelena Misic, Computer Science, received $135,000 over 5 years for the project "Building Wireless Sensor Networks."

- Dr. Vojislav Misic, Computer Science, received $45,000 over 3 years for the project "Product Line Architecture Assessment and Measurement."

- Dr. Sima Noghanian, Electrical and Computer Engineering, received $115,000 over 5 years for the project "Antenna Effects on the Capacity of Multi-antenna Systems."

- Dr. Trust Beta, Food Science, received $110,000 over 5 years for the project "Cereal Phenolic Compounds: Characterization and Functionality as Antioxidants."

- Dr. Mohamed Moghadasian, Human Nutritional Sciences, received $167,790 over 5 years for the project "Application of Flaxseed Oil as a Vehicle for Cyclosporine Administration."

- Dr. Eric Bibeau, Mechanical and Industrial Engineering, received $52,110 over 3 years for the project "Development of Alternative Energy Applications."

- Dr. Tapash Chakraborty, Physics and Astronomy, received $33,000 over 1 year for the project "Electronic and Optical Properties of Nanostructured Systems."

- Dr. Gerald Gwinner, Physics and Astronomy, received $120,000 over 2 years for the project "Tests of Fundamental Symmetries with Ultra-cold Radioactive Atoms and Cold Ions in Traps and Storage Rings."

- Dr. Rajmund Somorjai, Physics and Astronomy, received $54,000 over 3 years for the project "Multiple Classifier Systems for Disease Profiling using High-dimensional Biomedical Data."

- Dr. Alexandre Leblanc, Statistics, received $33,000 over 3 years for the project "Applications of Wavelets to Bayesian Statistics."

- Dr. Gail Davoren, Zoology, received $60,000 over 3 years for the project "Impacts of Climate Change on Vertebrate Predators Mediated through Key Forage Fish Species in the Canadian Arctic."

- Dr. Serge Larivière, Zoology, received $50,000 over 5 years for the project "Animal Ecology in Fragmented Prairie Habitats."

- There are currently 259 University of Manitoba researchers holding NSERC individual, group and project grants, totalling $7.6M. This is an increase from last year's total of $7.3M.

- Eight researchers received NSERC Research Tools and Instruments - Category 1 (Equipment) grants totalling $261,052. Two of these are to new faculty members as follows:

  - Dr. Jamie Van Gulck, Civil Engineering, received $22,345 to purchase an analytical instrument to measure the characteristics of leachate suspended particles.

  - Dr. Gail Davoren, Zoology, received $30,536 to purchase equipment for the continuous monitoring of physical oceanographic parameters where key forage fish species aggregate in Canada's arctic.

4. Related Initiatives

- In celebration of the Natural Sciences and Engineering Research Council's (NSERC) 25th Anniversary and in celebration of a twenty-five year partnership between NSERC and the University of Manitoba, a special invitational dinner was held on March 1st at the University Club. This event also honoured 71 University of Manitoba researchers who have held NSERC grants for 25 years. Dr. Tom Brzustowski, President of NSERC, was the guest speaker and gave a presentation entitled "Canadian University Research in Science and Engineering – The Next 25 Years." The event was attended by representatives from three levels

of government, industry funding partners, community leaders, and 47 of our 71 twenty-five year grantees together with their deans, associate deans and department heads.

5. **Program Initiatives**

- The fourth talk (from a series of five) in the "Get to know research...at your University" public speaker series featured Dr. Dan Fraser. His topic was "Powering the World with Thermal Energy," held on Sunday, February 29 at Smartpark, Research and Technology Park. Audience attendance was approximately 56.

- The "Get to know Research" series is designed to showcase leading-edge research and innovation that is taking place throughout the University of Manitoba to the general public, as well as to our University community.

IV. ADMINISTRATIVE MATTERS

1. **Campus Beautification Day**

- Planning is proceeding for Campus Beautification Day scheduled for May 19, 2004. This popular event continues to boost morale of faculty, staff and students. Design work is underway and a list of plant materials is currently being priced and ordered.

- Also planned in conjunction with this year's Campus Beautification Day is a "Paint the Fence" contest. Contest entries will be accepted from teams willing to apply their artistic talents to painting the Engineering and Information Technology Complex hoarding fence on the east side facing the quadrangle.

- Further, a group of deans, faculty and administrators who call themselves the "Think Green Group" are planning to start a small orchard on Campus Beautification Day.

2. **2004-2005 Operating Budget Development**

- This past January, the President and Vice Presidents met with their direct reports to discuss the unit-level resource planning submissions. The President and each Vice President outlined to the Budget Advisory Committee in February 2004 the priorities for their respective areas. A draft table of resource allocations was presented to the Budget Advisory Committee for advice and comment.

- Following the Council on Post-Secondary Education (COPSE) grant announcement to be released in conjunction with the Provincial Budget on April 19, 2004, the 2004-2005 operating budget plans will be finalized and presented to the Budget Advisory Committee, Finance and Administration Committee, and the Board of Governors.

3. Ancillary Services and Special Functions

- Special Functions is preparing for the upcoming conference season. The summer of 2004 is destined to be one of the busiest to date. Some of the major conferences booked are: Congress 2004: May 19 - June 6 (6,000 delegates); Quilt Canada: May 16-23 (550 delegates); Canadian Association of College and University Student Services (CACUSS) 2004: June 13-17 (275 delegates); Couples for Christ and Youth for Christ: July 16-18 (750 delegates).

- New conference programming software is expected to greatly assist with booking and assigning rooms, collection of fees and production of housekeeping reports.

- Applications for University College, Mary Speechly and Tache Hall residences already exceed capacity for the September 2004 intake. There are still some spaces available at Arthur V. Mauro. A random draw is planned to facilitate the allocation of residence space for returning residents.

4. Financial Services

- The department of Financial Services is in the process of compiling data on expenditures to assist in the production of an economic impact study. This study will be based on the March 31, 2003 Financial Statements of the University and Smartpark Development Corporation. A request for proposal for the Economic Impact Study was sent out with PricewaterhouseCoopers selected as the successful proponent. A preliminary meeting has been held with PricewaterhouseCoopers to discuss the information required to complete the study and prepare the report.

5. Human Resources

- The AESES/Security agreement was ratified on March 17, 2004. The three-year settlement provides for a 3% salary adjustment effective October 2003, October 2004 and October 2005.

- The University and the University of Manitoba Faculty Association successfully concluded bargaining under a new bargaining protocol. The collective agreement needs now to be ratified by UMFA members and the Board of Governors.

- The asbestos management program continues. On March 16, 2004, the Environmental Health and Safety Office held an Asbestos Awareness Seminar at the Bannatyne Campus. Awareness training programs were held for Security Services Staff. In addition, the Asbestos Surveillance Program is underway, and involves compulsory testing of certain physical plant staff as well as those requesting voluntary surveillance.

6. Information Services and Technology

- Significant progress has been made on many of the administrative systems renewal projects:
  - A preliminary Chart of Accounts has been established for the Financial Management System (FMS).
  - IBM Global Services has been selected as the "Execution Manager " for the Human Resources Information System (HRIS). IBM recently spent three weeks evaluating this project and have put together a renewed project plan. A change management component for the HRIS project is also being evaluated.
  - The Panache Pension Administration System from Eckler will be implemented for October 2004.
  - Training sessions are ongoing for both the Banner Student Information System (SIS) and the Banner Financial Management System (FMS).
  - The Library System (SIRSI) implementation continues on schedule.
  - The "Academic Record System" has been selected as the tool to meet the Curriculum Vitae Information System (CVIS) project requirements.
  - A fit/gap study was completed in February 2004 for the Blackbaud Raiser's edge Advancement System for Private Funding and Alumni. If the product is found to be acceptable, implementation will commence with a projected completion date of January, 2005.
  - IST continues to build the infrastructure to support these new packaged applications. This includes setting up servers, databases, and utility software products as well as realigning procedures and structures.
- Major e-mail delays have continued as a result of spam and virus floods. Messages arrived out of sequence and many were delayed for several hours. IST will be purchasing a larger machine to replace the current e-mail server. This

new server should be able to accept and respond to larger amounts of spam, and do so more quickly. Spam mail is much more than an annoyance – it is costly, for example, the new server will cost approximately $100,000.

- Classroom and production services are preparing for Congress 2004. Initial audio visual requests have been received. Meeting the demand for data projectors will take significant coordination

7. Physical Plant

- Safety footwear is now required on all construction and renovation projects to address provincial legislation.

- Status of Building Projects:

    - A steering committee is being struck for the Aboriginal Students' Centre.

    - Alternate designs have been reviewed for the Centre for Music, Art and Design.

    - The tender closed for the general contractor for the Engineering and Information Technology Complex on March 26, 2004.

    - The tender closed for the general contractor for the Environmental Safety Building on March 3, 2004.

    - The Pharmacy Building project is proceeding into detailed design phase. The building will be located at the corner of McDermot and Emily.

    - The project to install utilities, upgrades and replacement of existing utility services closed for tenders on April 7, 2004.

    - Replacement of the exterior curtain wall for the Russell Building has been postponed to 2005/06.

    - The Straw Bale project will continue once weather improves.

    - The Winnipeg Education Centre revised drawings are under review with the tender being issued in late April.

- Discussions are taking place with several suppliers on environmentally friendly care-taking products. Meetings have also been held with Purchasing to review the green procurement procedures.

V. EXTERNAL MATTERS

1. Alumni Affairs

- The Alumni Association coordinated a Canadian-theme event in Minneapolis at the Consul General's office on March 25 with approximately 60 alumni and friends in attendance. The university was represented by President Szathmáry, Vice-President Goldie and Dean Bjarnason, Agricultural and Food Sciences.
- *On Manitoba*, featuring "Caring and Community," was mailed in April. This year, 14 faculties and schools are inserting newsletters in the magazine. As well, there are plans to include a special library insert in August. These inserts provide faculties and departments with a cost-effective way to reach their alumni and friends.

- *On Manitoba On Line*, an electronic newsletter, was e-mailed to approximately 10,000 alumni on March 31. Click-thru and open rates continue to be above industry averages.

2. Public Affairs

- The most recent media attention came from a news story about researchers at Johns Hopkins University who discovered a link between circumcision and AIDS. The news story pointed out that this association was first noticed by Dr. William Cameron of the University of Manitoba in 1987, during preliminary studies in Africa, the forerunner of our present work in Kenya involving Dr. Frank Plummer. The news story was carried around the world and appeared on TV news and in international newspapers.

- Winnipeg's A-Channel has been doing regular live remote segments about the University of Manitoba for its popular "Big Breakfast" broadcast between 7 and 9 a.m. Although produced locally, the program is carried across Canada on Star Choice and Bell Expressvue. Recent segments were: School of Music, Faculty of Nursing, Department of Physics and Astronomy, Faculty of Physical Education and Recreation Studies, Department of Entomology, Ed Leith Cretaceous Menagerie.

- Public Affairs Specialist Avery Czarnecki received a Sliver Award in the CASE District VIII Juried Awards Competition for her news release "It's Exam Time: So Either Study or Start Praying" and Homepage Coordinator David Leibl received a bronze for his web news story "The Artist and the Law."

3. Private Funding

- During the first quarter of 2004, the Department of Private Funding focussed on completing activity started during the course of the capital campaign, including

conclusion of activities around a number of gifts that were outstanding. This has taken place and the transition to a new sustainable fundraising model (post-campaign) has begun.

- Major gifts during the month include a $250,000 gift from the Arthritis Society for the Chair in Rheumatology and $50,000 from the Health Sciences Centre for a Post Doctorate Fellowship at the Manitoba Center for Health Policy.

4. Government Relations

- The Office arranged the visit to the University by Foreign Affairs Minister Bill Graham for a roundtable discussion with University of Manitoba international affairs, defence and development experts.

- In partnership with the Vice-President (Research), coordinated University participation in Manitoba government/business visit to Ottawa highlighting Manitoba's infectious disease capabilities and arranged University representation at key meetings with Federal Government Officials.

- Coordinated a Joint Liaison Committee meeting between the University and the City of Winnipeg.

- Arranged the visit to the University by provincial officials to brief the Office of Vice-President (Research) on the province's biotechnology initiative with Minnesota.

5. External Relations on Bannatyne

- Barbara Becker has been appointed as the Associate Director of Private Funding, Bannatyne Campus. She will coordinate development activities for the Faculties of Medicine, Dentistry and Pharmacy, as well as for the Schools of Medical Rehabilitation and Dental Hygiene.

- In March the *Manitoba Medicine* newsletter was distributed to 5,000 alumni, faculty and students at the Faculty of Medicine. The Alumni-Faculty Bulletin was also distributed to 2,500 alumni, faculty and students in the Faculty of Dentistry.

- Work is continuing with the Faculty of Dentistry to develop an online version of the *Incidentals* newsletter to be posted on the Faculty's web site and updated monthly. The first edition is planned to go online on May 1, 2004.

6. Special Events

- A special event was held on April 7, 2004 to recognize major donors and campaign volunteers of *Building on Strengths: Campaign for the University of Manitoba.*

Web:

OSO20 - Student Evaluation of Educational Quality (SEEQ) 14:03 Thursday, March 11, 2004 2455
Main Report for Session: O4R - Terms: 1

College: Faculty: Combined Report Department: Combined Report

Course and Section: Combined Section Selected: Course Description: Combined Report
Instructor(s): --- Aggregate Report ---
Session: O4R Term: Duration: Group #: .

Students Enrolled: 55325
Students Responding: 38498
Percentage Responding: 70 %

	N/A	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	NO RESPONSE	MULTIPLE RESPONSE
LEARNING								
1. I have found the course intellectually challenging and stimulating.	0%	2%	5%	16%	54%	23%	0%	0%
2. I have learned something which I consider valuable.	0%	2%	4%	12%	53%	29%	0%	0%
3. My interest in the subject has increased as a consequence of this course.	0%	3%	10%	23%	40%	23%	1%	0%
4. I have learned and understood the subject materials of this course.	0%	1%	4%	16%	57%	21%	1%	0%
ENTHUSIASM								
5. Instructor was enthusiastic about teaching the course.	0%	1%	3%	11%	43%	41%	0%	0%
6. Instructor was dynamic and energetic in conducting the course.	0%	2%	5%	16%	40%	37%	0%	0%
7. Instructor enhanced presentations with the use of humour.	0%	3%	7%	18%	38%	33%	1%	0%
8. Instructor's style of presentation held my interest during class.	0%	6%	10%	20%	35%	27%	1%	0%
ORGANIZATION								
9. Instructor's explanations were clear.	0%	4%	8%	17%	46%	25%	0%	0%
10. Instructor's materials were well prepared and carefully explained.	0%	2%	6%	15%	45%	30%	1%	0%
11. Proposed objectives agreed with those actually taught so I knew where course was going.	0%	2%	4%	15%	49%	29%	1%	0%
12. Instructor gave lectures that facilitated taking notes.	3%	3%	8%	16%	40%	30%	1%	0%
GROUP INTERACTION								
13. Students were encouraged to participate in class discussions.	2%	2%	6%	18%	42%	31%	0%	0%
14. Students were invited to share their ideas and knowledge.	2%	2%	5%	18%	43%	30%	1%	0%
15. Students were encouraged to ask questions and were given meaningful answers.	1%	2%	4%	14%	46%	33%	1%	0%
16. Students were encouraged to express their own ideas and/or question the instructor.	1%	2%	5%	18%	44%	30%	1%	0%
INDIVIDUAL RAPPORT								
17. Instructor was friendly towards individual students.	1%	1%	2%	10%	43%	42%	0%	0%
18. Instructor made students feel welcome in seeking help/advice in or outside of class.	2%	1%	3%	13%	40%	40%	1%	0%
19. Instructor had a genuine interest in individual students.	2%	2%	4%	21%	38%	32%	1%	0%
20. Instructor was adequately accessible to students during office hours or after class.	5%	1%	3%	19%	41%	30%	1%	0%
BREADTH								
21. Instructor contrasted the implications of various theories.	5%	1%	4%	21%	48%	20%	1%	0%
22. Instructor presented the background or origin of ideas/concepts developed in class.	3%	1%	4%	18%	50%	23%	1%	0%
23. Instructor presented points of view other than his/her own when appropriate.	4%	1%	3%	18%	50%	23%	1%	0%
24. Instructor adequately discussed current developments in the field.	4%	1%	4%	18%	45%	25%	1%	0%

OSO20 - Student Evaluation of Educational Quality (SEEQ) 14:03 Thursday, March 11, 2004 245
Main Report for Session: 04R - Terms: 1

College: Faculty: Combined Report Department: Combined Report

Course and Section: Combined Section Selected: Course Description: Combined Report Students Enrolled: 55325
Instructor(s): --- Aggregate Report --- Students Responding: 38498
Session: 04R Term: Duration: Group #: . Percentage Responding: 70 %

	N/A	STRONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	NO RESPONSE	MULTIPLE RESPONSE
EXAMINATIONS								
25. Feedback on examinations/graded materials was valuable.	3%	4%	8%	21%	43%	21%	1%	0%
26. Methods of evaluating student work were fair and appropriate.	2%	4%	7%	17%	46%	23%	1%	0%
27. Examinations/graded materials tested course content as emphasized by the instructor.	3%	3%	5%	16%	48%	25%	1%	0%
ASSIGNMENTS								
28. Required readings/texts were valuable.	3%	4%	7%	18%	43%	24%	1%	0%
29. Readings, homework, laboratories contributed to appreciation and understanding of subject.	2%	2%	5%	17%	47%	26%	1%	0%

	N/A	VERY POOR	POOR	AVERAGE	GOOD	VERY GOOD	NO RESPONSE	MULTIPLE RESPONSE
OVERALL								
30. Compared with other courses I have had at U. of M., I would say this course is:	0%	3%	6%	26%	37%	24%	3%	0%
31. Compared with other instructors I have had at U. of M., I would say this instructor is:	1%	3%	6%	19%	33%	36%	3%	0%
32. As an overall rating, I would say this instructor is:	0%	2%	5%	19%	35%	36%	3%	0%

	ONE	TWO	THREE	FOUR	FIVE		NO RESPONSE	MULTIPLE RESPONSE
STUDENT AND COURSE CHARACTERISTICS (LEAVE BLANK IF NO RESPONSE APPLIES)								
33. Course difficulty, relative to other courses, (1=Very easy, 2=Easy, 3=Average, 4=Difficult, 5=Very difficult)	2%	12%	47%	27%	7%	0%	5%	0%
34. Course workload, relative to other courses was: (1=Very light, 2=Light, 3=Average, 4=Heavy, 5=Very heavy)	3%	13%	51%	21%	7%	0%	5%	0%
35. Course pace was: (1=Too slow, 2=Slow, 3=About right, 4=Fast, 5=Too fast)	1%	6%	66%	18%	3%	0%	5%	0%
36. Hours per week required outside of class: (1=0 to 2, 2=2 to 3, 3=5 to 7, 4=8 to 12, 5=Over 12)	9%	28%	38%	14%	4%	0%	7%	0%
37. Level of interest in the subject prior to this course: (1=Very low, 2=Low, 3=Medium, 4=High, 5=Very high)	7%	17%	38%	22%	8%	0%	8%	0%
38. Overall GPA at U. of M. Leave blank if not yet established: (1=Below 2.5, 2=2.5 to 3.0, 3=3.0 to 3.4, 4=3.4 to 3.7, 5=Above 3.7)	2%	11%	23%	19%	16%	0%	29%	0%
39. Expected grade in the course: (1=F, 2=D, 3=C or C+, 4=B or B+, 5=A or A+)	0%	1%	17%	43%	28%	0%	10%	0%
40. Reason for taking this course. Select the one which is best: (1=required for major, 2=Elective for major, 3=Faculty requirement, 4=Minor or related field, 5=General interest only)	33%	13%	29%	7%	12%	0%	6%	0%
41. Year in program: (1=First, 2=Second, 3=Third, 4=Fourth, 5=Pre-masters/Graduate)	28%	24%	22%	15%	4%	0%	6%	0%

PART B - Notable Events (External)
Emőke J. E. Szathmáry
March 16, 2004 - April 8, 2004

Tuesday, March 16, 2004

- Bring greetings at the opening Reception of UMSU's second National Forum on post-secondary education.

Wednesday, March 17, 2004

- Present remarks at the scholarship-funding and cheque presentation ceremony held by the Louis Riel Institute and Manitoba Metis Federation

Thursday, March 18, 2004

- Bring greetings to University of Manitoba Students' Union Scholarship and Bursary Dinner

Saturday, March 20, 2004

- Attend "Breakfast with Reg Alcock" event
- Present remarks at St. Paul's College Graduation Banquet

Monday, March 22, 2004

- Attend meeting of University of Manitoba/City of Winnipeg Joint Liaison Committee
- Present remarks and host Student Volunteer Recognition Reception at 37 King's Drive

Wednesday, March 24, 2004

- Present remarks and host Winnipeg Rh Institute Awards Reception at 37 King's Drive

Thursday, March 25, 2004

- Present remarks at University of Manitoba alumni reception at the offices of the Canadian Consul in Minneapolis, Minnesota

Friday, March 26, 2004

- Thank Prime Minister Paul Martin at a luncheon in his honour

Saturday, March 27, 2004

- Present remarks at the Faculty of Engineering Graduation Banquet

Monday, March 29, 2004

- Participate in telephone conference of the Board of the Canadian Genetic Diseases Network

- Meet with Mr. John Bertrand, Regional Director, English Radio and Television, CBC Manitoba

Tuesday, March 30th - Wednesday, March 31st, 2004

- Attend Association of Universities and Colleges in Canada (AUCC) meeting in Vancouver

Thursday, April 1, 2004

- Meet with potential University corporate benefactor in Montreal

Saturday, April 3, 2004

- Present remarks at the Faculty Science 100th Anniversary Banquet

Sunday, April 4, 2004

- Meet with potential University corporate benefactor in Calgary

- Attend National Aboriginal Achievement Awards Banquet and Award Ceremony in Calgary

Monday, April 5, 2004

- Meet with representatives of the Max Bell Foundation in Calgary

Tuesday, April 6, 2004

- Attend D. M. Stephens Memorial Fellowship Award reception

Wednesday, April 7, 2004

- Present remarks at dinner in honour of major donors to the University of Manitoba Capital Campaign

Thursday, April 8, 2004

- Host dinner in honour of Ms. Aleksandra Leligdowicz, Rhodes Scholar recipient

April 28, 2004

Report of the Senate Executive Committee

Preamble

1. The terms of reference for the Senate Executive Committee are found in Section 7.2 of the *Senate Handbook* (revised 2000).

2. The Senate Executive Committee held its regular monthly meeting on April 28, 2004.

Observations

1. **Speaker for the Senate Executive Committee**

   Dean David Witty will be the Speaker for the Executive Committee for the May meeting of Senate.

2. **Nominations to the Senate Committee on Nominations**

   The report of the University Secretary on the Senate Committee on Nominations is attached. Members of the Committee are nominated by the Senate Executive Committee and elected by Senate (see recommendation below).

3. **Comments of the Senate Executive Committee**

   Other comments of the Executive Committee accompany the report on which they are made.

Recommendation

The Senate Executive Committee recommends that the following nominations to the Senate Committee on Nominations be approved by Senate for three-year terms ending May 31, 2007:

a) Architecture and Engineering: Professor Alan Tate (Senator) (re-elected)
b) Science: Professor Norman Hunter (re-elected)
c) Law and Pharmacy: Dean David Collins (Senator)
d) Nursing, Social Work and Counseling Service: Professor Dennis Bracken (re-elected)

Respectfully submitted,

Dr. R. Kerr, Acting Chair
Senate Executive Committee

Terms of Reference: *Senate Handbook* (revised 2000), Section 7.

/cdak

Report of the University Secretary on the Committee on Nominations

At the July 1977 meeting of Senate, Senate approved without debate the following area representations for the Committee on Nominations. The representation was amended in July 1991 to include the Libraries. The membership at March 11, 2003 is as follows:

1.	Agriculture & Human Ecology	B. L. Dronzek *	to	2006
2.	Architecture & Engineering	A. Tate*		2004
3.	Arts	A. Young*		2005
4.	Science	N. Hunter		2004
5.	Law & Pharmacy	A. McGillivray		2004
6.	Medicine & Dentistry	W. Christie*		2005
7.	Education & Physical Education	D.Hrycaiko *		2006
8.	Management & Continuing Education	W. Kops		2005
9.	Music, Fine Arts, Natural Resources Institute & Libraries	R. Burleson *		2006
10.	Nursing, Social Work & Counselling Service	D. Bracken		2004
11.	Students (2)	E. Prosser S. Ronald		2004 2004

* denotes member of Senate

The terms for Professors Tate, Hunter, McGillvray and Bracken are ending on May 31, 2004. Consequently,replacements are required for the following areas (all are three-year terms):

1. Architecture and Engineering
2. Science
3. Law and Pharmacy
4. Nursing, Social Work and Counselling Service

The composition of the Committee on Nominations calls for ten members of the academic staff, the majority of whom are to be members of Senate. Since six of the academic members currently on the Committee are Senators, and three of those members' terms are ending, all three of the replacements will have to be members of Senate at the time of election to the Senate Committee on Nominations. **Professors Tate, Hunter and Bracken have indicated their willingness to be re-appointed to the Committee.**

/jml

PROGRAM OVERVIEW SUMMARY

Baccaluareate degree in Allied Health Science built on the current diploma program in Diagnostic Cytology offered through the School of Cytotechnology at Health Sciences Centre

Name: Bachelor of Allied Health Science - Diagnostic Cytology

Credentials: Undergraduate degree

Accreditation Requirement

The training program is accredited by the Canadian Medical Association Committee on Conjoint Accreditation. Upon successful completion of the diploma program graduates are eligible to write the Certification examinations set by the Canadian Society for Medical Laboratory Sciences.

Program length 30 credits of University 1, plus 24 month diploma plus one year for degree completion (1+2+1)

Proposed start date Program to start September 2004

Departments within Institutions Having Responsibility

University of Manitoba - Faculty of Medicine

Health Sciences Centre – Pathology Department, Cytology Laboratory, School of Cytotechnology

Program Priority HIGH

Revision of an Existing Program

The current Cytotechnology program is a post-RT or post BSc diploma program delivered by the Health Sciences Centre Cytology Laboratory. It is intended that this program be revised to a 1+2+1 model and included in the proposed Bachelor of Allied Health Science programs at the University of Manitoba.

What are the impacts of changing this program?

1. Entrance requirements for the program would decrease from a 3 year diploma program or undergraduate science degree to 30 credit hours (1 full year of study)

2. The length of the diploma program would increase slightly from 17 months to 24 months, but the total time spent in post-secondary education would decrease. (3 or 4 +1.5) to (1+2+1)

3. Although the program is designed to access current University of Manitoba courses, the discipline specific courses offered through the Health Sciences Centre Cytology Laboratory will need to be assessed for university credit and listed in the university calendar

4. Graduates of the diploma program who choose to continue with their studies and obtain a degree will have improved skills and knowledge and enhanced opportunities in related fields

5. Tuition fees would be standardized

6. It is expected that student awareness would increase as part of the Allied Health programs.

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the report to Senate.

Will the program be available to part- time students?

The pre-requisite year and the degree completion year could be taken part time.

However, once the students have entered into the Diagnostic Cytology portion of training (years 2 & 3), the student will be required to be enrolled full time in order to accomplish the required clinical practice.

Will the program have a Co-operative education component?

All discipline specific courses and clinical practicum will take place at Health Sciences Centre where the School of Cytotechnology currently resides thus minimizing space and capital resources needed to deliver the program.

The practicums will be 20 weeks in year 1, 22 weeks in year 2 and 10 weeks in the degree completion year

Will the program contain an option for Prior education assessment of students?

The program is designed to use as many existing courses from the UofM as possible. Students applying into the program who have taken these existing courses would be granted credit.

Students could also apply to have "like" courses evaluated for credit. This may require that they take challenge exams to ensure critical knowledge is achieved.

Registered Diagnostic Cytologists who completed an accredited Diagnostic Cytology training program in the past will be admitted to the program through the degree completion route. Credit would be given for diploma achievement and courses taken for continuing education or advanced certification achievement could also be submitted for assessment.

Will there be Distance Education options?

Ideally, flexible delivery systems like distance education would make the program more accessible and more appealing. With innovative teaching methods being developed for television and computers and access to the Internet so affordable there is a trend for educational institutions to expand their role in this area. Some of the required and elective courses of the diploma and degree-completion program are currently available by distance education through the University of Manitoba or an out-of-province institution. The viability and cost/benefit would have to be determined to encourage additional development of courses for this program.

Will the program be delivered jointly with another institution?

The total program would be delivered between the University of Manitoba and the Health Sciences Centre School of Cytotechnology under the Department of Pathology. Some courses would also be taken at Red River College.

Are similar programs offered in Manitoba?

The School of Cytotechnology at the Health Sciences Centre is the only training program of its kind in the Province of Manitoba.

What articulation, block transfer or credit transfer arrangements will you be looking at developing for this program?

University of Manitoba credit will be sought for discipline specific courses and clinical practicum courses, provided by the Health Sciences Centre Cytology Laboratory (Department of Pathology). Courses taken as part of the diploma program through other educational institutions would be given credit transfer.

SPECIFIC PROGRAM INFORMATION

PROGRAM OBJECTIVES

The program has been designed so that students completing the required academic, professional and clinical components will meet the requirements in the attached professional competency profiles.

The curriculum is designed to:

1. allow students in Diagnostic Cytology to share those subjects which are common to other allied health professional programs and examine independently those areas which are specific to the practice of Diagnostic Cytology.

2. provide the required clinical education to ensure competent practitioners upon graduation. Clinical education is interspersed throughout the academic years providing a comprehensive program and ensuring knowledge and comprehension of clinical procedures and practice at all levels.

EDUCATIONAL OBJECTIVES OF THE PROPOSED PROGRAM:

The program is designed so that graduates are able to:

1. demonstrate knowledge, understanding and competency in the application of their skills.

2. practice assessment procedures, interpret information and apply problem solving and critical thinking skills to their every day practice.

3. identify their role in the health care system and participate in decision-making processes that relate to their specialty.

4. implement quality practices and perform within safety standards relating to the application and utilization of equipment relative to patient care and diagnosis.

5. understand the ethical, legal and professional responsibilities of their discipline and apply them in practice.

6. treat patients with dignity and respect and in doing so accept the role of patient advocate.

7. participate in clinical and basic research.

8. commit to self-evaluation and life-long learning.

9. challenge national certification examinations as set by the Canadian Society for Medical Laboratory Science

In summary, the proposed undergraduate program in Diagnostic Cytology will streamline the education process, reduce duplications and providing flexibility and additional choices to students in the Allied Health educational stream. It will make more efficient use of resources and courses already in existence. It will provide competent, skilled Diagnostic Cytologists providing good patient care and better prepare graduates to meet the challenges of new technologies and better methods of detection and monitoring.

CONTENT OVERVIEW
BACHELOR OF ALLIED HEALTH SCIENCES – DIAGNOSTIC CYTOLOGY
PRE-REQUISITE YEAR COMPULSORY COURSES

COURSE #,	CREDIT	AND NAME
002.130L	3	Structure and Modeling in Chemistry
002.131L	3	Introduction to Physical Chemistry
		OR
022.132L	3	Introduction to Organic Chemistry
022.132L	3	Anatomy of the Human Body
022.133L	3	Physiology of the Human Body
005.100M	3	Basic Statistical Analysis
099-111W	3	Introduction to University or other 3 credit W course
071.125L	6	Biology B

Note: equivalent courses are available at other post-secondary institutions

plus 6 credits of electives (Program recommends)

016.102L	3	General Physics I
016.103L	3	General Physics II

TOTAL CREDITS FOR YEAR 1: 30

Students would apply to University of Manitoba Diagnostic Cytology Program after completing the pre-requisite year.

DIAGNOSTIC CYTOLOGY DIPLOMA
YEAR 2 COMPULSORY COURSES

MLSC101	3	Human Workplace Relations**
MLSC100	3	Laboratory Safety and Risk Management**
163.2CA	6	Cytopathology 1 (Gynecological Cytology)
163.2CB	6	Cytopathology 2 (Non-gynecological Cytology)
163.2CC	3	Cytopathology 3 (Cytopreparatory Techniques)
163.2CD	15	Cytopathology 5 (Clinical Education 1)
MLSC104	3	Elementary/Human Biopathology**

TOTAL CREDITS YEAR 2: 39

YEAR 3 COMPULSORY COURSES

MLSC205L	3	Microanatomy***
MLSC308L	3	Histotechnology***
163.3CE	6	Cytopathology 4 (Fine Needle Aspiration)
163.4CF	15	Cytopathology 6 (Clinical Education 2)
MLSC109	3	Basic Immunology**

ELECTIVE COURSE

MLSC 105(L)	3	Phlebotomy/pre and post analytical processing**

Note:** courses available through distance education or RRC
*** equivalent courses available through the UofM

TOTAL CREDITS YEAR 3: 30 (33 with elective in phlebotomy)

Total credits for Diagnostic Cytology diploma program: 99 (102 with elective in phlebotomy)

Optional Degree Completion Year
YEAR 4 COMPULSORY COURSES

015.274	3	Ethics in Biomedicine
060.210	3	Microbiology A
163.4DU	3	Clinical Immunology
163.4CG	6	Cytopathology 7 (Clinical Education 3)
163.4DY	3	Management in Laboratory medicine
068.245	3	Research methods
022.228(L)	3	Cell Biology

Plus 6 CREDITS OF ELECTIVES
(Sample list)

060.211L	3	Microbiology B
060.301L	3	Mechanisms of Microbial Disease
015.129	3	Critical Thinking
120.302	6	Introduction to Human Genetics
077.120	6	Introductory Sociology
060.277L / 022.277L	3	Elements in Biochemistry I
060.278L / 022.278L	3	Elements in Biochemistry II

TOTAL CREDITS YEAR 4: 30

Total credits for Bachelor of Allied Health Science in Diagnostic Cytology: 129 (132)

Program Enrolment

What is the program's initial projected enrolment? 1st year: from University One: 3 students

Due to the high student/instructor ratio required to teach microscopic interpretation skills, there is a maximum of three students per year in each year of the training program

2nd year: maximum 3 students
3rd year maximum 3 students
Degree completion year: maximum 3 students

This projection is consistent with past enrollment, is endorsed by the program accreditation team and is based upon projected manpower needs as well as resources available for clinical practicum

Labour Market Information

What labour market need is the program expected to meet?

The program is expected to meet the need of public and private cytology laboratories in the province of Manitoba. At the present time there are no unemployed Diagnostic Cytologists in the Province of Manitoba. There is a problem getting replacement staff for casual coverage in both the private and public labs. Manitoba relies heavily on the graduates of this program to provide critical services as all Diagnostic Cytologists working in the province are graduates of the Health Sciences Centre program, with the exception of two Diagnostic Cytologists trained prior to 1986. Recruiting and retaining staff not trained within the province has proven unsuccessful.

While the graduates have sometimes had to leave the province, they have found jobs within a short time of graduation. The following information shows the employment situation within six months of the time of graduation. (Source: School of Cytotechnology)

1990	3 graduates	all employed full time
1991	3 graduates	2 employed full time
1992	3 graduates	2 employed full time, 1 changed profession
1993	2 graduates	both employed full time
1994	no graduates	
1995	4 graduates	2 employed full time, 2 employed part time
1996	3 graduates	2 employed full time, 1 went back to school
1997*	2 graduates	both employed full time

(* decision made to take in 1 class every second year based on lack of provincial need.)

1998	no graduates	
1999	2 graduates	both employed full time
2000**	no graduates	

(** decision made to intake into the program yearly based on projected provincial staffing needs and article published in the Canadian Journal of Medical Laboratory Science)

2001	3 graduates	1 employed full time, 1 unknown, 1 continued with education
2002	2 graduates	both employed fulltime
2003**	2 graduates	both employed fulltime (one term, one permanent)

**In an article written by Roy Neifer in the Canadian Journal of Medical Laboratory Science (60:1998, 92-95) it becomes obvious that the attrition rate for Diagnostic Cytologists is going to increase significantly after the year 2000. He expressed concern that meeting the future staffing needs by the year 2005 may be difficult with current training trends. This will certainly pertain to our province.

The recently instituted Manitoba Cervical Cancer Screening Program has been assessing human resources. They have determined that there is a 22.7% staffing shortage at the time of writing this proposal. There is a future shortage of 35% anticipated in the next 5 years. These figures were determined by discussions with employers in the province.

How dos this program fit with Manitoba's stated economic, social and other priorities?

The program recognizes the importance of high-skilled workers in building a strong provincial economy and helps to provide a solution to the issue of recruitment and retention of a skilled workforce in Manitoba.
It is in line with Manitoba Health's commitment to provide the people of Manitoba with the best possible health care through high quality service delivery.
The field of Diagnostic Cytology has always been a female-dominated profession. It provides an excellent opportunity to increase gender representation in science and technology.

What agencies, groups, institutions were consulted regarding the development of the program?

EDUCATIONAL INSTITUTIONS:

The program has been developed as a joint effort between the University Of Manitoba (Faculty of Medicine), Red River College (Department of Health and Applied Science), and the Health Sciences Centre School of Diagnostic Cytology.

EMPLOYERS

The program proposal has the support of the major employers of Diagnostic Cytologists within the province of Manitoba, including the Winnipeg Regional Health Authority's Laboratory Program Team, Regional Health Authorities of Manitoba, and Private Laboratories providing diagnostic cytology services.

PROFESSIONAL ORGANIZATIONS

Canadian Society for Medical Laboratory Science (CSMLS) certifying body for the Diagnostic Cytologists in Canada

The Manitoba Society of Medical Laboratory Technologists (MSMLT) has provided input and guidance in the development of the program

The International Association of Medical Laboratory Technologists (IAMLT) supports the addition of a degree, as most countries of the developed world require degree based training as an entrance to practice for the profession

OTHER

Manitoba Cervical Cancer Screening Program based through CancerCare Manitoba.

FINANCIAL INFORMATION

See program submission

BACHELOR OF ALLIED HEALTH
PROPOSED 4 YEAR DEGREE
DATE: July, 2003

Diagnostic Cytology with Diploma Exit

Co-requisites: Computer fundamentals
CPR (must be completed before Clinical Rotation)
Medical Terminology (self-study)

YEAR 1 -UNIVERSITY 1- (Pre-requisite year)

COURSE #,	CREDIT	AND NAME
002.130	3	Structure and Modeling in Chemistry
002.131	3	An Introduction to Physical Chemistry
		OR
002.132	3	Introduction to Organic Chemistry
022.132	3	Anatomy of the Human Body
022.133	3	Physiology of the Human Body
071.125	6	Biology B
005.100M	3	Basic Statistical Analysis
099.111W	3	Introduction to University or any 3 credit W course

6 credit hours of electives
Program recommends:

077.120	6	Introductory Sociology
017.120	6	Introductory to Psychology

TOTAL CREDITS FOR YEAR 1: 30

DIAGNOSTIC CYTOLOGY DIPLOMA PROGRAM

YEAR 2
COMPULSORY COURSES

COURSE #,	CREDIT	AND NAME	SITE	TERM	PRE-REQ	COMMENTS
MLSC 101	3	Human Workplace Relations (legal and ethical expand)**	RRC	3		RRC Instructors
MLSC 100	3	Laboratory Safety and Risk Management**	RRC	1		
022.306L	3	Comparative animal histology	UofM	2		
OR						
MLSC 205L	3	Microanatomy	RRC	1		
163.2CAL	6	Cytopathology 1 (Gynecological Cytology)	HSC	1,	Includes 4 week clinical	
163.2CBL	6	Cytopathology 2 (Non-gynecological Cytology)	HSC	2		
163.2CCL	3	Cytopathology 3 (Cytopreparatory Techniques)	HSC	1, 2	Includes 2 blocks of 2 weeks clinical	
163.2CD	15	Cytopathology 5 (Clinical Education 1)	HSC	inter-session	(April to August inclusive – full time) 20 weeks	

** courses also available by distance education

TOTAL CREDITS YEAR 2: 39

YEAR 3
COMPULSORY COURSES

MLSC 109	3	Basic Immunology	RRC	1		
022.414L	3	Microtechnique	UofM	2		
	or					
MLSC 308L	3	Histotechnology	RRC	2		
MLSC 104	3	Elementary/Human Biopathology	RRC	3		MM3
163.3CE	6	Cytopathology 4 (Fine Needle Aspiration)	HSC	1,		
163.3CF	15	Cytopathology 6 (Clinical Education 2I)	HSC	2	(January to May inclusive – full time)	22 weeks

ELECTIVE COURSE

MLSC 105L	3	Phlebotomy/pre and post analytical processing, POCT**	RRC/HSC	2		

** equivalent course available by distance education

TOTAL CREDITS YEAR 3: 30 (33 with elective in phlebotomy)
TOTAL CREDITS FOR DIPLOMA PROGRAM: 99 (102 with elective in phlebotomy)

Entry to practice: Students who have successfully completed the required 99 credits in the program are eligible to write the CSMLS national certification examination.

YEAR 4 (Optional Degree Completion)

COMPULSORY COURSES

163.4DY	3	Management in Laboratory Medicine	UofM	1	
060.210L	3	Microbiology A	UofM	1	002.131 or 002.132
015.274	3	Ethics in Biomedicine	UofM	1	
163.4CG	6	Cytopathology 7 (Clinical Education 3)	UofM/HSC	inter-session	10 weeks clinical practice***
163.4DU	3	Clinical Immunology	UofM		
068.245	3	Research Methods	UofM	2	
022.228	3	Cell Biology	UofM	1	

***This course is REQUIRED for those students who take Year 4 full time and do not maintain clinical competence. Students who take the degree completion part-time and maintain a minimum of 900 practice hours/year are not required to take this course but require 12 credit hours of electives.

Plus 6 credit hours of electives (sample list):

060.236L/ 002.236L	3	Biochemistry I	UofM	1	[002.131]
060.237/ 022.237L	3	Biochemistry II	UofM	2	060.236
125.302	6	Introduction to Human Genetics	UofM	1-2	
015.129	3	Critical Thinking	UofM	2	
034.124W	3	Native Studies	UofM	2	
005.200	3	Basic Statistical Analysis II	UofM	1 or 2	005.100
060.211L	3	Microbiology B	UofM	2	060.210
077.120	6	Introduction to Sociology	UofM	1-2	

TOTAL CREDITS YEAR 4: 30

TOTAL CREDITS FOR BACHELOR OF ALLIED HEALTH SCIENCE IN DIAGNOSTIC CYTOLOGY: 129 (132)

April 5, 2004

Report of the Senate Planning and Priorities Committee on the Proposal to Introduce a Bachelor of Allied Health Sciences (Diagnostic Cytology)

Preamble

1. The terms of reference of the Senate Planning and Priorities Committee (SPPC) are found in the *Senate Handbook*, Section 8.32, wherein SPPC is charged with making recommendations to Senate regarding proposed academic programs.

2. The Faculty of Medicine, in collaboration with the School of Cytotechnology at the Health Sciences Centre in Winnipeg, proposes the creation of a 4-year Bachelor of Allied Health Science degree in Diagnostic Cytology. The proposed degree will incorporate the School's existing 2-year diploma program in Diagnostic Cytology in a revised baccalaureate program. In the revised program, 30 credit hours of University 1 will precede the diploma, and another year of study will follow it to complete the proposed degree.

Observations

1. Diagnostic cytology deals with the morphology of malignant cells and their detection through microscopic examination. This specialty is essential to the treatment of cancer in general, and screening for cervical cancer in particular. Diagnostic cytologists work directly with patients and with other health professionals to collect, prepare, and interpret specimens, and to provide accurate diagnoses in an efficient manner. A wide range of skills is required to practise in this field, including critical thinking, communication, organization, and technical expertise. In-depth knowledge of cellular structure and biological mechanisms of disease is also required. The field is changing rapidly due to new technology and changes in the health care system; diagnostic cytologists must be able to adapt to such rapid change. Nationally and provincially we are experiencing a shortage of diagnostic cytologists, which is expected to worsen in the next 2 to 3 years based on current enrollment and projected retirement figures.

2. The proposed Bachelor of Allied Health Science degree in Diagnostic Cytology will be built upon a 2-year diploma program that is now being offered by the School of Cytotechnology at the Health Sciences Centre in Winnipeg, with some courses being offered at Red River College. For students who are not already practising professionals in this field, 30 credit hours of University 1 would be required before entering the diploma program, and a year of study would be required after completing it, in order to receive the baccalaureate degree. (The substance of the degree year is described in Observation 3.) The main objective of the proposed program is for students in Diagnostic Cytology to develop, as a supplement to their discipline-specific clinical education, their understanding of

subjects shared with other allied health professionals. The proposed program is also suggested to streamline the educational process, reduce duplication, and prepare students for national certification examinations. The Canadian Society for Medical Laboratory Science has set a degree requirement to write certification examinations, beginning in 2010.

3. Cytotechnologists who have been recently certified by the Canadian Society for Medical Laboratory Science, or who are active, practising members in good standing with the College of Medical Laboratory Technologists of Manitoba, may apply to complete their degree with a program of 30 credit hours. This program would require coursework in statistics, ethics, health care administration or management, immunology, research methods, and cell biology, with up to 9 credit hours of elective courses (e.g., genetics, social science, critical thinking). Fifteen or more of these credit hours would have to be taken at the University of Manitoba.

4. A total of 63 credit hours of new University of Manitoba courses in Allied Health Sciences are proposed. These courses are the ongoing Health Sciences Centre Cytology courses that would be cross-listed in the University of Manitoba Calendar.

5. The proposed degree will address human resource needs for health care in Manitoba. Diagnostic cytology services are provided by the regional health authorities of Manitoba and by private laboratories. Currently, there are no unemployed diagnostic cytologists in Manitoba. All but two of those currently working are graduates of the Health Sciences Centre's program, with no recent exceptions, and recruitment from other provinces has not been successful in the past. The Manitoba Cervical Cancer Screening Program estimated that the shortage of diagnostic cytologists was 22.7% in 2000 and would rise to 35% by 2005. These estimates are supported by studies published in the *Canadian Journal of Medical Laboratory Science*, which have appeared as recently as 2002.

6. The maximum enrollment in the proposed program, based on the Health Sciences Centre and University of Manitoba's joint assessment of community needs and available resources, is currently set at 3 students per year.

7. Resources:
   a. $30,371 ongoing baseline funding and startup of $800 are being sought from COPSE, to cover a portion of administrative support ($26,335) sessional teaching and library services ($4,036), and one-time library costs ($800). The share of administrative and sessional costs is based on an equal division among four new Bachelor of Allied Health programs; it is not proportionate to enrollment in these programs. For example, the new program in medical imaging will have up to 10 times as many students as this program will have entering each year.

b. $9,688 annually will be needed for clinical support. It is anticipated that these baseline funds will come from Manitoba Health.

c. Tuition revenue is projected to increase from $10,350 in the first year to $22,770 in the second year and $34,155 in the third year, assuming the maximum enrollment of 3 students each year. These funds will partly offset the operating costs of the program.

8. The School of Diagnostic Cytology has a dedicated student laboratory bench area, a shared lecture area for students, and an office for teaching staff, which are sufficient physical facilities for the proposed program. Equipment valued at approximately $50,000 in all, including microscopes and overhead and slide projectors, will be available from the Cytology Laboratory.

9. Statements from the libraries indicate that they can support the proposed program with an initial expenditure of $800 to improve the monograph collection. Annual costs of $733.80 per student are necessary to support library services that will be provided to the program.

Recommendations:

The SPPC recommends that:

Senate approve and recommend to the Board of Governors that it approve the introduction of a Bachelor of Allied Health Science in Diagnostic Cytology.

The Vice-President (Academic) and Provost not implement the program until he is satisfied that sufficient new funding is in place adequately to fund the implementation and on-going operation of the program.

Respectfully submitted,

Juris P. Svenne, Chair
Senate Planning and Priorities Committee

/jml

March 22, 2004

Report of the Senate Committee on Curriculum and Course Changes regarding the proposal of the Faculty of Medicine for a Bachelor of Allied Health Science (Diagnostic Cytology) degree Program

Preamble

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) is found in section 8.21 of the *Senate Handbook,* wherein SCCCC is charged "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".

2. SCCCC met with representatives of the Faculty of Medicine to discuss the proposal for Bachelor of Allied Health Science (Diagnostic Cytology) on March 4, 2004.

Observations

1. The development of the degree program in Diagnostic Cytology stems from an on-going need for Diagnostic Cytologists in Manitoba, and a desire to streamline the education process for Diagnostic Cytologists, while providing the necessary background science knowledge. At present, an undergraduate degree in Science or a general diploma in Medical Laboratory Science are required for admission to the current diploma program.

2. The program was developed in cooperation with the Faculty of Medicine, Red River College and the Health Sciences Centre, who is responsible for the current diploma and has delivered this program in Manitoba since 1962.

3. COPSE waived the statement of intent for this program.

4. No degree program exists in Manitoba at this time. At present, following the completion of a B.Sc. or diploma program in general medical laboratory science, students complete a 24-month diploma offered by the Health Sciences Centre School of Diagnostic Cytology and begin practicing following the successful completion of the Canadian Society of Medical Laboratory Scientists (CSMLS) certification examinations.

5. The proposed program structure is a 1+2+1 structure in that the first year of the program is 30 credit hours of University 1 courses, 24 credit hours of which are prescribed, followed by the 22-month HSC School of Diagnostic Cytology Diploma, at which point students will be eligible to write the CSMLS certification examinations. The final, optional degree completion year would then be completed at the University of Manitoba. The degree completion year includes courses in Immunology, cell biology, microbiology, ethics, research methods, laboratory management with elective courses in genetics, biochemistry, and virology.

6. Diploma trained Diagnostic Cytologists who are presently practicing in the field will have the opportunity to take advantage of a degree-completion option to upgrade their skills, particularly with emerging knowledge.

7. Nine new courses are being proposed as part of this program, totaling 63 credit hours.

8. Letters of support from faculties offering courses in the program have been received, and any new costs associated with the additional offerings of these courses have been accounted for in the budget plans of the program.

9. The program contains 10 weeks of clinical training within the degree program, above the clinical training having taken place in the HSC School of Diagnostic Cytology Diploma Program.

10. SCCCC has received a statement of library resources indicating that there are sufficient holdings in the Neil John Maclean Health Sciences Library to support the program provided that there is an infusion of new resources for start up costs and an annual baseline allocation to support the collection.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends that Senate approve the proposal for a Bachelor of Allied Health Science (Diagnostic Cytology) within the Faculty of Medicine together with the following new courses:

Courses to be introduced:

163.2CA **Gynecological Cytology** **+6L**
This course designed to teach the detection of cellular abnormalities in the squamous epithelium of the cervix and in the glandular epithelium of the endocervix and endometrium. The course covers the fundamentals of cellular interpretation by light microscopy and basic pathology of the female genital tract. Emphasis is on microscopic skills required to locate and interpret cellular changes in cervical smears (Pap smears). *(Prerequisite: 022.132, 022.133)*

163.2CB **Non-gynecological Cytology** **+6L**
This course covers the diagnosis of malignancy in non-gynecological clinical specimens using light microscopy. It includes basic pathology of the organ systems studied. The emphasis is on the principles of cell identification and microscopic skills required to interpret cellular changes in specimens from a variety of body sites such as the respiratory system, urogenital system, gastrointestinal system, and specimens such as effusions and cerebrospinal fluid.
(Prerequisites: 022.132, 022.133, 163.2CA)

163.2CC **Cytopreparatory Techniques** **+3L**
This course covers standard methods of preparing gynecological and non-gynecological specimens for light microscopic evaluation. The students specimen requirements, specimen accessioning and process to cytopreparatory techniques, staining and final distribution. The student learns procedures for assisting in the procurement of fine needle aspiration specimens. The course includes a three-week clinical education rotation.
(Prerequisite: 163.2CA, 163.2CB)

163.2CD **Clinical Education 1** **+15**
Course reinforces the microscopic skills in screening and diagnosing cellular changes acquired

in Gynecological Cytopathology and Non-gynecological Cytopathology. The students screen and interpret exfoliative gynecological and non-gynecological material. *(Prerequisites: 163.2CA, 163.2CB, 163.2CC)*

163.3CE **Fine Needle Aspiration** **+6L**
This course covers the principles of preparation and microscopic skills required for screening and interpreting cellular material obtained by fine needle aspiration. Current practice includes material obtained from the common body sites such as Breast, liver, pancreas, thyroid, salivary gland, lymph node, lung, prostate and kidney. Students will participate in the evaluation of specimens for ancillary techniques. (*Prerequisites: 163.2CA, 163.2CB, 163.2CC)*

163.3CF **Clinical Education 2** **+15**
This second clinical education rotation strengthens the student's screening speed and interpretative abilities. The student screens and interprets fine needle aspiration material in addition to the exfoliative material that the student had examined in the first clinical rotation. The student assists in the procurement routine of fine needle aspiration material. (*Prerequisites: 163.2CA, 163.2CB,163.2CC, 163.3CE*)

163.4DU **Clinical Immunology** **+3**
Theoretical course covering topics in immunopathology and the analytical techniques used to diagnose immunoproliferative, myeloproliferative and lymphoproliferative disorders and auto-immune diseases or techniques used to assess donors and recipients for organ transplantation. *(Pre-requisites: MLSC109, MLSC307 or instructor permission)*

163.4DY **Management in Laboratory Medicine** **+3**
The provision of quality laboratory analyses and efficient reporting of results relies on the application of sound principles of administration and supervision outlined in this course.

163.4CG **Clinical Education 3** **+6**
This third clinical rotation is required for the students who took the Degree completion full-time and do not maintain clinical competence. This rotation allows the student to screen and interpret material, maintaining the competency needed entry to practice. *(Prerequisites: 163.3CE, 163.3CF)*

NET CHANGE IN CREDIT HOURS: **+63**

Respectfully submitted,

Professor B.L. Dronzek, Chair
Senate Committee on Curriculum and Course Changes

/jml

Program Proposal

Institution: University of Manitoba

Title of Proposed Programs: Bachelor of Science in Physical Geography

Faculty/Department in which the proposed program is to be located:

Faculty of Environment

Department of Environment and Geography

Name of Person(s) responsible for the Program: Dean Leslie King

Credential to be Offered: B.Sc. Physical Geography

Date of Program Implementation: January, 2005

President's/Rector's Signature

Date

Date Received by Council on Post-Secondary Education:

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the report to Senate.

Section 1: Program Description

1. Describe the program, including each area of concentration, as it would appear in a catalogue.

The Faculty of Environment offers programs leading to the following degrees:

B. Sc. Physical Geography (Major)
B. Sc. Physical Geography (Major Coop)
B. Sc. Physical Geography (Honours)
B. Sc. Physical Geography (Honours Coop)

Department of Environment and Geography Head: Dr. Jill Oakes, Ph.D.

Department Office: 213 Isbister Building

Telephone: (204) 474-9081

Program Information

Physical geography includes the study of the environment through aspects of atmospheric science, geomorphology, biogeography and hydrology, all of which draw upon the natural and applied sciences to understand the natural environment. Atmospheric sciences examine the physical and biophysical processes at and near the earth's surface shaping climate and determining the weather. These processes are examined over cascading scales, from the local to global scales. Hydrology studies the flow of water between the earth's surface and the atmosphere, including the quantity and quality of water resources as well as the spatial variability in the hydrologic cycle. The examination of processes at the earth's surface and the associated landforms is called geomorphology. Various sub-disciplines include weathering and erosional processes, volcanoes, glacial and river systems. Biogeography studies the interrelationships between the biospheric environment and the physical environment. Formation of soils, ecosystem and biomes cycles and components, as well as human interaction with the physical environment are all topical areas of biogeography.

Geomatics is an emerging subfield, referring to the techniques of spatial data acquisition, handling and analysis. Included within this sub-field have been geographic applications of computer analysis and spatial modeling, spatial statistics, remote sensing technology, and Geographic Information Systems. Many of these techniques have their origins in the applied sciences, but both physical and human geographers have contributed greatly to their development and application. The application of such methodologies in geographic fields, such as resource management, urban geography, climate change, and applied geography, has also provided closer co-operation between human and physical geography, as well as promoting considerable interdisciplinary research with other University disciplines.

The Major and Honours B.Sc. degree programs in Physical Geography serve students who desire advanced study in the academic subject matter of various themes contained within Physical Geography. The Honours program in particular is intended for students interested in the opportunity for exposure to advanced geographic research. As such, the Honours program demands higher academic performance. Students who are ineligible to enter Honours in their second year may establish this in the following year on the basis of their improved scholastic performance. Students in the B.Sc. (Physical Geography) have the opportunity to complete a Minor of 18 credit hours from a department offering this option at the University of Manitoba. Students are not permitted, however, to complete this Minor in the B.A. (Geography). Students can declare only one Minor. Students should contact a student advisor for further information. The degree programs may be pursued on a full or part-time basis.

Students in the Major or Honours programs may wish to participate in the Cooperative Education Option. Coop students are required to complete 6 credit hours of course work associated with the program and pay all additional fees.

Scan 16

Streams

Students are required to complete a stream approved by the academic advisor. Students in the Major or Major (Coop) are required to complete a minimum of 30 credit hours of 200 (or higher) level courses, of which at least 18 credit hours must be at or above the 300 level. In addition, Major students must achieve minimum performance requirements. The B.Sc. Honours and Honours Coop programs require students to complete 39 credit hours in a Stream, of which at least 24 credit hours are defined at or above the 300 level and also includes 053.466 Honours Thesis. Streams are currently available in *Atmospheric and Hydrological Sciences*, *Geomatics* and *Physical Geography*.

Major

To qualify for the degree, Bachelor of Science in Physical Geography (Major), a student must complete 120 credit hours with passing grades ("D" or better) and a minimum cumulative grade point average of 2.00 on the courses that constitute the degree. Students must complete all faculty requirements. There is no limit to the number of credit hours a student completes provided he/she does not exceed 18 credit hours of failed and/or repeated courses.

Honours

To qualify for the degree Bachelor of Science in Physical Geography (Honours), a student must complete 120 credit hours with a minimum cumulative grade point average of 3.00 on the courses that constitute the degree. Students must complete all faculty requirements. There is no limit to the number of credit hours a student completes provided he/she does not exceed 18 credit hours of failed and/or repeated courses.

A Cooperative Education Option is available to students registered in either the Major or Honours degree programs in Physical Geography. Coop is an arrangement whereby students spend alternating periods in university and employment. There are several advantages to a cooperative education program for students. One benefit is that students are able to acquire both theoretical knowledge and practical experience. This experience assists them in selecting areas of specialization for their senior courses in their chosen Stream. As well, Coop assists students in their professional development by enhancing networking opportunities, participation in conferences and workshops and provides the foundation of skills and strategies required in searching and acquiring employment after graduation. Students can also defray some of the costs of their university education through these work term placements.

Students electing to participate in the Cooperative Option will be assessed a one time program fee with their formal application for admission to the Cooperative Option. The program fee covers the registration in 128.398, 128.399, and 128.498. Once a student has accepted a position with a Coop employer, no portion of the program fee will normally be refunded.

The Cooperative Option consists of two employment work terms totaling eight months and six credit hours of mandatory course work. An optional third work term and associated work term report is available to interested students. Each academic term and each employment term commence in January, May or September. The work term must provide a minimum of 420 hours of employment. While on an employment term, a Cooperative Option student is not permitted to take more than three additional credit hours of academic work outside of the requirements of the Coop placement.

Students must register in the appropriate 1.5 credit hour Work Term Reprot concurrently with the employment placement. This is outlined as follows:

Placement Course	**Corequisite Report Course**
128.398 Coop Work Term 1 (0)	128.391 Coop Work Term Report 1 (1.5)
128.399 Coop Work Term 2 (0)	128.392 Coop Work Term Report 2 (1.5)
optional	
128.498 Coop Work Term 3 (0)	128.491 Coop Work Term Report 3 (1.5)

Entrance Requirements for the B.Sc. Physical Geography

Students complete the first-year of their degree program in University 1 where they select courses from a wide variety of offerings in Environment, Arts, Science and other faculties/schools. Students are encouraged to complete 016.102, 016.103, 136.150 and 136.130 and a "W" course in their first year of study.

Entry to the Major (Coop), Honours and Honours (Coop) requires the completion of additional requirements which can be summarized as follows:

Bachelor of Science Physical Geography Entry Requirements

Degree Program in Physical Geography	Minimum Number of Credit Hours	Minimum Cumulative Grade Point Average	Additional Entrance Requirements
Honours	48	3.00	No failures on entry; a grade of "B" or better in 053.129 (or 053.120); a grade of "C+" or better in 12 credit hours from 016.102 (or 016.105), 136.150 (136.151, 136.152, or 136.153), 007.134, 016.103 (or 016.107), 136.130 (or 136.131)
Honours (Coop)	60	3.00	128.290; students must satisfy the requirements for entry/ continuation in the regular program and (normally) have completed 053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255, 016.102, 016.103, 136.130 and 136.150.
Major (Coop)	60	2.50	128.290; students must satisfy the requirements for entry/ continuation in the regular program and (normally) have completed 053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255, 016.102, 016.103, 136.130 and 136.150.

Minimum Performance Requirements for Continuation in, and Graduation from, the Degree Programs in the B.Sc. Physical Geography

A student's academic performance will be assessed with his/her application for admission to the Faculty of Environment and following each *April examination series* thereafter. The Student Advisor must approve a student's registration each Regular and Summer session. Any revisions in this schedule should also be approved prior to the end of the registration revision period.

To be in **"good standing"** and permitted to continue in a degree program, a student must achieve the minimum standards at each point of assessment. This assessment is based on the student's minimum cumulative Grade Point Average; the grades received in each of 053.129, 053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255, 053.368; and the number of failures and/or repeated courses after admission to the Faculty of Environment.

Minimum Performance Requirements for the Degree Programs in B.Sc. Physical Geography

	Minimum Performance Requirements			Graduation Requirements[1]	
Degree Program (Credit Hours)	**Minimum Cumulative Grade Point Average (GPA)**	**Maximum Credit Hours of Failures/ Repeated Courses**	**Physical Geography Core: Minimum Grade Requirements in 053.129, 053.2aa, 053.2ab, 053.2ca, 053.244, 053.253, 053.2xx, 053.255, 053.368**	**Stream (200 Level or Higher)**	**Coop Option Courses**
Major (120)	2.00	18	"C"	•30 credit hours of which at least 18 credit hours must be at the 300 level of higher; with a minimum cumulative GPA of 2.00.	
Major Coop (120)	2.50	"	"	"	128.235, 128.290, 128.390, 128.391, 128.398, 128.392, 128.399; (128.491 and 128.498 are optional)
Honours (120)	3.00	18	"B" in 053.129; "C+" grades in others	•39 credit hours of which at least 24 credit hours must be at the 300 level or higher; •completion of 053.466; •minimum "C+" minimum grade in each course.	
Honours Coop (120)	3.50	"	"	"	128.235, 128.290, 128.390, 128.391, 128.398, 128.392, 128.399; (128.491 and 128.498 are optional)

[1]students must successfully complete a minimum of 60 credit hours at the University of Manitoba to satisfy the Residency Requirement. The courses used to satisfy the requirement must be acceptable for credit in this B.Sc. degree program in Faculty of Environment.

To **graduate** from the Bachelor Science in Physical Geography with the intended degree designation, a student must achieve the minimum standards and graduation requirements outlined above following the final year *April or August examination series* and satisfy all degree course requirements in the foundation, physical geography core and Stream.

Students in the Honours program who do not meet these minimum performance requirements for continuation or graduation will be withdrawn from the degree program and placed in the Major provided they are eligible based on their performance. Students who do not meet the minimum performance requirements of the Major will be placed on probation or academic suspension as defined in section 3.12 Probation and Academic Suspension in this *Chapter*.

Students withdrawn from the Honours program as a result of their inability to meet minimum performance requirements will have the notation, "Required to Withdraw from the Honours Program," recorded on their transcript of marks. Similarly, students withdrawn from the Major program will have the notation, "Required to Withdraw from the Program," recorded on their transcript of marks.

B.Sc. Physical Geography: Dean's Honour List and Graduating with Distinction or First Class Honours

Students enrolled in a minimum of 24 credit hours of course work during the Regular term and achieving a cumulative Grade Point Average of 3.50 or higher will be placed on the **Dean's Honour List**.

To obtain a **Degree with Distinction** a student must achieve a minimum cumulative Grade Point Average of 3.50 on the last 60 credit hours in the degree program.

To graduate with **First Class Honours** a student must achieve a cumulative Grade Point Average of 3.50 on a minimum of 48 credit hours of courses complete in the last two years in the degree program.

B.Sc. Physical Geography, Program Code: 053

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS[1,2] 120 CREDIT HOURS			
053.129 (or 053.120)	053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255	053.262	053.368
016.102[3], 136.150[4]	016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	9 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	
016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7]	3 credit hours from 002.130, 002.131, 005.100, 005.200, 071.125[6], 074.101, 136.170[7]		
Plus 6 credit hours from the Faculty of Arts.			

A "W" course should be taken in University 1 or Year 2. Note: Students may wish to consider 053.351 or 053.358 or another course in Geography to fulfill this requirement.

Plus a **Stream,** approved by the academic advisor. Honours Stream requirements are as follows: 39 credit hours of 200 (or higher) level courses, of which 24 credit hours must be at the 300 or 400 level and include 053.466.

HONOURS COOPERATIVE OPTION[1,2] 120 CREDIT HOURS			
053.129 (or 053.120)	053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255	053.262	053.368
016.102[3], 136.150[4]	016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	9 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	128.399, 128.392 (128.498 and 128.491 are optional)
016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7]	128.235, 128.290	128.390, 128.398 128.391	
Plus 6 credit hours from the Faculty of Arts.			

A "W" course should be taken in University 1 or Year 2. Note: Students may wish to consider 053.351 or 053.358 or another course in Geography to fulfill this requirement.

Plus a **Stream,** approved by the academic advisor. Honours Coop Stream requirements are as follows: 39 credit hours of 200 (or higher) level courses, of which 24 credit hours must be at the 300 or 400 level and include 053.466.

NOTE: The Cooperative Education Option is typically a five-year program.

MAJOR[1,2] 120 CREDIT HOURS			
053.129 (or 053.120)	053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255	053.262	053.368
016.102[3], 136.150[4]	016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	9 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	
016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7]	3 credit hours from 002.130, 002.131, 005.100, 005.200, 071.125[6], 074.101, 136.170[7]		
Plus 6 credit hours from the Faculty of Arts.			

A "W" course should be taken in University 1 or Year 2. Note: Students may wish to consider 053.351 or 053.358 or another course in Geography to fulfill this requirement.

Plus a **Stream,** approved by the academic advisor. Major Stream requirements are as follows: 30 credit hours of 200 (or higher) level courses, of which 18 credit hours must be at the 300 or 400 level.

MAJOR COOPERATIVE OPTION[1, 2]	120 CREDIT HOURS		
053.129 (or 053.120)	053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255	053.262	053.368
016.102[3], 136.150[4]	016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	9 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	128.399, 128.392 (128.498 and 128.491 are optional)
016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7]			
	128.235, 128.290	128.390, 128.398 128.391	
Plus 6 credit hours from the Faculty of Arts.			

A "W" course should be taken in University 1 or Year 2. Note: Students may wish to consider 053.351 or 053.358 or another course in Geography to fulfill this requirement.

Plus a **Stream,** approved by the academic advisor. Major Coop Stream requirements are as follows: 30 credit hours of 200 (or higher) level courses, of which 18 credit hours must be at the 300 or 400 level.

NOTE: Students in the Major Coop are required to maintain an overall cumulative Grade Point Average of 2.50. The Cooperative Education Option is typically a five-year program.

MINOR 18 CREDIT HOURS	
053.129 (or 053.120)	15 credit hours selected from 200, 300, or 400 level courses designated as Physical Geography (PS) or Techniques (TS) courses (see Other, Note 1).

NOTES:
[1]entry into the degree programs is summarized in X.X.X in this *Chapter*.
[2]the courses required in this program will satisfy the university mathematics requirement.
[3]016.105 and 016.107 may be used in lieu of 016.102 and 016.103 respectively.
[4]136.151, 136.153, 136.168, 136.169 may be used in lieu of 136.150.
[5]007.144 or 007.123 may be used in lieu of 007.134.
[6]071.101 and 071.100 may be used in lieu of 071.125.
[7] 136.171 and 136.173 can be used In lieu of 136.170

IMPORTANT: The Honours and Major programs need not be completed in the course order described in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

2. Where possible, list the courses (title, number, semester credit hours, and catalogue description) that would constitute the requirements and other components of the proposed program. Indicate which courses are currently offered and which will be new.

Within the Bachelor of Science (Physical Geography) proposal, there are a number of new courses that need to be introduced. Most of these new courses are replacement for present courses that are not offered or have become obsolete due to recent advances in the field of physical geography. The new courses are outlined in this document by using a combination of letters and numbers in the course number. The department is presently offering the courses required by students for the Cooperative Education Option. These courses are designed to provide students with a foundation in professional development including aspects of workplace performance and conduct, WHMIS and MSDS protocol, environmental health and safety, legislation, environment sector requirements etc. Students are required to network and participate in conferences, seminars and workshops with practicing professionals to encourage greater mentorship before the student graduates from the undergraduate degree program. Lastly, students must complete technical reports in association with work term placements that links the conceptual framework for environmental issues, as delivered in academic courses, with the application of these concepts to the professional sector.

The following represents courses in the Physical Geography program that comprise the required "core" courses in the proposed degrees.

053.120 Introductory Geography (6) This course studies aspects of the human and physical worlds and their interrelationships. Students may not hold credit for both 053.120 and 053.129, 053.128, or the former 053.121, 053.124, 053.125 or 053.127. ***This is an existing course.***

053.129 Introduction to Physical Geography (PS) (3) This course studies aspects of our physical environment: climate, landforms, soils and vegetation. Students may not hold credit for both 053.129 and 053.120, or the former 053.121. ***This is an existing course.***

053.2aa Introduction to Thematic Cartography (PS) (3)L An introduction to the principles of map compilation and reproduction, including analysis and cartographic display of spatially referenced data. Emphasis will be placed on cartographic data manipulation, generalization, and symbolization, map design, visualization and communication. Not to be held with the former 053.222. Prerequisite: a grade of "C" or better in a minimum of three credit hours Geography courses numbered at the 100 level, or written consent of the instructor. ***This is a new course which will replace the former course 053.222 Introduction to Cartography and Digital Map Analysis (6).***

053.2ab Introduction to Geographic Information Systems (PS) (3)L An introduction to the fundamental theoretical concepts of geographic information systems including acquisition, processing and analyzing environmental and socio-economic data. Topics to be covered include georeferencing, spatial data structures, processing, output and applications. Not to be held with the former 053.222 or 053.373. Prerequisite: a grade of "C" or better in a minimum of three credit hours Geography courses numbered at the 100 level, or written consent of the instructor. ***This is a new course which will replace the former course 053.222 Introduction to Cartography and Digital Map Analysis (6).***

053.2ca Introduction to Process Hydrology (PS) (3) This course introduces students to the near-surface components of the hydrological cycle, including the processes of precipitation, evaporation, water-biosphere interactions, infiltration, overland and stream flow. Not to be held with the former 053.362. Prerequisite: 053.129 (or 053.120) and one of 016.102 (or 016.105) or 136.150 (or 136.151, 136.152, or 136.153); or written permission from the instructor. ***This is a new course which will replace the former 53.362 Geographical Hydrology (6).***

053.2xx Atmospheric Thermodynamics, Clouds and Precipitation (PS) (3) Critical thermodynamic processes are discussed that are associated with the Earth's atmosphere including dry and moist processes, phases of water, stability, cloud development and precipitation processes. Prerequisite: 053.129 (or 053.120) with a grade of "C" or better; 136.150 (or 136.151, 136.152, or 136.153). ***This is a new course.***

053.244 Geography of Natural Hazards (PS) (6) Physical environmental hazards to human settlement and economy are examined with particular attention to meteorological, soil erosion, mass wasting, earthquake, and volcanic phenomena. Prerequisite: a grade of "C" or better in 053.129 (or 053.120) and 007.134, or written consent of the instructor. ***This is an existing course.***

053.255 Geomorphology (PS) (3) This half-course surveys a broad array of landforms in the world and the geomorphic processes responsible for their creation. Attention is strongly focused on those landform processes originating at the earth's surface. Students may not hold credit for both 053.255 and the former 053.251. Prerequisite: a grade of "C" or better in 053.129 (or 053.120) and 007.134, or written consent of the instructor. ***This is an existing course.***

053.262 Geography of Environmental Changes (PS) (3) This course will introduce concepts of environmental change and examine in detail past, present and future environmental changes. The human response to, and the role of policy in dealing with environmental change will be discussed. Prerequisite: a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of the instructor. ***This is an existing course.***

053.368 Research Methods in Geography (TS) (6)L A study of the process of model building in physical and human geography. The analysis and interpretation of data in testing geographic models. Students may not hold credit for 053.368 and the former 053.247. Prerequisite: a grade of "C" or better in 053.253 or 005.100, or written consent of the instructor. ***This is an existing course.***

Core Courses offered outside the Department of Environment and Geography:

Students select 27 credit hours from the following list of courses

002.130 University 1 Chemistry: Structure and Modelling in Chemistry (3)L Atomic and molecular models and their applications to chemistry, including a discussion of solid, liquid, and gaseous states, and of mixtures. Not to be held with the former 002.123 or 002.127. Prerequisites: Applied Mathematics 40S or Pre-calculus Mathematics 40S, or the former Mathematics 40S (300), and Chemistry 40S (or equivalent) or 002.090 (P) or a minimum grade of "B" in 002.100 (or the former 002.125). ***This is an existing course.***

002.131 University 1 Chemistry: An Introduction to Physical Chemistry (3)L Thermochemistry, chemical thermodynamics, and chemical kinetics. Not to be held with 002.124 or the former 002.123 or 002.128. Prerequisite: 002.130 (or the former 002.127) (C). ***This is an existing course.***

005.100M Basic Statistical Analysis 1 (3) An introduction to the basic principles of statistics and procedures used for data analysis. Topics to be covered include: gathering data, displaying and summarizing data, examining relationships between variables, sampling distributions, estimation and significance tests, inference for means. Not to be held with 005.222 (or the former 005.101, 005.120, 005.201, 005.210, 005.211, 005.220, 005.221, 005.231, 005.241 or 005.250). ***This is an existing course.***

005.200 Basic Statistical Analysis 2 (3) The study of estimation and hypothesis testing procedures for means and proportions in one, two and multiple sample situations, introduction to the analysis of variance; regression and correlation analysis; optional topics may include nonparametric procedures, design of experiments, probability models. Not to be held with 005.222 (or the former 005.120, 005.201, 005.211, 005.221, 005.231, 005.241, 005.250). Prerequisite: 005.100 (C), (or the former 005.101 (C) or 005.210 (C)). ***This is an existing course.***

007.134 The Dynamic Earth (3)L An introduction to dynamics of the Earth's Interior and surface that created the environment in which life evolved and that continue to change the world in which people live now. Taught with 007.225. Not to be held with 007.123, 007.124, 007.144, 007.225 (or the former 007.126, 007.127, 007.132, or 007.133). This is an existing course. ***This is an existing course.***

016.102 General Physics 1 (3)L A non-calculus survey course in Physics covering topics in mechanics and thermodynamics with illustrations drawn from the life and physical sciences. This course, together with the sequel 016.103, is recommended for students seeking either a single, comprehensive course in Physics or entry into health science programs. It may also be used for entry into the Honours Physics program ("B+" or better) or the Major Physics program ("B" or better). Not to be held with 016.105, 016.141 or 016.142 or the former 016.118, 016.120, 016.121 or 016.127. Prerequisites: Either Physics 40S, 016.090 (with a "C" or better), or equivalent; and either Pre-calculus Mathematics 40S, Applied Mathematics 40S (with 70 per cent or better), or equivalent. It is strongly recommended that students attain a minimum of 70 per cent as the average of their marks in Physics 40S and Pre-calculus Mathematics 40S. This is an existing course. ***This is an existing course.***

016.103 General Physics 2 (3)L A non-calculus survey in Physics covering topics in electricity, magnetism, optics and modern physics, with illustrations drawn from the life and physical sciences. This course, together with its prerequisite 016.102, is recommended for students seeking either a single comprehenive course in physics, or entry into health schience programs. Not suitable for entry to Major or Honours in Physics. This course may not be held with 016.141 or 016.142 or the former 016.120. Prerequisite: 016.102 or 016.105 (or the former 016.118). This is an existing course. ***This is an existing course.***

071.125 Biology B (6)L A course in the theories and principles of biology, the origin of life, cell theory, metabolism, genetics, the classification of animals, micro-organisms, and plants, the relation between structure and function, ecology and evolution. Not to be held with 071.100, 071.101, 071.201 or the former 071.123. NOTE: 071.125 is a prerequisite to further courses in Microbiology and to most courses in Botany and Zoology. It is also intended for students proceeding to Agricultural and Food Sciences, Dentistry, Human Ecology, Medicine, Optometry, Pharmacy, Veterinary Science, Physical Education, and Science. ***This is an existing course.***

074.101 Introductory Computer Science 1 (3)L An introduction to computer programming using a procedural high level language. Not to be held with the former 074.112, 074.121, 074.123, or 074.125. ***This is an existing course.***

136.130 Vector Geometry and Linear Algebra (3L) An introduction to vectors, matrices, systems of linear equations and three-dimensional geometry. Not to be held for credit with 136.131, 136.168, or the former 006.121, 013.128, 013.129, or 013.146. Prerequisite: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of "C" or better in either 136.100 or the Mathematical Skills course taught by the Continuing Education Division. **NOTE:** A minimum grade of 70 per cent in Applied Mathematics 40S may be used as a prerequisite to this course. This is an existing course. ***This is an existing course.***

136.150 Introduction to Calculus (3L) Differentiation and integration of elementary functions, with applications to maxima and minima, rates of change, area and volume. Not to be held with 136.151, 136.152, 136.153, 136.168, 136.169, or the former 006.125, 010.115, 013.128, 013.129, 013.139, or 013.159. Prerequisite: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of "C" or better in either 136.100 or the Mathematical Skills course taught by the Continuing Education Division. ***This is an existing course.***

136.170 Calculus 2 (3)L Theory and techniques of integration, curve sketching, volume, arc length, surface area and partial derivatives. Not to be held with 136.169, 136.171, 136.173 or the former 006.126, 013.149, or 013.159. Prerequisite: 136.150 (C), 136.151 (C), 136.152 (C), 136.153 (C) or 136.168 (C), or the former 006.125, 010.115, 013.128, 013.129, or 013.139. ***This is an existing course.***

Additional Core Courses for Cooperative Education Option:

128.235 Technical Communication in the Environmental Sectors (3)L An introduction to technical communication skills required for environmental practitioners in research, government, and industry. The course covers technical writing and literature search techniques, business writing including reports, memos and e-mails, professional presentation skills, and fundamental internet skills. Practical experience is gained through assignments and laboratory exercises. Not to be held for credit with the former 128.205. ***This is an existing course.***

128.290 Professional Development in the Environmental Sectors 1 (1.5) Through self directed learning students are introduced to the environmental sectors and issues including workplace health and safety, the respectful workplace, managing workloads and expectations, and professionalism. The course is a mandatory requirement to Cooperative Education Option admission. Prerequisite: 128.235. This is an existing course. ***This is an existing course.***

128.390 Professional Development in the Environmental Sectors 2 (1.5) Attendance and participation in seminars, conferences and workshops to foster greater interaction between students and practitioners in the environmental sectors. Students improve professional skill sets through assignments and mock interviews. The normal sequence for participation is after completion of 128.398. Prerequisites: 128.290; minimum of 60 hours of university credit. This is an existing course. ***This is an existing course.***

128.391 Coop Work Term Report 1 (1.5) Work term report, completed in conjunction with the coop placement, which is designed to integrate professional experiences with the concepts and theories explored through academic study. Students must be admitted into the Coop program to be registered, and receive

credit. Prerequisite: 128.290. Corequisite: 128.398. This is an existing course. ***This is an existing course.***

128.392 Coop Work Term Report 2 (1.5) Work term report completed in conjunction with the coop placement, which is designed to integrate professional experiences with the concepts and theories explored through academic study. Students must be admitted into the Coop program to be registered, and receive credit. Prerequisite: 128.398. Corequisites: 128.399 and 128.391. ***This is an existing course.***

128.398 Coop Work Term 1 (0) Work assignments in business, industry, research or government for students registered in the Honours or Major Cooperative program. Students must be registered in 128.391 concurrently. Prerequisite: 128.290; Corequisite: 128.391. ***This is an existing course.***

128.399 Coop Work Term 2 (0) Work assignments in business, industry, research or government for students registered in the Honours or Major Cooperative program. Students must be registered in 128.392 concurrently. Prerequisite: 128.398; Co-requisites: 128.390 and 128.391. ***This is an existing course.***

128.491 Coop Work Term Report 3 (1.5) Work term report, completed in conjunction with the coop placement, which is designed to integrate professional experiences with the concepts and theories explored through academic study. Students must be admitted into the Coop program to be registered, and receive credit. Prerequisite: 128.399. ***This is an existing course.***

128.498 Coop Work Term 3 (0) Work assignments in business, industry, research or government for students registered in the Honours or Major Cooperative program. Students must be registered in 128.491 concurrently. Prerequisite: 128.399; Corequisite: 128.491. ***This is an existing course.***

Stream Courses

Students are required to complete a stream approved by the academic advisor. Students in the Major and Major (Coop) are required to complete a minimum of 30 credit hours of 200 (or higher) level courses, of which at least 18 credit hours must be at or above the 300 level. In addition, major students must achieve the minimum performance requirements. The B.Sc. Honours and Honours Coop programs require students to complete 39 credit hours in a stream, of which at least 24 credit hours are defined at or above the 300 level and also includes 053.466 Honours Thesis. Streams are currently available in *Atmospheric and Hydrological Sciences*, *Geomatics* and *General Physical Geography*.

Atmospheric and Hydrological Sciences - This stream will focus on atmospheric science, specifically on the generic sub-fields of climatology, meteorology and, to an extent, hydrology. The stream will integrate across both temporal and spatial scales of atmospheric science by examining those physical and biophysical processes and shape our climate and determine our weather. Issues will be examined over cascading scales that extend from the micro- to global scale.

053.3ca Introduction to Microclimates and Micrometeorology (PS) (3) This courses introduces the concept of energy balance climatology and examines relationships among climate, microclimate, and environments of the Earth's surface and human-made environments. Studies include bioclimates and hydroclimates. Not to be held for credit with 053.344. Prerequisites: 053.2ca; 053.2xx; or written permission of the instructor. ***This course replaces the former 053.344 Applied Climatology (6).***

053.3xx Atmospheric Dynamics, Storms and Radar (PS) (3) The course covers the critical dynamic processes that are associated with the Earth's atmosphere including forces that control wind, the kinematics of the wind field, general circulation, hodographs, thermal wind, laws of motion, mid-latitude circulations, convective storms and the utility of weather radar. Prerequisite: 053.2xx; or written permission of the instructor. ***This is a new course.***

053.4ca Boundary-Layer Climatology and Micrometeorology (PS) (3) A seminar course on advanced topics in microclimatology and micrometeorology. Prerequisite: 053.3ca, or written permission of the instructor. ***This is a new course.***

053.4dd Global Climate Change (PS) (3) General Circulation Models are described and their applications to the study of Global climate change are examined. Students are familiarized with contemporary research

approaches in the field of climate change through team projects coordinated with external "clients" working in the area of climate change. Prerequisite: written permission of the instructor. ***This is a new course.***

053.4xa Modeling the Physical Climate (PS) (3) Numerical modeling techniques and applications to the physical climate and atmosphere. Students learn aspects of basic FORTRAN programming and explore various models that demonstrate physical concepts and their associated errors. Offered in 2005-2006 and in alternate years thereafter. Prerequisite: 053.3xx, 053.3ca; or written permission of the instructor. ***This is a new course.***

053.456 Techniques in Climatology (PS) (3) This course overviews the theory basis and its application for the measurement and analysis of meteorological elements that form the basis of microclimate and micrometeorological research. Prerequisite: 053.3ca or permission of the instructor. ***This is an existing course.***

053.4xx Synoptic Meteorology and Weather Analysis (PS) (3) Applied aspects of meteorology are described in terms of weather analysis and forecasting techniques for synoptic-scales and meso-scales using various meteorological tools. An introduction to severe weather forecasting techniques will also be described. Prerequisite: 053.3xx; or written permission of the instructor. ***This is a new course.***

and appropriate selection from:

136.230 Linear Algebra 2 (3) A continuation of 136.130 (136.131 or the former 013.146). Finite dimensional vector spaces; linear transformation and matrices; eigenvalues and eigenvectors; diagonalization and applications; inner product spaces. Not to be held with 136.235 or the former 013.235 or 013.246. Prerequisites: 136.130 (C) or 136.131 (or the former 013.146) (C), and one of 136.150 (C), 136.151 (C), 136.152 (C), 136.153 (C) or 136.169 (or the former 013.139, 013.159, or 006.125) (C). ***This is an existing course.***

136.260 Numerical Mathematics 1 (3) Elementary techniques of numerical solution of mathematical problems: solution of equations, finite differences, interpolation, systems of equations, numerical differentiation and integration. Not to be held with the former 010.344 , 006.220 or 006.331. Prerequisites: 136.130 or 136.131 (or the former 013.146) (C), 136.169 (C) or 136.170 (C) or 136.171 (C) or 136.173 (or the former 006.126 or 013.149 or 013.159) (C) and 074.101 (C) or equivalent, or consent of instructor. ***This is an existing course.***

136.280 Ordinary Differential Equations with Applications 1 (3) An introduction to the theory of ordinary differential equations, and practical techniques of solution, principally relating to first order and linear higher order equations; linear systems. Applications to problems in science and other selected areas. Not to be held with the former 006.202, 006.226, 006.235. Prerequisite: 136.130 (C) or 136.131 (or the former 013.146) (C). Corequisite: 136.270 (or the former 013.239) (D) or 136.275 (or the former 013.234) (D). ***This is an existing course.***

016.220 Electricity and Magnetism (6)L Electric field, electric potential, Gauss' law, capacitors, dielectric materials, magnetic fields, Ampere's law, magnetic induction, magnetic materials, displacement current, integral form of Maxwell's equations, Ohm's law, Kirchhoff's laws, DC circuit analysis, equivalent circuits, AC circuit analysis, complex impedance, RLC circuits, magnetic coupling, transformers, diodes and diode circuits. Not to be held with 016.260 or 016.261. Prerequisites: one of 016.107 (or the former 016.106 or 016.120) (C), or 016.102 (C+) and 016.103 (C+) (or the former 016.118 or 016.127 and the former 016.128) (C); and one of: 136.150 (C), 136.151 (C), 136.152 (C), 136.153 (C) or 136.169 (or the former 006.125, 013.139 or 013.159) (C).
Corequisites: 136.120 (or the former 006.144 or 006.147) (D) and one of 136.169 (D), 136.170 (D), 136.171 (D) or 136.173 (or the former 006.126, 013.149, or 013.159) (D). ***This is an existing course.***

016.226 Optics (3)L A survey of refraction, reflection, simple lens systems and optical systems, dispersion, achromatism and an elementary treatment of diffraction, interference, and polarization. Prerequisites: One

of: 016.107 (C) (or the former 016.106 or 016.120), or 016.102(C+) and 016.103(C+) (or the former 016.128) (C); and one of 136.150 (C), 136.151 (C), 136.152 (C), 136.153 (C) or 136.169 (C) (or the former 006.125 (C), 013.139 (C), or 013.159 (C)). Corequisites: 136.130 (D) or 136.131 (D) (or the former 013.146 (D)), and one of 136.169 (D), 136.170 (D), 136.171 (D) or 136.173 (D) (or the former 006.126 (D), 013.149 (D) or 013.159 (D)). ***This is an existing course.***

016.227 Physical Topics for Biologists A (3) Physical topics with a relation to biology are discussed. Radiative transfer of energy, boundary layers, heat conduction, diffusion, mass transport, and the use of radioactive materials in biology are considered. Prerequisite: 016.107 (C) (or the former 016.106 or 016.120) (C) or 016.103 (C) or consent of department. ***This is an existing course.***

016.235 Energy Sources: Physical Aspects (3) A detailed investigation of the physical aspects of energy production and utilization. Critical comparison of the various energy sources including solar, nuclear, fossil, and wind will be emphasized. The physics of energy collection, production, storage, and distribution will be discussed in the context of thermodynamics, radiation, solid state and nuclear physics. Prerequisite: 016.107 (or the former 016.106 or 016.120) (C) or 016.103 (C) or consent of department. ***This is an existing course.***

001/022/065.237 Principles of Ecology (3)L Principles of ecology at the individual, population, community, and ecosystems levels. This course is also given in the Zoology department as 022.237 and in the Faculty of Agricultural and Food Sciences as 065.237. It is the normal prerequisite to other courses in ecology. Not to be held with 001.228 (022.229). Prerequisite: 071.125 (C). Pre- or corequisite: 005.100. ***This is an existing course.***

040.350 Landscapes and Biophysical Processes (3) Soil and landscape description and interpretation; surficial geology and water; land patterns and slope morphology; hydrologic and ecosystem processes; role of soil and landscape in the functioning of terrestrial ecosystems. ***This is an existing course.***

040.351 Fundamentals of Soils and Landscapes (3) Soils as part of the land ecosystem, and as structured bodies of both biotic and abiotic components that interact within landscapes. An examination of the terrestrial environment as a resource; its behaviour, limitations, fate and use. ***This is an existing course.***

<u>Geomatics</u> - This stream will focus on the methodologies of geographic information systems (GIS), remote sensing, global positioning systems (GPS), computer modeling and mapping. The stream will constitute a B.Sc. degree when the student conducts an applied study focusing on physical geographic issues. The stream will also be available to students who are enrolled in the department's B.A. program.

053.3ac Introduction to Remote Sensing (TS) (3)L The course is an introduction to the principles of optical, active and passive microwave remote sensing. A review of satellite and sensors and their geographic applications will be presented, along with digital image analysis techniques. Laboratory assignments will provide hands-on experience in dealing with remote sensing data. Students may not hold credit for both 053.3ac and the former 053.454. Prerequisite: A grade of "C" or better in 053.129 (or 053.120) and three credit hours in 016.102, 016.103, 136.130, 136.150, or written consent of the instructor. ***This is a new course.***

053.373 Geographic Information Systems (PS) (3)L An introduction to geographic information systems (GIS) input, processing, output and applications. Prerequisite: a grade of "C" or better in 53.2ab, or written consent of the instructor. ***This is a new course***

053.4tt Advanced Methods in Remote Sensing (TS) (3)L This course provides instruction in the current theory and application of remote sensing technology to Earth system Science. Emphasis will be placed on the processing and interpretation of remote sensing imagery and the integration of remote sensing data with other spatial data. Students may not hold credit for both 053.4tt and the former 053.454. Prerequisite: A grade of "C" or better in 053.3ac or written consent of the instructor. ***This course replaces the former 053.454 Remote Sensing and Its Geographical Applications (3).***

053.459 Spatial Analysis in Geography (TS) (3) Theory and techniques of spatial statistical data exploration, inference and hypothesis testing as they pertain to geographic analysis is explored. The role of spatial analytical techniques in field investigations, GIS and remote sensing applications are discussed. Prerequisite: A grade of "C" or better in 053.368 and in 136.130, 136.150, or written permission of the instructor. ***This is an existing course.***

053.472 Advanced Methods in Geographic Information Systems (TS) (3) This course focuses on the practical application of techniques used in Geographic Information Systems (GIS) and the development of techniques used in Geographic Information Systems (GIS) and the development of GIS models. The development, testing and presentation of GIS data, models and results are studied. Students may not hold credit for both 053.472 and the former 053.468. Prerequisite: A grade of "C" or better in 053.373 and 053.368, or written consent of instructor. ***This is an existing course.***

and appropriate selection from:

005.312 Topics in Regression Analysis (3) Linear regression and correlation, multiple regression, polynomial regression, selecting the best regression model. Not to be held with 005.347. Prerequisite: 005.200 (or the former 005.201, 005.211 or 005.221) (C). ***This is an existing course.***

005.349 Time Series Analysis (3) Trend and seasonal components, exponential smoothing by the multiple regression method, the Box-Jenkins Methodology, analysis of seasonal data. Prerequisite: 005.312 (C)or 005.347 (C). ***This is an existing course.***

007.206 Introductory Geophysics (3)L An introduction to geophysical exploration, Earth physics, satellite geophysics and remote sensing. Emphasis will be on quantitative modelling and will include geophysical measurements and handling of data. Prerequisites: one of 007.123 (C), 007.124 (C), 007.134 (C), or 007.144 (or the former 007.132 or 007.133) (C), three credit hours from 136.130 (C), 136.131 (C), 136.150 (C), 136.151 (C), 136.152 (C) or 136.153 (C), and three credit hours from 016.102 (C) or 016.105 (C); or consent of instructor. ***This is an existing course.***

016.227 Physical Topics for Biologists A (3) Physical topics with a relation to biology are discussed. Radiative transfer of energy, boundary layers, heat conduction, diffusion, mass transport, and the use of radioactive materials in biology are considered. Prerequisite: 016.107 (C) (or the former 016.106 or 016.120) (C) or 016.103 (C) or consent of department. ***This is an existing course.***

053.377 Special Topics in Geography (3) This course will vary from year to year depending on the needs of students and the interests of instructors. Prerequisite: written consent of department head. ***This is an existing course.***

136.230 Linear Algebra 2 (3) A continuation of 136.130 (136.131 or the former 013.146). Finite dimensional vector spaces; linear transformation and matrices; eigenvalues and eigenvectors; diagonalization and applications; inner product spaces. Not to be held with 136.235 or the former 013.235 or 013.246. Prerequisites: 136.130 (C) or 136.131 (or the former 013.146) (C), and one of 136.150 (C), 136.151 (C), 136.152 (C), 136.153 (C) or 136.169 (or the former 013.139, 013.159, or 006.125) (C). ***This is an existing course.***

136.270 Calculus 3A (3) Calculus of several variables. Not to be held with 136.275 or the former 013.234, 006.227, 006.228, 006.243, or 013.239. Prerequisites: 136.130 or 136.131 (or the former 013.146)(C) and one of 136.169(C), 136.170(C), 136.171(C), or 136.173 (or the former 013.149, 013.159, or 006.126)(C). ***This is an existing course.***

16.271 Calculus 3B (3) This course deals with the concepts of "modern physics" which arose near the turn of the twentieth century and revolutionized our view of the physical world. Einstein's Theory of Relativity, the Bohr-Rutherford atom and wave-particle duality are discussed. The impact of these ideas on modern society is explored. N.B. This course should be preceded by 016.270 (or the former 016.131). Not to be

held with the former 016.124, 016.132, or 071.129. This course is not to be held for credit in a Major or Honours program in Physics and Astronomy. ***This is an existing course.***

General Physical Geography – This general stream will provide the student with instruction across the major sub-fields of physical geography, including: climatology, hydrology, geomorphology, biogeography, soil science and geomatics. The student will be allowed to 'direct' the course content of their degree providing for a flexible balance in understanding the processes that link the spheres of the Earth system.

053.358 Landforms (PS) (6) Present-day and Pleistocene glacial processes and landforms are examined in one term; slope processes and forms as well as the activities of rivers comprise the other. Human modification of these systems is discussed. Students may not hold credit for both 053.358 or the former 053.340 and 007.349. Prerequisite: a grade of "C" or better in one of: 053.120, 053.129, 053.255, or the former 053.121, 053.251 or written consent of the instructor. ***This is an existing course.***

053.373 Geographic Information Systems (PS) (3)L An introduction to geographic information systems (GIS) input, processing, output and applications. Prerequisite: a grade of "C" or better in 53.2ab, or written consent of the instructor. ***This is a new course***

053.376 Special Topics in Geography (6) This course will vary from year to year depending on the needs of students and the interests of instructors. Prerequisite: written consent of the instructor. This is an existing course. ***This is an existing course.***

053.377 Special Topics in Geography (3) This course will vary from year to year depending on the needs of students and the interests of instructors. Prerequisite: written consent of department head. ***This is an existing course.***

053.469 Natural Hazards and Disasters (PS) (3) This course provides a conceptual and methodological survey of natural hazards. Characteristics and causes of geophysical disasters, human exacerbation of hazards, and human adjustments to and perceptions of natural threats will be studied. Prerequisite: 053.244, 053.255, and 053.358; or permission of the instructor. ***This is an existing course.***

053.472 Advanced Methods in Geographic Information Systems (TS) (3) This course focuses on the practical application of techniques used in Geographic Information Systems (GIS) and the development of techniques used in Geographic Information Systems (GIS) and the development of GIS models. The development, testing and presentation of GIS data, models and results are studied. Students may not hold credit for both 053.472 and the former 053.468. Prerequisite: A grade of "C" or better in 053.373 and 053.368, or written consent of instructor. ***This is an existing course.***

and the appropriate selection from:

007.239 Environmental Geology (3) Examination of geological processes and material as they interact with human activities, environmental planning, and management. Also available by correspondence. Prerequisite: university geology or 053.129 (C) or 053.120 (C) or consent of instructor. ***This is an existing course.***

007.250 Introduction to Mineraology (3) An introduction to the chemistry, physics and classification of minerals. Brief, systematic description of about 200 of the most important minerals. Laboratory: hand specimen identification. Not to be held with the former 007.207 or 007.262. Prerequisite: one of 007.123 (C), 007.124 (C), 007.134 (C), or 007.144 (or the former 007.132 or 007.133) (C) or consent of instructor. ***This is an existing course.***

007.252 Igneous and Metamorphic Petrology (3) The classification, occurrence and origin of igneous and metamorphic rocks. The study and identification of rocks using hand specimens and thin sections. Not to be held with the former 007.251. Prerequisite: 007.250 (or the former 007.207 or 007.262) (C). ***This is an existing course.***

007.253 Sedimentary Petrology and Stratigraphy (3) An introduction to sedimentary deposits and principles of stratigraphic analysis. Occurrence, classification and origin of sedimentary deposits. Facies concept, stratigraphic classification and correlation. Not to be held with the former 007.251, 007.388 or 007.389. Prerequisite: 007.250 (or the former 007.207 or 007.262) (C). ***This is an existing course.***

007.349 Glacial Geology and Geomorphology (3) Principles of landform development with emphasis on glacial deposition. Aerial photo and map interpretation in lab. Not to be held with 053.358. Prerequisite: 007.253 (or the former 007.251, 007.388 or 007.389) (C). ***This is an existing course.***

040.350 Landscapes and Biophysical Processes (3) Soil and landscape description and interpretation; surficial geology and water; land patterns and slope morphology; hydrologic and ecosystem processes; role of soil and landscape in the functioning of terrestrial ecosystems. This is an existing course. ***This is an existing course.***

040.351 Fundamentals of Soils and Landscapes (3) Soils as part of the land ecosystem, and as structured bodies of both biotic and abiotic components that interact within landscapes. An examination of the terrestrial environment as a resource; its behaviour, limitations, fate and use. This is an existing course. ***This is an existing course.***

001/022/065.237 Principles of Ecology (3)L Principles of ecology at the individual, population, community, and ecosystems levels. This course is also given in the Zoology department as 022.237 and in the Faculty of Agricultural and Food Sciences as 065.237. It is the normal prerequisite to other courses in ecology. Not to be held with 001.228 (022.229). Prerequisite: 071.125 (C). Pre- or corequisite: 005.100. ***This is an existing course.***

022.350 Limnology (3) Lectures and laboratories providing an introduction to the physics, chemistry and biology of lakes. Prerequisite: 022.237 (001.237 or 065.237) (C). ***This is an existing course.***

3. Outline the educational objectives of the program.

The Department of Environment and Geography requires a B.Sc. program to allow it to be competitive with other Geography Departments in North America and to provide graduates with certification of their strong scientific training, which is necessary for some employment opportunities in the private sector or for continuing their academic career as a graduate student in a science stream.

Physical Geographers within the department have existing expertise in the broad areas of atmospheric sciences, process hydrology, geomorphology, biogeography, and in the geographic technologies – Geomatics (spatial statistics, remote sensing and G.I.S.). We propose to build directly upon these strengths to ensure that the B.Sc. program is competitive nationally and internationally.

The principal educational objectives of the B.Sc. (Physical Geography) program are:

1) to strengthen the academic background of those students interested in the scientific aspects of contemporary physical geography;

2) to provide adequate skills for students pursuing careers in fields within physical geography and quantitative geographical methodologies;

3) to provide a range of degree options similar to those existing in the overwhelming majority of Canadian and North American Geography Departments;

4) to integrate more effectively physical geographical academic training with undergraduate and graduate level teaching in Environmental science at the University of Manitoba;

5) to respond to specific recommendations of the President's Task Force Report.

4. Describe the expected learning outcomes in terms of skills, knowledge, attitudes or other attributes which students will accrue as a result of their involvement in the proposed program.

Graduates of the degree program will be poised to assume responsibilities throughout the environmental sectors dealing with issues of climatology, weather, geomatics and biophysical processes. They will be skilled to deal with the multidimensional problems that typify environmental issues and well equipped to work in the areas of research, technical assistance, and policy development whether it be in the public or private sectors.

5. If applicable, describe any selective admissions policy or specific criteria for students selecting this as a major field of study.

There are no selective admissions policies. All students in the degree program will have the minimum Faculty admission requirements satisfied. The diversity in courses that constitute admission eligibility (e.g., 9 cr. hrs from a list) is meant to acknowledge the multiple perspectives to studying physical geography issues. The specific admission requirements are outlined in the Program Information section of this submission.

6. Describe the extent to which this program is central to the institutional mission and planning priorities of the campus.

The University of Manitoba has created a Faculty of Environment, which brings together the expertise and resources to promote collaboration in the delivery of interdisciplinary environmental training and research on campus. The Faculty of Environment has identified a gap in opportunities for researchers and students working in the area of physical geography in both competencies demanded by industry and the educational training delivered to students in the physical geography discipline. Currently students with an interest in the topic are streamed through the Bachelor of Arts (Geography). However, the structure of the B.A. program does not accommodate the requirements of a strong foundation of introductory sciences and consequently this has impacted the demands that can be placed on students to understand many of the concepts and theory that would otherwise be demanded in these courses. With the creation of the degree program in physical geography, there is a pedagogical sequence that will address issues of depth in introductory sciences, progression in the concepts and theories on topics in physical geography, and advanced studies in one of three available streams. This will ensure that students have depth within the areas of physics and mathematics to further advance studies in physical geography. Students will have a broad understanding across the major areas of climatology, geomatics and land processes that can then be applied to further studies at an advanced level.

The degree program represents a crucial advancement in the Faculty of Environment that compliments innovation in research in such important areas that include climate change, physical climate modeling, circumpolar research, disaster research and biogeography. Consequently, the Faculty has placed this degree program as a priority for the upcoming year.

7. If a similar program exists or is in the process of being developed elsewhere in the province, describe the similarities or differences in the credential to be awarded, the area(s) of specialization, and the specific academic content of the program or course of study.

Brandon University offers a 4-year Specialist and General B.Sc. degree in Physical Geography. No Honours degree in Physical Geography is presently being awarded. The "core" courses for these programs are similar to the ones proposed in this proposal (geographic techniques courses), however the "streams" available to students are more extensive. The "streams" or "concentrations" available include Environmental Science and Water Science. The B.Sc. (Physical Geography) being proposed includes other aspects of physical geography, including geomatics, geomorphology and atmospheric sciences.

The University of Winnipeg offers a B.Sc. in Physical Geography (4-year and Honours) with similar "core" courses, including the general physical and biological sciences. This program also has various streams or fields of studies that the students may pursue in physical geography. These fields of study include climatology, geomorphology, techniques and biogeography. The first three streams are similar to those included in this proposal. The difference between these degree offerings and the ones included in this proposal are the academic content of each stream. For example, the Climatology field of study at the University of Winnipeg provides students a broad overview of climatology and meteorology, while the atmospheric and hydrological sciences stream in the present proposal allows students to delve deeper in the physics and techniques related to atmospheric processes, as well as the coupling between the hydrosphere and atmosphere.

Another aspect of this degree proposal that is unique to this degree is the inclusion of a Cooperative Education option. This option will allow students to gain invaluable experience in their chosen stream prior to graduation, as well as give them an edge in competing for jobs once they graduate.

SECTION II: Market Need and Market Demand for the Program

1. Where possible, state the specific local or provincial needs for graduates of the proposed program for the next 3 to 5 years. This should include projections of both ongoing and future demand in regions throughout Manitoba; as well as evidence and supporting data of market need for the program.

Today, GIS and remote sensing are found in many areas, for example natural resource management, land information, precision agriculture, urban planning, utilities, transportation, social services, economic development and public safety. In many of these areas GIS and remote sensing have become indispensable tools. A "Geospatial information specialist is one of the 21 hot jobs of the twenty-first century", U.S. News Online (Nov. 2002). "Estimates of between 150,000 and 300,000 GIS positions will be needed in the next 5 years" in the United States alone (Urban and Regional Information Systems Association). Industry Canada also acknowledges that the global markets for geomatics products are expanding rapidly, and GPS (Global Positioning Systems) is experiencing unprecedented growth. GIS is expected to experience continued strong growth. There is also a growing demand for industry-specific geomatics applications. Canada has become a world leader in geomatics technologies.

Environment Canada is very concerned about hiring skilled workers in the atmospheric and hydrologic science fields over the next 3-5 years and beyond. Due to increasing concerns about climate change, there is a need for skilled personnel to work in the operational, technical and research oriented streams of atmospheric and hydrologic sciences, not only in government, but academic and private sectors (hydroelectric and environmental & engineering firms). Manitoba (and Canada as a whole) has one of the most abundant fresh water supplies in the world, and with climate change concerns it is not known how these supplies will change in the future, and if they do change, how we adapt to those changes. With the atmosphere and hydrology being major factors in this change, government and industry are looking for qualified personnel to work in the areas of weather forecasting, weather & climate research, hydrologic monitoring and research, air quality/pollution and environmental contamination.

2. What are the probable employment destinations of program graduates?

Employment opportunities for graduates with a B.Sc. (Physical Geography) are available in both the public and private sectors. Various provincial and federal departments (i.e. Environment Canada, Canadian Centre for Remote Sensing, Canadian Ice Service and Natural Resources) hire physical geography graduates specializing in atmospheric and hydrologic science or geomatics. Just some examples of private sector national and local careers include environmental and engineering firms, Weather Network, and media outlets (television and radio). An increasing number of entrepreneurial opportunities in small business are also developing with improvements in computing capabilities. There are a wide variety of Manitoba employers for graduates from the B.Sc. program, including: Red River Community College, Keewatin and Assiniboine Community Colleges (for teaching), Manitoba Centre for Remote Sensing (technical & scientific expertise in Winnipeg), Manitoba Conservation (various offices), Linnet Geomatics (consulting firm in Winnipeg), KGS Consulting (Winnipeg), Dillon Engineering (Winnipeg), Manitoba Hydro (various offices), Canadian Wheat Board (Winnipeg), Meteorological Service of Canada (Winnipeg), Manitoba Emergency Response (various offices), and various mining companies in northern Manitoba.

3. Where appropriate, did industry, business and/or any other pertinent groups play a role in the development of this program and/or commit resources to its future?

Through professional and research contacts of various faculty members in the department, the B.Sc. (Physical Geography) program has solid connections with many of the potential employers noted above (in 2). Many of these private and public sector contacts have been consulted to ensure that students are trained to apply their skills in today's workforce. In the future, with the development of the Cooperative Education program, there will be continual feedback and input from the Cooperative Education employers in the discussion of student competencies and degree program curriculum gaps.

The degree program has been developed through comparisons with other institutions (Brandon University and University of Winnipeg for example) to ensure that a standard was achieved. As well, the program is sensitive to existing degree programs such as the Bachelor of Environmental Science to ensure that redundancy in curriculum is avoided.

While accreditation has not been formalized for physical geography programs, we have consulted heavily with geological sciences where it is well established and with the environmental where the process is currently underway. We believe that our current structure is sensitive to the demands for a strong foundation in the introductory sciences, to field and applied studies through laboratory based studies, and provides advanced studies in the major subjects of the discipline. Through the streams, the degree program has the opportunity to respond to innovation in the field and to respond to curriculum requirements that might be demanded with accreditation.

The Faculty of Environment intends to organize an external liaison industry advisory committee that will meet annually to review these undergraduate programs. In addition, the Faculty of Environment will continue to work collaboratively with the professional community to develop courses appropriate for undergraduate students. It will also continue to survey Coop employers to identify any gaps in the undergraduate programs that must be addressed through course introductions.

4. How does the program correspond with the province's economic, social and cultural priorities?

The Government of Manitoba, as well as the Federal Government, has mandated a clean, safe environment as one of the main priorities. This includes preserving our fresh water resources, improving air quality, providing timely severe weather warnings and better understanding climate change effects on the environment and economy. This undergraduate program will enhance Manitoba's (and Canada's) ability to achieve this goal by providing knowledgeable graduates in weather, climate, conservation, hydrologic and geomatics areas.

5. What potential does this program offer in terms of job creation and research and development?

The proponents of this proposal from the Department of Environment and Geography are involved in large national and international scientific research projects and all hold NSERC grants. These researchers explore aspects of the weather, climate, hydrology, and linkages to ecosystem function. Through their research connections with many public and private sector agencies, students have the opportunity to continue their careers in these research centres as well as continuing their studies as graduate students in collaboration with these outside agencies. In addition, an increasing number of entrepreneurial opportunities in small business are also developing with improvements in computing capabilities. Examples of these small business opportunities include software development, private consulting and educational material design.

SECTION III: Student Demand for the Program

1. What students are the programs intended to serve?

The B.Sc. Physical Geography degree program is intended for students interested in the scientific aspects of contemporary physical geography. It will be applicable to students who wish to study geography with a Science-based focus.

2. What is the evidence that provincial students are not being adequately served within existing program offerings in Manitoba?

The undergraduate degree options for 24 Canadian Geography Departments have been collected from the Internet and from university calendars. The University of Manitoba is in a minority in that it both lacks a B.Sc. program and provides fewer degree options than all the other institutions. The faculty in which the geography department resides appears immaterial in determining the range of degree options offered to students. The question to be asked is whether the lack of a B.Sc. program in the Department of Environment and Geography is a deterrent to attracting possible undergraduates. It would certainly appear so given the large growth in the science-based courses in geography departments over the past decade and by the success of geography graduates in the marketplace who have been trained in geographic technologies.

As the majority of Geography Departments in Canada offer both a B.Sc. and M.Sc. program, it is of concern that graduates with an Arts degree in Geography from the University of Manitoba, with equivalent training, may be at a competitive disadvantage in gaining admission to graduate programs elsewhere in Canada. In addition, our students may be at a competitive disadvantage in the Geomatics and scientific marketplaces when employees are confronted with a choice between equally trained students with B.A and B.Sc. degrees.

3. Provide evidence of student interest and demand for the program.

There is considerable interest among students to participate in physical geography programming. This has typically been supported through the Faculty of Science with students completing electives outside their Majors, as well as students in the Faculty of Arts completing the Geography major or minor requirements. With the restructuring and formal recognition of the discipline, it is expected that students who desire the advanced studies in areas of atmospheric, hydrologic and geomatic studies will be drawn to the degree program.

4. What are the projected enrolments for the program?

The anticipated enrolments for the degree program are expected to be small for the first three years, as the program becomes more recognized by undergraduate students. However, with a greater profile, it is expected that enrolments should achieve 25 students into second year on an annual basis leading to a total enrolment of approximately 80 students within 7 years of the degree program introduction.

5. Which programs currently offered by the institution are projected to lose enrolment to this program?

We expect that students will be drawn from science based programming since there is a significant requirement in the areas of physics and mathematics. Our enrolment is expected to be drawn from University 1, Bachelor of Environmental Science and from the Faculty of Science degree program students. We also expect a number of will come from the B.A. (Geography) program. Students presently registered in the B.A. (Geography) program with an interest and ability in physical geography disciplines will transfer into this new program.

6. What are the proposed growth limit and minimum enrolments?

Enrolment in this degree program is expected to increase as the support structure in put in place to support admission, student advising, promotion and recruitment. It is expected that the minimum enrolment will be realized in September 2004 as a result of the deployment of faculty and support staff, the lack of profile and need for promotion. With the support structures in place, it is envisioned that the programs will gain in popularity. We do not see a need to set enrolment caps now or in the future.

7. Project the numbers of graduates for the first 3 to 5 years of the program and, where appropriate, the anticipated number of program majors (full-time and part-time) for each of the first five years of the program.

The number of graduates will increase annually with the growth of the degree programs in the Faculty of Environment. By May 2009, it is expected that between 20-25 students will be graduating from this degree program (as indicated in the table below).

B.Sc (Physical Geography)	
Year 1	0
Year 2	0
Year 3	5
Year 4	15
Year 5	25

The expected student profile is as follows:

Honours	10%
Majors	70%
Majors/Honours Coop	20%

It is anticipated that few if any students will graduate within this program for the first couple of years due to the requirements and difference between this program and the B.A. (Geography). Most students admitted into the program in September 2004 will take upwards of two years to satisfy the degree requirements and will likely be eligible for graduation in May 2007 (Year 3)

8. What steps have been taken to ensure participation and success in the program by under-represented groups, such as women, the disabled, minorities and aboriginal students?

The Faculty of Environment considers the inclusion of under-represented groups a high priority and will participate in the promotion and advocacy of these individuals to the greatest extent possible. This includes active participation in programs such as "Campus Life Manitoba", Disability Services, and the organization of support structures offered through the Dean's Office Student Services. The Faculty of Environment, and the faculty teaching in the B.Sc. (Physical Geography) intend to work with Aboriginal programs on and off campus to provide off campus instructional opportunities as well.

9. Will the program be available to part-time learners?

These programs will be available to part-time learners. Distance Education and Summer Session availability will provide greater flexibility.

SECTION IV: Faculty Requirements

1. Provide a list of current faculty by rank and areas of expertise who will teach in the program.

The advancement and delivery of the proposed B.Sc. program in Physical Geography can be accomplished with the current departmental faculty at this time. A list of current departmental faculty who will be directly involved in the Bachelor of Science program is provided below.

Barber, David G.

Dr. Barber specializes in understanding climate variability and change through the use of Geomatics Technologies, as well as the coupling between the physical and biological systems. His primary research focuses on the detection and impact assessment of climate change on the physical and biological sytems. Dr. Barber currently holds a Canada Research Chair in 'Arctic System Science', an NSERC operating grant and several CFI and NSERC infrastructure grants. He will teach 3ch per year for the period 2002 to 2007 within the Atmospheric and Hydrological Sciences or Geomatics streams.

Benbow, S. Mary P.
Dr. Benbow's teaching and research focus on environmental change, biogeography, and tourism. Dr. Benbow is currently conducting research on the environmental, cultural, and technological implications of zoos and aquariums. She will teach a number of courses within the General Physical Geography stream.

Baydack, Richard K.
Dr. Baydack is currently the Associate Dean with the Faculty of Environment and a member of the Department of Environment and Geography. His research and teaching is in the areas of wildlife management, biogeography, ecosystem management, conservation of biological diversity, and enhanced policy and decision-making strategies. He is the principle investigator on an NSERC/SSHRC Industrial Partnership Grant, and receives other research support from government and non-government agencies. Dr. Baydack's teaching commitment will focus on biogeographical study in the General Physical Geography stream.

Papakyriakou, Timothy N.
Dr. Papakyriakou joined the Department of Environment and Geography in July of 1999. His research is in the area of microclimatology and boundary-layer processes, including air-surface exchange of heat, water vapour and greenhouse gases. He maintains a research program in the far north and in Prairie Canada. Dr. Papakyriakou currently holds an NSERC Operating Grant, is part of an NSERC Network Grant and has been a recipient of an NSERC Equipment Grant. His teaching will be predominantely within the Atmospheric and Hydrological Sciences stream, focusing on microclimates and micrometeorology as well as modeling the physical climate.

Gardner, Jim S.
Dr. Gardner is the Executive Director, International Relations, University of Manitoba and Professor, Department of Geography and Natural Resources Institute, Faculty of the Environment. He is formerly the Vice President (Academic) and Provost, University of Manitoba, 1991-2001. His areas of specialty include: resources and hazards management in mountain areas; geomorphology, glaciology and hydrology; land use history and landscape change. Therefore his teaching will be focused on geomorphology and natural hazards within the General Physical Geography stream. His geographical expertise encompasses the Western Canadian Cordillera and Hindu Kush-Karakoram-Himalaya (Pakistan to western Sichuan). Recent projects include: hazards mapping and monitoring in the Canadian Rockies and Himilaya; land use history and landscape change in the Selkirk Mountains, B.C. and Himachal Pradesh in the western Sichuan and Darjeeling.

Hanesiak, John, M.
Dr. Hanesiak joined the Department of Environment and Geography in June of 2001. His research is in the areas of physical climatology and meteorology. He maintains research programs in the Canadian Arctic and in Prairie Canada. Dr. Hanesiak currently holds an NSERC Operating Grant, is part of several Networks (NSERC, CFCAS and NCE) and has been a recipient of an NSERC Equipment and CFI New Opportunities Grants. His teaching will be concentrated within the Atmospheric and Hydrological Sciences stream, focusing on atmospheric physics and applied synoptic meteorology / weather analysis.

McLachlan, Stéphane
Dr. McLachlan is an associate professor within the Department of Environment and Geography. Trained as a terrestrial ecologist, his research now lies at the interface between the life and social sciences and is conducted in Canada and abroad. His ecological research examines ecological restoration, landscape ecology, impacts of land use on flora and fauna, and agroecology. In contrast, his social research is region- and community-focused, participatory, and aims at developing and promoting the use of experience-based

rural knowledge in management, sustainable agriculture, and risk analysis of disease and GM crops. These ecological and social data are combined spatially through vulnerability and risk mapping.

Wang, Feiyue

Dr. Wang is currently an assistant professor in the Department of Environment and Geography (Faculty of Environment) and the Department of Chemistry (Faculty of Science). Dr. Wang's research focuses on speciation, cycling, and bioavailability of trace elements across environmental interfaces, particularly across the water-sediment-biota interfaces and the air-ice-water interfaces, therefore adding to the Atmospheric and Hydrological Sciences stream. Current research programs include in situ analytical techniques, ultra-trace analytical techniques, metal speciation in sulfidic waters, mercury methylation processes, and cryospheric chemistry of trace elements. A recent recipient of CFI New Opportunities Award, Dr. Wang designed and is operating the metal-free Ultra-Clean Trace Element Laboratory (UCTEL), one of the most advanced ultra-trace analytical facilities in Canada. Dr. Wang is also a participant of two NSERC research networks.

Iacozza, John

Mr. Iacozza is on a three-year term appointment as an Instructor I with the Department of Environment and Geography, with the intention to make this a continuing position. He teaches 18 credit hours per year in the proposed B.Sc. proposal, particularly at the 100, 200 and 300 levels. Mr. Iacozza has no official research mandate with this position although he does collaborate within the research of the Centre for Earth Observation Science. His teaching will be concentrated within the Geomatics Stream, with focus on remote sensing, cartography and quantitative analysis techniques.

Laboratory Support

A critical element of the B.Sc. proposal is the creation of teaching laboratories that are associated with the core curriculum of the B.Sc. program. The department has a physical geography teaching lab in room 104 Isbister. Due to current restructuring of space within the Faculty and University, this lab will be moved to the Wallace Building where up to date equipment and wiring will provide state of the art facilities for student learning. The details of this move are presently being discussed through the Faculty of Environment Space Committee.

Through external granting activities of CEOS there is now a considerable amount of field equipment available for research within the department. In the past 5 years CEOS has purchased 2 M$ in field equipment which includes: climate instrumentation, radiometers, scatterometers, cloud ceilometers, data logging equipment, thermistor and thermocouple devices, grain sieves, sediment measurement instrumentation, water quality sampling equipment, etc. Through a partnership with CEOS this equipment will be made available for teaching laboratory sections of most of the core curriculum of the physical geography program. The software licensing for the ESRI products suite of Geomatics software (Arc Info, Arc View, spatial analyst, etc) will ensure that the Geomatics stream is taught with Industry Standard Software.

Technical Support

The Department of Environment and Geography currently has three full-time technical staff members that provides support for the undergraduate program for computer related issues and equipment for teaching and research.

Douglas Fast provides cartographic, photographic, technical and artistic services.

David Mosscrop is our Systems Analyst. He acts as network administrator, CEOS operations manager, software consultant and database manager.

Robert Hodgson offers field and technical support in managing and deploying electronic field instrumentation (e.g., radiometers and scatterometers for electromagnetic radiation, meteorological sensors and energy flux towers).

2. Will the program involve the hiring of new faculty or staff? If yes, indicate which additional faculty are to be hired and describe their qualifications.

The following represent curent positions postings within the Faculty of Environment and Department of Environment and Geography through the 2004-2005 SIP process. These new positions will add to the current faculty complement participating in the BSc in Phsyical Geography.

Atmospheric Chemistry/Ecotoxicology (Assistant Professor)
The Department of Environment and Geography is currently in the process of hiring a tenure-track position (Assistant Professor) in atmospheric chemistry, ecotoxicology or biogeochemistry. The ideal candidate will provide expertise in the Atmospheric and Hydrological Science stream by focusing their research and teaching on environmental (including biological, physical and human) processes affecting the earth's atmosphere.

Land Surface Processes (Assistant Professor)
The Department of Environment and Geography is also currently hiring a tenure-track position (Assistant Professor) in land surface processes and geomatics technology. This position will focus on interdisciplinary approaches to the integration of physical, biological and human processes with the use of geomatics technologies to the study of earth system processes. The successful candidate will teach courses which relate to process hydrology and biophysical processes (Atmospheric and Hydrological Science stream), as well as advanced geographic information systems (Geomatics stream).

SECTION V: Cooperative Arrangement

1. Describe the cooperative arrangements with other institutions and organizations that may be used to offer this program.

The University of Manitoba has established opportunities for students to participate in international exchanges (e.g., Plymouth University) as well as Letter of Permission to register in courses offered at other institutions. While these opportunities expand the opportunities to explore other universities and travel, the B.Sc. (Physical Geography) is not reliant on these institutions for delivery of the degree programs.

2. Will the credits of the proposed program be fully transferable (in terms of both the credit as well as the grade) to other institutions in Manitoba?

Yes. Similar to other courses offered at the University of Manitoba, for example in the Faculties of Arts and Science. Since most courses in the degree program have been available for several years, the transferability is well established.

Students will be able to transfer to and from comparable programs at the University of Winnipeg and Brandon University without significant disruption in their degree programs.

3. Does the program have an internship or practicum component? What attempts have been made to ensure that this program has both theoretical and applied modules?

There is no internship or practicum component to the degree program. There is a Cooperative Education Option that provides an avenue for students to explore physical geography if they choose. The Faculty of Environment intends to also offer a series of professional workshops and conferences that will provide students the opportunity to network with professionals and establish mentorships.

4. What provisions will be made in the program to enable students to receive credit for relevant learning previously achieved outside of the Manitoba post-secondary education system?

There is no formal mechanism to assess prior learning. The current 'transfer of credit' process at the University of Manitoba allows each student entering the program to have previous relevant learning accessed on an individual basis to determine applicability to the degree. Through Distance Education and Continuing Education, there is on-going negotiate and review of certificate programs and transfer of credit.

SECTION VI: Learning Technologies

1. What use will be made in the program of modern learning technologies?

Several courses are delivered through using the Internet and WebCT. In addition, there are several that are delivered through Distance Education sections. The Faculty of Environment intends to enhance Aboriginal educational opportunities in environmental education and is considering alternative course delivery methods through the assistance of Distance Education Division.

SECTION VII: Resource Requirements

1. Describe the adequacy of existing library resources to support the proposed program. Indicate how the institution will overcome any deficiencies.

The offerings in this program already exist and are currently being supported at the University of Manitoba libraries. Library statements are available for new courses proposed in the rogram. With the progression of this degree to offer additional streams, supplementary journals may be required. We have identified several journals that are not currently in the library sytem but would ***enhance*** the growth of the B.Sc. program. These journals are ***not required*** for the development of this degree.

2. Are existing computer facilities adequate to support the new program?

Yes. The Department of Environment and Geography has a physical geography teaching lab in room 203 Isbister. This room will be adequate for lab teaching purposes. With the development of the new Faculty of Environment, the undergraduate teaching resources, including computer facilities will be upgraded and expanded, however the success of this program is not dependent on that expansion.

3. How will the proposed program impact on the use of existing infrastructure and equipment?

The impact of the degree programs will be minimal since the B.Sc. (Physical Geography) is an extension of the present B.A. (Geography) presently offered by the Department of Environment and Geography. Existing infrastructure (i.e. student support and computer facilities within the department) will be accessible to this new program. As well, field equipment presently used by the faculty will be available for teaching purposes. This equipment includes various climatological instrumentation, data logging equipment, sediment measurement instrumentation and water quality sampling equipment. The present software licensing for the ESRI products suite of Geomatics software (Arc Info, Arc View, spatial analyst, etc) will ensure that the Geomatics stream is taught with Industry Standard Software. As the degree programs grow in popularity, it is anticipated that additional courses will be developed with associated requirements of space and resources. This is not forecasted for the next three years since there are modifications currently proposed for courses in other degree programs that will reduce this stress.

4. Describe any additional facilities, facility modifications, and equipment that may be required for the proposed program.

There are none expected.

SECTION VIII: Financial considerations

1. What are the total financial resources required to offer this program? Include estimated initial and ongoing funding requirements.

This degree program will be implemented using existing resources (including academic and support staff) available in the Faculty of Environment and departments offering relevant courses from departments in other faculties. There are no new immediate funding requirements to offer the programs in September 2004.

2. Of the financial resources required to offer this program, how much will come from a reallocation of existing funds and how much from new funds?

All of the financial resources are derived from existing funds through a reorganization of the undergraduate programs in the Department of Environment and Geography and the creation of the Faculty of Environment.

3. Discuss the internal reallocations of financial resources which will occur to support this program.

There is no significant reallocation of financial resources required with the program proposal. The B.Sc. (Physical Geography) represents a recognition of existing expertise and strength of the Faculty of Environment in the discipline. The proposal is founded on existing expertise, modifications to existing curriculum and reliance on existing technical support.

4. What percentage of program costs will be accrued through tuition fees?

The total amount of program costs that will be estimated to come from tuition fees is between $100,000 to $200,000 annually (assuming enrolment of 25 to 50 students and tuition of $4000/student).

5. Discuss the impact of the program's estimated enrolment on the institution's overall tuition revenues.

It is anticipated that the B.Sc. (Physical Geography) will be revenue neutral and simply represent a redeployment of students among the Faculties of Arts, Environment and Science. As the degree program grows in popularity and attracts students who would otherwise seek this training elsewhere, the revenue will also increase for the University.

6. How will the proposed program be funded if enrolment projections are not met?

The Faculty of Environment will be expected to support the degree program should the enrolment projections not be met.

SECTION IX: Program Consultations and Evaluation

1. What consultations have occurred with professional associations, employers, graduates of similar programs, and other educational institutions regarding this program?

As previously outlined, the degree programs proposed have been vetted through professionals participating in joint research initiatives. External liaison committees will provide ongoing feedback to assist in the evolution and modifications to the programs in the future.

2. Please provide evidence of academic quality by submitting reports from two similar institutions as well as from the relevant professional associations(s), if appropriate.

3. Describe the procedures for institutional evaluation of the program during and subsequent to

implementation.

This proposed degree program will be submitted for consideration by the Senate Committee on Course and Curriculum Changes, the Space and Priority Planning Committee, as well as by Senate and the Board of Governors. Similar procedures will be followed in the proposal for revisions to the curriculum as required.

B.Sc. Physical Geography, Program Code: 053

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
HONOURS[1,2] 120 CREDIT HOURS			
053.129 (or 053.120) 016.102[3], 136.150[4] 016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] Plus 6 credit hours from the Faculty of Arts.	053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255 016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken 3 credit hours from 002.130, 002.131, 005.100, 005.200, 071.125[6], 074.101, 136.170[7]	053.262 9 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	053.368

A "W" course should be taken in University 1 or Year 2. Note: Students may wish to consider 053.351 or 053.358 or another course in Geography to fulfill this requirement.

Plus a **Stream,** approved by the academic advisor. Honours Stream requirements are as follows: 39 credit hours of 200 (or higher) level courses, of which 24 credit hours must be at the 300 or 400 level and include 053.466.

HONOURS COOPERATIVE OPTION[1,2] 120 CREDIT HOURS			
053.129 (or 053.120) 016.102[3], 136.150[4] 016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] Plus 6 credit hours from the Faculty of Arts.	053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255 016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken 128.235, 128.290	053.262 9 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken 128.390, 128.398 128.391	053.368 128.399, 128.392 (128.498 and 128.491 are optional)

A "W" course should be taken in University 1 or Year 2. Note: Students may wish to consider 053.351 or 053.358 or another course in Geography to fulfill this requirement.

Plus a **Stream,** approved by the academic advisor. Honours Coop Stream requirements are as follows: 39 credit hours of 200 (or higher) level courses, of which 24 credit hours must be at the 300 or 400 level and include 053.466.

NOTE: The Cooperative Education Option is typically a five-year program.

MAJOR [1,2] 120 CREDIT HOURS

053.129 (or 053.120)	053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255	053.262	053.368
016.102[3], 136.150[4]		9 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	
016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7]	016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken		
Plus 6 credit hours from the Faculty of Arts.	3 credit hours from 002.130, 002.131, 005.100, 005.200, 071.125[6], 074.101, 136.170[7]		

A "W" course should be taken in University 1 or Year 2. Note: Students may wish to consider 053.351 or 053.358 or another course in Geography to fulfill this requirement.

Plus a **Stream,** approved by the academic advisor. Major Stream requirements are as follows: 30 credit hours of 200 (or higher) level courses, of which 18 credit hours must be at the 300 or 400 level.

MAJOR COOPERATIVE OPTION[1, 2]	120 CREDIT HOURS		
053.129 (or 053.120)	053.2aa, 053.2ab, 053.2ca, 053.244, 053.2xx, 053.255	053.262	053.368
016.102[3], 136.150[4]		9 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken	128.399, 128.392 (128.498 and 128.491 are optional)
016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7]	016.103[3], 136.130; or 6 credit hours from 007.134[5], 074.101, 002.130, 002.131, 005.100, 005.200, 071.125[6], 136.170[7] not yet taken		
Plus 6 credit hours from the Faculty of Arts.	128.235, 128.290	128.390, 128.398 128.391	

A "W" course should be taken in University 1 or Year 2. Note: Students may wish to consider 053.351 or 053.358 or another course in Geography to fulfill this requirement.

Plus a **Stream,** approved by the academic advisor. Major Coop Stream requirements are as follows: 30 credit hours of 200 (or higher) level courses, of which 18 credit hours must be at the 300 or 400 level.

NOTE: Students in the Major Coop are required to maintain an overall cumulative Grade Point Average of 2.50. The Cooperative Education Option is typically a five-year program.

MINOR 18 CREDIT HOURS	
053.129 (or 053.120)	15 credit hours selected from 200, 300, or 400 level courses designated as Physical Geography (PS) or Techniques (TS) courses (see Other, Note 1).

NOTES:
[1]entry into the degree programs is summarized in X.X.X in this *Chapter*.
[2]the courses required in this program will satisfy the university mathematics requirement.
[3]016.105 and 016.107 may be used in lieu of 016.102 and 016.103 respectively.
[4]136.151, 136.153, 136.168, 136.169 may be used in lieu of 136.150.
[5]007.144 or 007.123 may be used in lieu of 007.134.
[6]071.101 and 071.100 may be used in lieu of 071.125.
[7] 136.171 and 136.173 can be used In lieu of 136.170

IMPORTANT: The Honours and Major programs need not be completed in the course order described in the chart above. The chart indicates one possible arrangement of the required courses and is meant to be a guide around which students can plan their program.

February 23, 2004

Report of the Senate Planning and Priorities Committee on the Proposal to introduce a Bachelor of Science (Physical Geography) program in the Faculty of Environment.

Preamble

1. The terms of reference of the Senate Planning and Priorities Committee (SPPC) are found in the *Senate Handbook*, Section 8.32, wherein SPPC is charged with making recommendations to Senate regarding proposed academic programs.

2. The Faculty of Environment proposes the creation of a new undergraduate degree program called the B.Sc. in Physical Geography, in the Department of Environment and Geography.

Observations

1. The Faculty of Environment was established by a motion from the University of Manitoba Senate in December 2001, became operational in 2002, and successfully appointed a Founding Dean in 2003. Geography is a founding discipline in this initiative. Although the proposed degree was under serious consideration in 1998 to be introduced in the Faculty of Science, plans to this effect were altered to coincide with Geography's migration to the Faculty of Environment.

2. The Faculty of Environment currently offers a BA in Geography. The principal reasons for advocating a B.Sc. program are (a) to strengthen the academic background of students with an interest in scientific aspects of contemporary physical geography, (b) to develop the skills of students pursuing careers in physical geography and quantitative geographical methodology, and (c) to offer a range of degree programs that is comparable to most Canadian and North American geography departments.

3. Based on developments in the field of physical geography and on the expertise of faculty members in the Department of Environment and Geography, the proposed program would be organized initially in 3 streams, with a fourth stream to be added later. Each stream overlays a distinct set of supplementary courses (mostly 300- or 400-level courses in Geography) on a common core (9 courses at the 100- and 200-level in Geography and a 300-level research methods course). The 3 initial streams are in atmospheric and hydrological sciences, geomatics, and general physical geography. Biogeography is the intended fourth stream. Each stream will have a Program Advisor in the Department of Environment and Geography, to assist students with course selection.

4. Students will enter the B.Sc. in Physical Geography having successfully completed 30 credit hours (CH) of coursework in University 1, with at least 3 CH

in physical geography, 9 CH in Science, 6 CH in Arts, and 3 CH in English. Program Advisors and the general calendar entry will encourage prospective students to take required courses in Math, Physics, and Statistics, and recommended courses in Biology, Chemistry, Computer Science, or Geological Sciences, during University 1. In each following year of the program, students must take at least 18 CH from identified core or supplementary courses in Geography, and at least 6 CH from 200- or higher level courses in the Faculties of Environment, Science, Agriculture, Architecture, or Engineering.

5. The proposed degree will have 5 levels of distinction: Major, Minor, Major Cooperative Option, Honours, and Honours Cooperative Option. The Major degree, viewed as standard, denotes completion of the core curriculum and 30 CH in a supplementary stream, with a minimum 2.00 cumulative GPA. The Minor option denotes completion of 18 CH in physical geography courses at or above the 200-level. The Major Cooperative Option allows students to gain valuable professional experience in their chosen stream prior to graduation. The Cooperative Option adds to the Major requirements as follows: two terms of employment (minimum 420 hours per term); 6 CH of mandatory course work (i.e., placement courses 128.398 and 128.399, and corequisite report courses 128.391 and 128.392); and a minimum 2.50 cumulative GPA. The Honours designation is for students who complete the core curriculum and 39 CH in a supplementary stream, plus a 6 CH honours thesis course (053.466), with a minimum 3.25 cumulative GPA. Finally, the Honours Cooperative Option adds the employment and mandatory course work of the Major Cooperative Option to the other requirements for the Honours degree. The Cooperative Option Programs (i.e., Major and Honours) are expected to take five years to complete.

6. The structure of the proposed B.Sc. in Physical Geography mirrors that of the Bachelor of Environmental Science program recently approved by Senate. Beyond the introductory science foundation in University 1, however, the two programs are distinct offerings of the Faculty of Environment. The B.Env.Sc. has a scientific foundation but encompasses conservation, restoration, ethics, economics, and ecology. The proposed B.Sc. in Physical Geography program offers a stronger academic background in physical science and technical subjects beyond the second year.

7. With growing awareness of the B.Sc. (Physical Geography) program, the program is expected to reach a total enrolment of 25 students, across all levels of distinction, after 3 years. The program will draw students initially from other science-based programs and the BA (Geography) program; in time, however, it is hoped that the B.Sc. (Physical Geography) program will attract students directly to the University of Manitoba. Demand for the program is expected to grow, based on the following considerations: Geographic Information Systems and remote sensing are becoming indispensable tools in natural resource management, agriculture, urban planning, utilities, transportation, economic development and public safety. There is strong demand in government and

industry for skilled workers in the atmospheric and hydrologic fields, such as weather forecasting, weather and climate research, hydrologic monitoring and research, air quality and environmental contamination. A wide variety of potential employers are located throughout Manitoba, including Red River College, Keewatin and Assiniboine Community Colleges, Manitoba Centre for Remote Sensing, Manitoba Conservation, Linnet Geomatics (consulting), KGS Consulting, Dillon Engineering, Manitoba Hydro, Canadian Wheat Board, Meterological Service of Canada, Manitoba Emergency Response, and various mining companies in northern Manitoba. The proposed program will enhance students' preparation for advanced study in physical geography.

8. The Department of Environment and Geography's present complement of 8 professors (3 hired since 1999) and 1 instructor in relevant areas is sufficient to deliver the B.Sc. (Physical Geography) program. The required courses are presently being offered, and the number of students in those courses will not abruptly increase with the introduction of this degree. The department expects to grow in this area, nonetheless.

9. The Department of Environment and Geography has a physical geography teaching lab in room 203 Isbister, which is sufficient for the proposed program. The program will benefit from, but does not require, an anticipated upgrade and expansion of computer facilities used by undergraduates in the Faculty of Environment. Similarly, field equipment used by faculty members in research, software licensing arrangements, and other resource developments in the faculty will benefit the proposed program indirectly and reduce any stress that may result from its growing popularity in the next several years.

10. Library statements indicate that current holdings are adequate to support the proposed B.Sc. (Physical Geography) program and each course to be introduced. As new streams are added to the degree, new materials and journals may be required.

11. Deans or Associate Deans from the Faculties of Architecture, Agriculture and Food Sciences, Science, Arts, and Engineering received notice of the proposed B.Sc. (Physical Geography) program. Statements of support and non-duplication of courses were received from Engineering and Science, with information that the Geomatics stream would interest students in Civil and Biosystems Engineering, and that access to 005.100 Basic Statistical Analysis I is limited.

Recommendations:

The SPPC recommends that:

Senate approve and recommend to the Board of Governors that it approve the introduction of a Bachelor of Science (Physical Geography) program in the

February 23, 2004

Faculty of Environment.

Respectfully submitted,

Juris P. Svenne, Chair
Senate Planning and Priorities Committee

/jml

March 22, 2004

Report of the Senate Committee on Curriculum and Course Changes on a Proposal for a B.Sc. in Physical Geography from the Faculty of Environment

Preamble

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) is found in section 8.21 of the *Senate Handbook*, wherein SCCCC is charged "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".

2. The Senate Committee on Curriculum and Course Changes met on March 4, 2004 to consider a proposal for a new degree program in the Department of Environment and Geography: a B.Sc. in Physical Geography.

Observations

1. The development of the proposal is an effort several years in the making, and results from a desire to provide students with a physical geography program that is based strongly in the basic sciences. The program proponents note that the B.Sc. in Physical Geography will "allow it to be competitive with other Geography Departments in North America and to provide graduates with certification of their strong scientific training".

2. The degree comprises a foundation of introductory sciences (27 credit hours), a core of physical geography courses (33 credit hours), and a stream variable in credit hour requirement (30 credit hours in the major and 39 credit hours in the Honours which includes a 6 credit hour thesis project). The three streams are Atmospheric and Hydrological Sciences, Geomatics, and General Physical Geography. Honours, Honours Cooperative, Major, Major Cooperative and a Minor in Physical Geography are proposed as a part of this program.

3. The Cooperative programs are built on the existing structure in the Environmental Studies and Environmental Science programs in the Faculty of Environment and administrative support will be shared with these programs.

4. A number of course introductions, modifications and deletions are proposed as part of the program proposal, and are outlined below.

5. The proposal was also forwarded to the Senate Planning and Priorities Committee for consideration and comment on the financial resources required.

6. A statement of support from the Libraries was received and indicates that the Libraries' collection is adequate to support the needs of the individual courses and the program as whole.

6. Letters of support were received from the Faculty of Science, the Faculty of Engineering, and the Departments of Soil Science, Statistics, Physics and Astronomy, Geological Sciences and Mathematics.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends that the proposed B.Sc. in

Physical Geography in the Faculty of Environment be approved by Senate.

Respectfully submitted,

Professor B. L. Dronzek, Chair
Senate Committee on Curriculum and Course Changes

/jml

Courses to be deleted:

053.222	Introduction to Cartography	-6
053.344	Applied Climatology	-6
053.362	Geographical Hydrology	-6
053.363	Climatology	-6
053.454	Remote Sensing and its Geographical Applications	-3

Courses to be introduced:

053.2AA **Introduction to Thematic Cartography (TS) +3L**
An introduction to the principles of map compilation and reproduction, including analysis and cartographic display of spatially referenced data. Emphasis will be placed on cartographic data manipulation, generalization, and symbolization, map design, visualization and communication. Not to be held with the former 053.222. Prerequisite: a grade of "C" or better in a minimum of three credit hours Geography courses numbered at the 100 level, or written consent of the instructor.

053.2AB **Introduction to Geographic Information Systems (TS) +3L**
An introduction to the fundamental theoretical concepts of geographic information systems including acquisition, processing and analyzing environmental and socio-economic data. Topics to be covered include georeferencing, spatial data structures, processing, output and applications. Not to be held with the former 053.222. Prerequisite: a grade of "C" or better in a minimum of three credit hours Geography courses numbered at the 100 level, or written consent of the instructor.

053.2CA **Introduction to Process Hydrology (PS) +3**
This course introduces students to the near-surface components of the hydrological cycle, including the processes of precipitation, evaporation, water-biosphere interactions, infiltration, overland and stream flow. Not to be held with the former 053.362. Prerequisite: 053.129 (or 053.120) and one of 016.102 or 136.150; or written consent of the instructor.

053.2XX **Atmospheric Thermodynamics, Clouds and Precipitation (PS) +3**
Critical thermodynamic processes are discussed that are associated with the Earth's atmosphere including dry and moist processes, phases of water, stability, cloud development and precipitation processes. Prerequisite: 053.129 (or 053.120) with a grade of "C" or better; 136.150 (or 136.151, 152, or 153) and 016.102 (or 016.105); or written consent of the instructor.

053.3AC **Introduction to Remote Sensing (TS) +3L**
The course is an introduction to the principles of optical, active and passive microwave remote sensing. A review of satellite and sensors and their geographic applications will be presented, along with digital image analysis techniques. Laboratory assignments will provide hands-on experience in dealing with remote sensing data. Students may not hold credit for both 053.3AC and the former 053.454. *Prerequisite:* A grade *of* "c" *or* better in 053.129 (or 053.120) and three credit hours in 016.102, 016.103, 136.130, 136.150, or written consent *of* the instructor.

053.3CA **Introduction to Microclimates and Micrometeorology (PS) +3**
This course introduces the concept of energy balance climatology and examines relationships among climate, microclimate, and environments *of* the Earth's surface and human-made environments. Studies include bioclimates and hydroclimates. Not to be held for credit with the former 053.344. Prerequisites: 053.2CA; 053.2XX; or written consent of the instructor.

053.3XX **Atmospheric Dynamics, Storms and Radar (PS) +3**
The course covers the critical dynamic processes that are associated with the Earth's atmosphere including forces that control wind, the kinematics *of* the wind field, general circulation, hodographs, thermal wind, laws of motion, mid-latitude circulations, convective storms and the utility of weather radar. *Prerequisite:* 053.2XX; *or* written consent of the instructor.

053.4CA **Boundary-Layer Climatology and Micrometeorology (PS) +3**
A seminar course on advanced topics in microclimatology and micrometeorology.
Prerequisite: 053.3CA or written consent of the instructor.

053.4DD **Global Climate Change(PS) +3**
General Circulation Models are described and their application to the study of Global climate change are examined. Students are familiarized with contemporary research approaches in the field of climate change through team projects coordinated with external "clients" working in the area of climate change. *Prerequisite:* a grade *of* "C" *or* better in 053.129 (or 053.120) and at least three 3 credit-hour courses in physical geography, or written consent of the instructor.

053.4TT **Advanced Methods in Remote Sensing(TS) +3L**
This course provides instruction in the current theory and application of remote sensing technology to Earth System Science. Emphasis will be placed on the processing and interpretation *of* remote sensing imagery and the integration of remote sensing data with other spatial data. Students may not hold credit for both 053.4TT and the former 053.454. Prerequisite: A grade *of* "C" *or* better in 053.3AC *or* written consent of the instructor.

053.4XA **Modeling the Physical Climate(PS) +3**
Numerical modeling techniques and applications to the physical climate and atmosphere. Students learn aspects of basic FORTRAN programming and explore various models that demonstrate physical concepts and their associated errors. Offered in 2005-2006 and in alternate years thereafter. Prerequisite: 053.3XX, 053.3CA; or written consent of the instructor.

053.4XX **Synoptic Meteorology and Weather Analysis (PS) +3**
Applied aspects of meteorology are described in terms of weather analysis and forecasting techniques for synoptic-scales and meso-scales using various meteorological tools. An introduction to severe weather forecasting techniques will also be described. Prerequisite: 053.3XX; or written consent of the instructor.

Courses to be modified:

There are a series of course modifications proposed that change the prerequisite requirements to better reflect the sequencing of courses and process for approvals.

053.368 **Research Methods in Geography** (6)
A study of the process of model building in physical and human geography. The analysis and interpretation of data in testing geographic models. Students may not hold credit for 053.368 and the former 053.247. Prerequisite: a grade of "C" or better in 053.253 or 005.100; or written consent of the instructor.

053.373 **Geographic Information Systems** (PS) (3)L
Weekly two-hour lab. An introduction to geographic information systemsl (GIS) input, processing, output and applications. Prerequisite: a grade of "C" or better in 53.2AB, or written consent of the instructor.

053.456 **Techniques in Climatology** (3)
This course overviews the theory basis and its application for the measurement and analysis of meteorological elements that form the basis of microclimate and micrometeorological research. *Prerequisite:* 053.3CA or written consent of the Instructor.

053.459 **Spatial Analysis in Geography** (TS) (3)
The theory and techniques of spatial statistical data exploration, inference and 'hypothesis testing as they pertain to geographic analysis is explored. The role of spatial analytical techniques in field investigations, GIS and remote sensing applications are discussed. *Prerequisite:* A grade of "C" or better in 053.368 and in 136.130, 136.150, or written consent of the instructor

53.469 **Natural Hazards and Disasters** (3)
This course provides a conceptual and methodological survey of natural hazards. Characteristics and causes of geophysical disasters, human exacerbation of hazards, and human adjustments to and perceptions of natural threats will be studied. Prerequisite: 053.244,053.255, and 053.358; or written consent of the instructor.

Net change in credit hours: +9

THE FORMAL PROGRAM PROPOSAL

Institution Submitting the Formal Program Proposal:

UNIVERSITY OF MANITOBA

Title of Proposed Program:

Computer Science – Physics and Astronomy Joint Program

Faculty/Department in which the Proposed Program will be located:

Faculty of Science/Department of Physics and Astronomy and Department of Computer Science

Name of Person(s) responsible for the Program:

Dr. D. Scuse (Department of Computer Science)
Dr. R. M. Roshko (Department of Physics and Astronomy)

Credential to be Offered:

Bachelor of Science Honours

Date of Program Implementation:

September 2004

President's/Rector's Signature _____ Date _____

Date Received by Council on Post-Secondary Education: _____

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the report to Senate.

SECTION I: Program Description

1. Describe the program, including each area of concentration, as it would appear in a catalogue.

The departments of Computer Science and Physics and Astronomy offer a joint Honours program for in-depth study in both computer science, and physics and astronomy. The number of credit hours is divided equally between the two areas of specialization.

2. Where possible, list the courses (title, number, semester credit hours, and catalogue description) that would constitute the requirements and other components of the proposed program. Indicate which courses are currently offered and which will be new.

The program is as follows:

Year 1 (30 credit hours)

016.105 Physics 1: Mechanics (3 ch)
016.107 Physics 2: Waves and Modern Physics (3 ch)
136.130 Vector Geometry and Linear Algebra (3 ch)
136.153 Calculus with Computers (3 ch)
136.173 Calculus 2 with Computers (3 ch)
074.101 Introductory Computer Science 1 (3 ch)
074.102 Introductory Computer Science 2 (3 ch)
+ Arts (6 ch) + elective (3ch)

Year 2 (30 credit hours)

016.226 Optics (3 ch)
016.237 Introduction to Theoretical Physics (6 ch)
016.250 Quantum Physics 1 (3 ch)
016.265 Classical Mechanics 1 (3 ch)
074.208 Analysis of Algorithms (3 ch)
074.213 Discrete Mathematics for Computer Science (3 ch)
074.214 Data Structures and Algorithms (3 ch)
074.219 Introduction to Scientific Computing (3 ch)
074.222 Introduction to Assembler Language Programming (3 ch)

Year 3 (30 credit hours)

016.260 Electromagnetic Field Theory (3 ch)
016.261 Circuit Theory and Introductory Electronics (3 ch)
016.341 Thermodynamics (6 ch)
016.370 Quantum Physics 2 (3 ch)
074.317 Analysis of Algorithms and Data Structures (3 ch)
074.343 Operating Systems (3 ch)
+ computer science electives (9 ch)

Year 4 (30 credit hours)

300 level and 400 level Honours physics courses (15 ch)
300 level or 400 level computer science courses (12 ch)
elective (3 ch)

The total number of credit hours for the program is 120, divided equally between physics and computer science.

3. Outline the educational objectives of the program

The principal objective of the program will be to graduate students with expertise in both physics and computer science, who are prepared either to enter the job market directly, or to proceed directly into graduate school in either physics or computer science.

4. Describe the expected learning outcomes in terms of skills, knowledge, attitudes or other attributes which students will accrue as a result of their involvement in the proposed program.

The students will gain an appreciation for the synergy between different disciplines which characterizes virtually all modern approaches to research problems. Thus, as a specific example, the ultimate success of research on quantum computation will require a thorough knowledge of both quantum physics and computational algorithms.

5. If applicable, describe any selective admissions policy or specific criteria for students selecting this as a major field of study.

To enter the joint Honours Computer Science – Physics program, the student must have a minimum grade of "B" in each of 016.105 (or "B+" in 016.102), 016.107, 136.130, 136.153, 136.173 (or any equivalent), 074.101 and 074.102.

To graduate with the Honour degree, a student must present a minimum grade of "C" in each of 074.208, 074.213, 074.214, 074.219, 074.222, 074.317, 074.343, 016.226, 016.237, 016.250, 016.260, 016.261, 016.265, 016.341, 016.370 and each Computer Science and Physics & Astronomy course that applies to the Computer Science and Physics & Astronomy component of their degree program.

The department must approve a student's Honour or Major program each session. Students must also obtain departmental approval for any and all revisions to their program.

6. Describe the extent to which this program is central to the institutional mission and planning priorities of the campus.

Staff retention and growth, and program development in the Department of Computer Science has been a high priority of the University of Manitoba for some time now. Similarly, the Department of Physics and Astronomy is recognized as a research intensive department with the largest grant income from the Natural Sciences and Engineering Research Council of Canada (NSERC) of any department in the Faculty of Science, and is thus also a central and indispensable component of the mission of the institution.

7. If a similar program exists or is in the process of being developed elsewhere in the province, describe the similarities or differences in the credential to be awarded, the area(s) of specialization, and the specific academic content of the program or course of study.

No similar program exists in the province.

SECTION II: Market Need and Market Demand for the Program

1. Where possible, state the specific local or provincial needs for graduates of the proposed program for the next 3 to 5 years. This should include projections of both ongoing and future demand in regions throughout Manitoba; as well as evidence and supporting data of market need for the program.

The job opportunities for computer science graduates with particular expertise in software, programming, and database manipulation are plentiful within the local economy, as evident from the numerous local businesses which either specialize in providing service to other businesses in these areas, or which employ their own staff devoted to maintaining computer networks, developing customized programs, manipulating databases, integrating components of manufacturing systems, design, desktop publishing, and so on. Similarly, graduates in physics are widely recognized and valued for their critical thinking and problem solving abilities, and are able to compete successfully for essentially any jobs which employ engineering graduates (mechanical, electrical, computer, and so on), but are also widely employed in the financial and health care sectors of the economy.

2. What are the probable employment destinations of program graduates?

As mentioned above, the immediate employment destinations of program graduates cover a very broad spectrum, which includes financial institutions, high tech industries like the aerospace industry, computer manufacturing companies like Mind Computer Products, and so on. The list is virtually endless. However, it is important to point out that the health care sector of the economy depends heavily on personnel with expertise in computer imaging as well as knowledge of the physics of radiation and its interaction with living organisms. Thus these graduates will be of particular interest to Cancer Care Manitoba or the NRC Institute for Biodiagnostics, or possibly the new virology lab (Canadian Science Centre for Human and Animal Health).

3. Where appropriate, did industry, business and/or any other pertinent groups play a role in the development of this program and/or commit resources to its future?

No external industries or businesses contributed resources to the development of the program.

4. How does the program correspond with the province's economic, social and cultural priorities?

Given that Manitoba's economic and social strategy is consistent with that of the federal government, the proposed program will satisfy the demand for a technologically highly skilled

labour force, which will provide the research and development expertise which is essential for the growth and maintenance of high tech industries in Manitoba.

5. What potential does this program offer in terms of job creation and research and development?

The potential for "spin-offs" is considerable. These graduates will have the ideal qualifications to implement existing production protocols and, more importantly, to innovate, and to create new protocols. It is anticipated that these graduates will be particularly adept not only at proposing new ideas but also at executing them, either within the existing company framework, or by creating a "spin-off" company, which is a frequent occurrence in the context of both computer science and high tech industries.

SECTION III: Student Demand for the Program

1. What students is the program intended to serve?

The program is designed for undergraduate students seeking a four year BSc degree (Honours).

2. What is the evidence that provincial students are not being adequately served within existing program offerings in Manitoba?

There is no existing program in the province of Manitoba which offers a joint degree in computer science and physics.

3. Provide evidence of student interest and demand for the program.

Evidence of interest is primarily through informal discussions with and requests from students when they meet with Honours and Major Committee advisors. However, it should be pointed out that similar programs at other institutions in Ontario and British Columbia are very popular and much in demand.

4. What are the projected enrolments for the program?

The projected enrolments are approximately 5 to 10 students in each of Years 2, 3, and 4.

5. Which programs currently offered by the institution are projected to lose enrolment to this program?

The only programs which may potentially lose enrolment are other programs offered by the Departments of Physics and Astronomy and Computer Science. However, this would simply correspond to a redistribution of students among existing programs, and does not represent a real loss.

6. What are the proposed growth limits and minimum enrolments?

There will be no minimum enrolment since these students will be registered in the same courses which service the other Honours and Major programs in the two departments. Growth limits are unlikely to be necessary.

7. Project the number of graduates for the first 3 to 5 years of the program and, where appropriate, the anticipated number of program majors (full-time and part-time) for each of the first five years of the program.

In the first three to five years, the program is expected to graduate between 10 and 15 students.

8. What steps have been taken to ensure participation and success in the program by under-represented groups, such as women, the disabled, minorities and aboriginal students?

The program is available to anyone who satisfies the stated entrance requirements or their equivalent.

9. Will the program be available to part-time learners?

The program will be available to part-time students, subject to faculty or department regulations regarding the minimum number of credit hours per year to maintain Honours status (currently, 24 credit hours).

SECTION IV: Faculty Requirements

1. Provide a list of current faculty by rank and areas of expertise who will teach in the program.

Department of Computer Science

Professors – Arnason, A. N., Hoskins, J. A., King, P. R., Kocay, W. L., Meek, D. S., Scuse, D. H., van Rees, G. H. J., Walton, D. J.
Associate Professors – Baltes, H., Bate, J. A., Cameron, H. A., Ehikioya, S., Graham, P., Laucht, C. M.
Assistant Professors – Anderson, J. E., Eskicioglu, M. R., Irani, P., Kemke, C., Thulasiram, R., Thulasiraman, P., Toulouse, M.
Instructors – Andres, T., Boyer, G., Hussain, S., Marshall, A., Penner, C., Zapp, M.

Department of Physics and Astronomy

Professors – Birchall, J., Davison, N. E., Ens, E. W., Loly, P. D., Osborn, T. A., Page, J. H., Page, S. A., Roshko, R. M., Sharma, K. S., Southern, B. W., Williams, G., Zetner, P. W.
Associate Professors – Bhakar, B. S
Assistant Professors – English, J., Gwinner, G., Safi-Harb, S.

2. Will the program involve the hiring of new faculty or staff? If yes, indicate which additional faculty are to be hired and describe their qualifications.

No hirings specifically for this program.

SECTION V: Cooperative Arrangements

1. Describe the cooperative arrangements with other institutions and organizations that may be used to offer this program.

No cooperative arrangements.

2. Will the credits of the proposed program be fully transferable (in terms of both the credit as well as the grade) to other institutions in Manitoba?

It is anticipated that credits will be fully transferable to other institutions.

3. Does the program have an internship or practicum component? What attempts have been made to ensure that this program has both theoretical and applied modules?

The program has no formal internship or practicum component at this stage.

4. What provisions will be made in the program to enable students to receive credit for relevant learning previously achieved outside of the Manitoba post-secondary education system?

Transfer credit for equivalent courses attended outside the Manitoba post-secondary education system will be available, and will be evaluated by designated faculty members in the Departments of Computer Science and Physics and Astronomy (most likely the Associate Head).

SECTION VI: Learning Technologies

What use will be made in the program of modern learning technologies?

We anticipate that the program will be delivered primarily through conventional lectures, with individual lecturers free to adopt the technologies (PowerPoint, overhead, etc.) which they find most effective.

SECTION VII: Resource Requirements

1. Describe the adequacy of existing library resources to support the proposed program. Indicate how the institution will overcome any deficiencies.

The proposed program requires no new resources beyond those currently available to support existing programs in the two departments. To this extent, current library resources are adequate.

2. Are existing computer facilities adequate to support the new program?

Similarly, existing computer facilities are adequate.

3. How will the proposed program impact on the use of existing infrastructure and equipment?

The proposed program will be accommodated easily within the existing infrastructure.

4. Describe any additional facilities, facility modifications, and equipment that may be required for the proposed program.

No new facilities are required.

SECTION VIII: Financial Considerations

1. What are the total financial resources required to offer this program? Include estimated initial and ongoing funding requirements.
2. Of the financial resources required to offer this program, how much will come from a reallocation of existing funds and how much from new funds?
3. Discuss the internal reallocations of financial resources which will occur to support this program.
4. What percentage of program costs will be accrued through tuition fees?
5. Discuss the impact of the program's estimated enrolment on the institution's overall tuition revenues.
6. How will the proposed program be funded if enrolment projections are not met?

Since the proposed program is constructed entirely from the components of existing programs, all the necessary funding is currently in place, and no new funding requirements are anticipated. Thus the budget for this program is absorbed within the existing budget.

SECTION IX: Program Consultations and Evaluation

1. What consultations have occurred with professional associations, employers, graduates of similar programs, and other educational institutions regarding this program?
2. Please provide evidence of academic quality by submitting reports from two similar institutions as well as from the relevant professional association(s), if appropriate.
3. Describe the procedures for institutional evaluation of the program during and subsequent to implementation.

Programs similar to the one proposed here are emerging rapidly at universities across the country. The University of British Columbia, McGill University, the University of Victoria, and the University of Saskatchewan all offer formal joint Physics/Computer Science BSc degree programs, while many others like University of Alberta, McMaster University, and the University of Regina offer physics options with an emphasis on computation and modelling. While we have consulted informally with other universities regarding the content of their specific programs, we feel that such programs as the one we are proposing have an established structure (curriculum) and a demonstrated track record for attracting large numbers of students who recognize the potential job prospects available to graduates who combine the analytical problem-solving abilities of the physicist with the computational expertise of the computer scientist.

April 5, 2004

Report of the Senate Planning and Priorities Committee on the Proposal to Introduce a Bachelor of Science Degree with Joint Honours in Computer Science and Physics and Astronomy

Preamble

1. The terms of reference of the Senate Planning and Priorities Committee (SPPC) are found in the *Senate Handbook*, Section 8.32, wherein SPPC is charged with making recommendations to Senate regarding proposed academic programs.

2. The Faculty of Science, Departments of Computer Science and Physics and Astronomy, have proposed a program leading to the Bachelor of Science degree with Joint Honours in Computer Science and Physics and Astronomy.

Observations

1. Considerable synergy exists between the disciplines of computer science and physics and astronomy, as they can be jointly applied to a range of problems from the very theoretical and remote (e.g., research on quantum computation) to the very practical and immediate (e.g., high tech industries or health care). The analytical and computational skills that are developed by training in these two disciplines make a potent combination.

2. Although no similar program exists at the University of Manitoba, the University of British Columbia, McGill University, the University of Victoria, and the University of Saskatchewan all offer formal joint Physics and Computer Science BSc degree programs. Several more Canadian universities offer physics options with an emphasis on computation and modelling. Program development in both of the participating departments is a high institutional priority of the University of Manitoba.

3. It is expected, based on the prior enquiries of students here and the popularity of similar programs at other Canadian universities, that the proposed joint honours program will meet with high student demand. Between 5 and 10 students per year are expected to enrol. These students will have a minimum grade of "B" in 7 specified prerequisite courses to enter the program. Departmental approval will be required each session and for any revisions.

4. The proposed program, as noted above, develops a potent combination of analytical and computational skills, which will prepare students well for immediate employment or post-graduate educational opportunities. Graduates are expected to find employment in financial institutions, the aerospace industry, computer manufacturing companies, and the health care sector (e.g., biodiagnostics and cancer care). They will be well positioned regarding the

strong demand for technologically highly skilled workers across Canada and in Manitoba, in particular.

5. The proposed program is composed entirely from the components of existing programs. No new faculty, courses, space, library, or computer resources are needed beyond the participating departments' existing resources.

Recommendation

That Senate approve and forward to the Board of Governors the Joint Honours Program in Computer Science and Physics and Astronomy proposed by the Faculty of Science.

Respectfully submitted,

Juris P. Svenne, Chair
Senate Planning and Priorities Committee

/jml

March 23, 2004

Report of the Senate Committee on Curriculum and Course Changes on a proposal for a Joint Honours Program in Computer Science & Physics and Astronomy

Preamble

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) is found in section 8.21 of the *Senate Handbook*, wherein SCCCC is charged "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".

2. SCCCC met on March 4, 2004 to consider a proposal for a new Joint Honours program in Computer Science and Physics and Astronomy.

Observations

1. The Departments of Computer Science and Physics and Astronomy propose the introduction of a Joint Honours Program in Computer Science and Physics and Astronomy. The Joint Honours program will provide outstanding students with an in depth course of study in Computer Science and Physics and Astronomy.

2. The Joint Honours Program combines required courses in Physics and Astronomy, Mathematics and Computer Science. As proposed program consists entirely of existing courses, it provides students with a new program choice without the commitment of additional resources.

3. The program proponents anticipate any student enrolment of approximately ten students.

4. As the program is comprised entirely of existing courses, library holdings are sufficient to support this new program.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends that Senate approve and recommend that the Board of Governors approve the proposed Joint Honours Program in Computer Science and Physics and Astronomy.

Respectfully submitted,

Professor B.L. Dronzek, Chair
Senate Committee on Curriculum and Course Changes

/jml

THE FORMAL PROGRAM PROPOSAL

Institution Submitting the Formal Program Proposal: The University of Manitoba

Title of Proposed Program: Joint Honours Economics and Mathematics

Faculty/Department in which the Proposed Program will be located: Faculty of Arts (Economics) and Faculty of Science (Mathematics) jointly

Name of Person(s) responsible for the Program: Head of Economics (W. Simpson) and Head of Mathematics (G. Woods)

Credential to be Offered: BA Hons or BSc Hons

Date of Program Implementation: September 1, 2004

President's/Rector's Signature _____ Date _____

Date Received by Council on Post-Secondary Education: _____

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the report to Senate.

INTRODUCTION OF A STATISTICS – ECONOMICS JOINT HONOURS PROGRAM
Proposed Program
2004-2005

Statistics – Economics Honours Joint Program, Department Code: 005E

The departments of Statistics and Economics offer a joint Honours program for students wishing in depth study in Statistics and Economics.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS[4] 120 CREDIT HOURS			
018.120 (or 018.121 and 018.122), 136.130[1], 136.150[1,2], 136.170[1,2], 005.100, 074.101 Plus 9 credit hours of electives which should include the required "W" course	018.270, 018.280, 136.220, 136.235, 136.275, 005.200 Plus 6 credit hours of approved Economics electives [3]	018.370, 018.380, 136.375 or 136.376, 005.347, 005.348, 005.349, 005.350, 005.360 Plus 3 credit hours of approved Economics electives[3]	018.412, 018.413, 005.414, 005.452, 005.453, 005.458, 005.463 Plus 9 credit hours of approved Economics electives[3]
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] 136.131 may be taken in place of 136.130; 136.151, 136.152 or 136.153 may be taken in place of 136.150; 136.171 or 136.173 may be taken in place 136.170.

[2]The combination of 136.150[1] and 136.170[1] may be replaced by 136.169.

[3] Of the 18 credit hours in Economics electives in Years 2, 3 and 4, no more than 6 credit hours may be at the 200 level or below; 018.253 and 018.318 are recommended in Year 2 or 3. The normal prerequisite for 018.318 is 018.317, which will be waived for students in this program who have completed Year 1.

[4]The courses required in this program satisfy the University Mathematics requirement.

(Letters in brackets indicate minimum prerequisite standing for further study.)

Section I: Program Description

1. The program would appear under the title "Joint Honours Economics and Mathematics" in the corresponding sections of the Undergraduate Calendar for Mathematics (pp. 382-384 of the 04R Calendar) and Economics (p. 118 of the 04R Calendar).

2. The program involves no new courses:

Year 1	Year 2	Years 3 and 4
18.120 (6)[or 18.121(3) and 18.122(3)] 136.150 or 151 or 152 or 153 (3) 136.170 (3) 136.130 or 131 (3) 5.100 (3) 74.101 (3) + 9 CH in electives, including 3CH in W-designated course	18.270 (3) 18.280 (3) 136.220 (3) 136.235 (6) 136.275 (6) 136.280 (3) + 6 approved CH in electives	18.370 (3) 18.380 (3) 18.318 or 5.200 (3) 136.260 (3) 136.323 (3) 136.330 (3) 136.340 (3) 136.370 or 371 (3) 136.375 or 376 (6) + 24 approved CH in Economics + 6 approved CH in Mathematics at the 300 or 400 level, which must include 3CH from among 136.350, 351, 360, 381, 382, or at the 400 level
30 credit hours	30 credit hours	60 credit hours

Notes: (1) Of the 24 CH in electives in Economics in Years 3 and 4, no more than 6 credit hours may be at the 200 level (with the exception of 18.253) and at least 6 CH must be at the 400 level.

(2) The combination of 136.150 (or 151 or 152 or 153) and 136.170 may be replaced by 136.169.

(3) Some courses may be taken in a different year than indicated; 5.100, 74.101, 136.260, and 18.318 (or 5.200) may be taken in Year 2. The normal prerequisite for 18.318 is 18.317, which will be waived for students in this program who have completed Year 1.

(4) 136.330, plus 3 of the 6 unallocated CH in Mathematics in Years 3 and 4, may be replaced by 136.335.

(5) Students are encouraged to consider useful courses in Computer Science and Statistics for their unallocated credit hours.

Other notes will have to be consistent with the Double Honours program in Economics (p.118 of the Undergraduate Calendar) and the Joint Honours program in Mathematics (pp.382-384 of the Undergraduate Calendar).

3. The objective is to provide outstanding students the opportunity to complete a joint honours program in Economics and Mathematics.

4. There is considerable overlap between the modeling and analysis aspects of Economics, such as Microeconomic and Macroeconomic theory, and Mathematics. There is also a strong link between certain aspects of Econometric theory and Mathematical Statistics. This program will allow Economics students to pursue a theoretical orientation with a strong basis in Mathematics and it will allow Mathematics students to obtain a strong basis in Economic theory and its applications.

5. Students will have to meet the entry requirements for Honours programs in both Economics and Mathematics.

6. Mathematics is a cognate discipline of Economics and this proposed program offers outstanding students the opportunity to obtain an excellent education in both disciplines. At no additional resource costs, this program provides a new choice for our best and brightest students.

7. No comparable program exists in the province.

Section II: Market Need and Market Demand

1. Honours graduates in Economics and Mathematics find employment readily in the public and private sectors, including government departments and agencies, the financial sector (banks, insurance companies, etc.), and other large private organizations. Graduates of this degree will have a unique set of valuable skills in the marketplace.

2. Government departments and agencies, the financial sector (banks, insurance companies, etc.), and other large private organizations.

3. No. The program was developed by the Departments of Economics and Mathematics jointly.

4. The proposed program develops important professional capacity in the application of Economics and Mathematics to government policy, operations management, forecasting, and other business applications.

5. Nothing specific at this time.

Section III: Student Demand for the Program

1. Undergraduates admissible to an Honours Program in Arts or Science.

2. There is no such program currently available in Manitoba. Students cannot combine a single Honours program in Economics and a single Honours program in Mathematics within a regular four-year program.

3. The Honours Committee in Economics has regular enquiries about Double Honours programs in Economics and Statistics or Mathematics and initiated the process that led to this proposal and the proposal for a Joint Honours in Economics and Statistics.

4. According to the 2002 IS Book, there are 16 students in Honours Economics and 10 students in Honours Mathematics. Given the overlap between these disciplines, and the opportunities afforded to a student who can specialize in both in one program, we expect a steady flow of perhaps 5 students in the proposed Joint Honours program.

5. There might be some loss to the current single Honours programs in Economics and Mathematics, but the students in the proposed Joint Honours program would be taking most of the same courses as their single Honours counterparts and the Joint Honours Program might attract some new students that would not otherwise have taken either single Honours program.

6. There is room for growth in both the Honours programs in Economics and Mathematics. They could easily double in size before there would be any concern. There is no minimum enrolment, since no new courses are involved.

7. Over a three to five year period I would anticipate about five graduates from this program.

8. Nothing special beyond what is done for single Honours (and other general) programs in the Department of Economics and Mathematics.

9. Yes, under the same terms as the single Honours programs in Economics and Mathematics.

IV. Faculty Requirements

1. No new faculty are required for this program. From year to year, most faculty teach courses in the single Honours programs in Economics and Mathematics and will therefore teach in this program as well.

2. No new faculty are required for this program.

V. Cooperative Arrangements

1. The cooperative arrangements are with the Department of Mathematics and the Faculty of Science. No arrangements outside the University are necessary at this point.

2. They will be transferable on the same basis as other Honours degree programs in Economics and

Mathematics.

3. There is no internship or practicum component per se. The program is designed to give students a blend of theoretical work in Economics and Mathematics with applications to each discipline that will be useful later in a student's career.

4. Same basis as the single Honours programs in Economics and Mathematics.

VI. Learning Technologies

1. Same basis as the single Honours programs in Economics and Mathematics.

VII. Resource Requirements

1. Existing library resources for single Honours programs in Economics and Mathematics are adequate for this proposed program.

2. Existing computer resources for single Honours programs in Economics and Mathematics are adequate for this proposed program.

3. No impact on existing infrastructure and equipment.

4. None.

VIII. Financial Considerations

1 to 6. No new financial resources are required for this program.

IX. Program Consultations and Evaluation

1. No consultations.

2. No evidence. Extension of existing Honours programs.

3. Same procedures as for single Honours programs in Economics and Mathematics. Programs reviewed regularly by Department Councils and as part of undergraduate program reviews.

April 5, 2004

Report of the Senate Planning and Priorities Committee on the Proposal to Introduce a Bachelor of Arts or Bachelor of Science Degree with Joint Honours in Economics and Mathematics

Preamble

1. The terms of reference of the Senate Planning and Priorities Committee (SPPC) are found in the *Senate Handbook*, Section 8.32, wherein SPPC is charged with making recommendations to Senate regarding proposed academic programs.

2. The Faculty of Arts (Economics) and Faculty of Science (Mathematics) have proposed a program leading to the Bachelor of Arts or Bachelor of Science degree with Joint Honours in Economics and Mathematics.

Observations

1. Economics and mathematics are cognate disciplines. There is considerable overlap between the modelling and analysis aspects of economics, such as microeconomic and macroeconomic theory, and mathematics. The aim of the proposed joint honours program is to give outstanding students the opportunity to obtain a strong education in both disciplines, within a regular 4-year program.

2. Single honours programs in economics and mathematics already exist but cannot be completed independently in 4 years. Both also have room for additional students. It is expected, based on prior enquiries, that the opportunity to take a combined program will attract some students who would not otherwise have taken either single honours program alone. Approximately 5 students per year are expected to enrol in the proposed joint honours program. These students will have to meet the entry requirements for honours programs in both Economics and Mathematics.

3. The proposed program develops professional capacity in the application of economics and mathematics to government policy, operations management, forecasting, and other business applications. Graduates will have a unique set of skills and are expected to find employment in government departments and agencies, the financial sector, other large private organizations.

4. No new faculty, courses, space, library, or computer resources are needed beyond the existing resources for the respective single honours programs.

Recommendation

That Senate approve and forward to the Board of Governors the Joint Honours Program in Economics and Mathematics proposed by the Faculty of Arts (Economics) and Faculty of Science (Mathematics).

Respectfully submitted,

Juris P. Svenne, Chair
Senate Planning and Priorities Committee

/jml

March 23, 2004

Report of the Senate Committee on Curriculum and Course Changes on a proposal for a Joint Honours Program in Mathematics and Economics

Preamble

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) is found in section 8.21 of the *Senate Handbook*, wherein SCCCC is charged "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".

2. SCCCC met on March 4, 2004 to consider a proposal for a new Joint Honours program in Mathematics and Economics.

Observations

1. The Departments of Mathematics and Economics propose the introduction of a Joint Honours Program in Mathematics and Economics. The Joint Honours program will provide outstanding students with an in depth course of study in Mathematics and Economics.

2. The Joint Honours Program combines required courses in Mathematics, Economics, Statistics and Computer Science. As proposed program consists entirely of existing courses, it provides students with a new program choice without the commitment of additional resources.

3. The program proponents anticipate any student enrolment of approximately five students.

4. As the program is comprised entirely of existing courses, library holdings are sufficient to support this new program.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends that Senate approve and recommend that the Board of Governors approve the proposed Joint Honours Program in Mathematics and Economics.

Respectfully submitted,

Professor B.L. Dronzek, Chair
Senate Committee on Curriculum and Course Changes

/jml

THE FORMAL PROGRAM PROPOSAL

Institution Submitting the Formal Program Proposal: The University of Manitoba

Title of Proposed Program: Joint Honours Economics and Statistics

Faculty/Department in which the Proposed Program will be located: Faculty of Arts (Economics) and Faculty of Science (Statistics) jointly

Name of Person(s) responsible for the Program: Head of Economics (W. Simpson) and Head of Statistics (S. Cheng)

Credential to be Offered: BA Hons or BSc Hons

Date of Program Implementation: September 1, 2004

President's/Rector's Signature

Date

Date Received by Council on Post-Secondary Education:

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses the report to Senate.

INTRODUCTION OF MATHEMATICS – ECONOMICS JOINT HONOURS PROGRAM
Proposed Program
2004-2005

MATHEMATICS – ECONOMICS JOINT HONOURS PROGRAM, Department Code 136E

The departments of Mathematics and Economics offer a joint Honours program for students wishing in depth study in Mathematics and Economics.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT HONOURS 120 CREDIT HOURS			
018.120, 136.130[1],136.150 [1,2], 136.170 [1,2], 005.100[3], 074.101[3]	018.270, 018.280, 136.220, 136.235, 136.275, 136.280	018.370, 018.380, 018.318 (or 005.200)[3], 136.260[3], 136.323, 136.330[5], 136.340, 136.370 (or 136.371), 136.375 (or 136.376)	
Plus 9 credit hours of electives[6], which should include the required "W" course	Plus 6 credit hours of approved electives[6]	Plus 18 credit hours of approved Economics courses[4] Plus 6 credit hours of Mathematics courses at the 300 or 400 level, which must include at least one of 136.350,136.351, 136.360, 136.381, 136.382, or any Mathematics course at the 400 level. Plus 6 credit hours of approved electives[6]	
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

[1] 136.131 may be taken in place of 136.130; 136.151, 136.152 or 136.153 may be taken in place of 136.150; 136.171 or 136.173 may be taken in place 136.170.

[2] The combination of 136.150[1] and 136.170[1] may be replaced by 136.169.

[3] Some courses may be taken in a different year than indicated; 005.100, 074.101, 136.260 and 018.318 (or 005.200) may be taken in Year 2.

[4] Of the 18 credit hours of electives in Economics in Years 3 and 4, no more than 6 credit hours may be at the 200 level (with the exception of 018.253) and at least 6 credit hours must be at the 400 level.

[5] 136.330, plus 3 of the 6 unallocated credit hours in Mathematics in Years 3 and 4, may be replaced by 136.335.

[6] Student are encouraged to consider useful courses in Computer Science and Statistics as electives.

Section I: Program Description

1. The program would appear under the title "Honours ~~Double~~ JOINT Economics and Statistics" in the corresponding sections of the Undergraduate Calendar for Statistics (p. 401 of the 04R Calendar) and Economics (p. 118 of the 04R Calendar).

2. The program involves no new courses:

Year 1	Year 2	Year 3	Year 4
18.120 (6)[or 18.121(3) and 18.122(3)] 136.130[1](3) 136.150[1](3) 136.170 (3) 5.100 (3) 74.101 (3) + 9 CH in electives, including 3 CH in W-designated course	18.270 (3) 18.280 (3) 136.220 (3) 136.235 (6) 136.275 (6) 5.200 (3) + 6 approved CH in Economics electives [2]	18.370 (3) 18.380 (3) 136.375 or 376 (6) 5.347 (3) 5.348 (3) 5.349 (3) 5.350(3) 5.360 (3) + 3 approved CH in Economics electives [2]	18.412 (3) 18.413 (3) 5.414 (3) 5.452 (3) 5.453 (3) 5.458 (3) 5.463 (3) + 9 approved CH in Economics electives [2]
30 credit hours	30 credit hours	30 credit hours	30 credit hours

2) Notes: (1) Of the 18 credit hours in Economics electives in Years 2-4, no more than 6 credit hours may be at the 200 level; 18.253 and 18.318 are recommended in year 2 or 3. The normal prerequisite for 18.318 is 18.317, which will be waived for students in this program who have completed Year 1.

Other notes will have to be consistent with the Double Honours program in Economics (p.118 of the Undergraduate Calendar) and the Joint Honours program in Statistics (pp.401-402 of the Undergraduate Calendar).

3. The objective is to provide outstanding students the opportunity to complete a joint honours program in Economics and Statistics.

4. There is considerable overlap between the quantitative aspects of Economics, such as Econometrics, and Statistics. There is also a strong link between certain aspects of Economic theory, such as those involving risk and uncertainty, and Statistical theory. This program will allow Economics students to pursue a quantitative and theoretical orientation with a strong basis in Statistics and it will allow Statistics students to obtain a strong basis in Economic applications.

5. Students will have to meet the entry requirements for Honours programs in both Economics and Statistics.

6. Statistics is a cognate discipline of Economics and this proposed program offers outstanding students the opportunity to obtain an excellent education in both disciplines. At no additional resource costs, this program provides a new choice for our best and brightest students.

7. No comparable program exists in the province.

Section II: Market Need and Market Demand

1. Honours graduates in Economics and Statistics find employment readily in the public and private sectors, including government departments and agencies, the financial sector (banks, insurance companies, etc.), and other large private organizations. Graduates of this degree will have a unique set of valuable skills in the marketplace.

2. Government departments and agencies, the financial sector (banks, insurance companies, etc.), and other large private organizations.

3. No. The program was developed by the Departments of Economics and Statistics jointly.

4. The proposed program develops important professional capacity in the application of Economics and Statistics to government policy, operations management, forecasting, and other business applications.

5. Nothing specific at this time.

Section III: Student Demand for the Program

1. Undergraduates admissible to an Honours Program in Arts or Science.

2. There is no such program currently available in Manitoba. Students cannot take a single Honours program in Economics and a single Honours program in Statistics within a regular four-year program.

3. The Honours Committee in Economics has regular enquiries about Double Honours programs in Economics and Statistics or Mathematics and initiated the process that led to this proposal.

4. According to the 2002 IS Book, there are 16 students in Honours Economics and 9 students in Honours Statistics. Given the overlap between these disciplines, and the opportunities afforded to a student who can specialize in both in one program, we expect a steady flow of perhaps 5 students in the proposed Honours Double program.

5. There might be some loss to the current single Honours program in Economics and Statistics, but the students in the proposed Honours Double program would be taking most of the same courses as their single Honours counterparts and the Honours Program might attract some new students that would not otherwise have taken either single Honours program.

6. There is room for growth in both the Honours programs in Economics and Statistics. They could easily double in size before there would be any concern. There is no minimum enrolment, since no new courses are involved.

7. Over a three to five year period I would anticipate about five graduates from this program.

8. Nothing special beyond what is done for single Honours (and other general) programs in the Department of Economics and Statistics.

9. Yes, under the same terms as the single Honours programs in Economics and Statistics.

IV. Faculty Requirements

1. No new faculty are required for this program. From year to year, most faculty teach courses in the single Honours programs in Economics and Statistics and will therefore teach in this program as well.

2. No new faculty are required for this program.

V. Cooperative Arrangements

1. The cooperative arrangements are with the Department of Statistics and the Faculty of Science. No arrangements outside the University are necessary at this point.

2. They will be transferable on the same basis as other Honours degree programs in Economics and Statistics.

3. There is no internship or practicum component per se. The program is designed to give students a blend of theoretical work in Economics and Statistics with applications to each discipline that will be useful later in a student's career.

4. Same basis as the single Honours programs in Economics and Statistics.

VI. Learning Technologies

1. Same basis as the single Honours programs in Economics and Statistics.

VII. Resource Requirements

1. Existing library resources for single Honours programs in Economics and Statistics are adequate for this proposed program.

2. Existing computer resources for single Honours programs in Economics and Statistics are adequate for this proposed program.

3. No impact on existing infrastructure and equipment.

4. None.

VIII. Financial Considerations

1 to 6. No new financial resources are required for this program.

IX. Program Consultations and Evaluation

1. No consultations.

2. No evidence. Extension of existing Honours programs.

3. Same procedures as for single Honours programs in Economics and Statistics. Programs reviewed regularly by Department Councils and as part of undergraduate program reviews.

April 5, 2004

Report of the Senate Planning and Priorities Committee on the Proposal to Introduce a Bachelor of Arts or Bachelor of Science Degree with Joint Honours in Economics and Statistics

Preamble

1. The terms of reference of the Senate Planning and Priorities Committee (SPPC) are found in the *Senate Handbook*, Section 8.32, wherein SPPC is charged with making recommendations to Senate regarding proposed academic programs.

2. The Faculty of Arts (Economics) and Faculty of Science (Statistics) have proposed a program leading to the Bachelor of Arts or Bachelor of Science degree with Joint Honours in Economics and Statistics.

Observations

1. Economics and statistics are cognate disciplines. Economic and statistical theory both deal with problems of risk and uncertainty. Quantitative aspects of economics, such as econometrics, overlap substantially with statistics. The aim of the proposed joint honours program is to give outstanding students the opportunity to obtain a strong education in both disciplines, within a regular 4-year program.

2. Single honours programs in economics and statistics already exist but cannot be completed independently in 4 years. It is expected, based on prior enquiries, that the opportunity to take a combined program will attract some students who would not otherwise have taken either single honours program alone. Approximately 5 students per year are expected to enrol in the proposed joint honours program. These students will have to meet the entry requirements for honours programs in both Economics and Statistics.

3. The proposed program develops professional capacity in the application of economics and statistics to government policy, operations management, forecasting, and other business applications. Graduates will have a unique set of skills and are expected to find employment in government departments and agencies, the financial sector, other large private organizations.

4. No new faculty, courses, space, library, or computer resources are needed beyond the existing resources for the respective single honours programs.

Recommendation

That Senate approve and forward to the Board of Governors the Joint Honours Program in Economics and Statistics proposed by the Faculty of Arts (Economics) and Faculty of Science (Statistics).

Respectfully submitted,

Juris P. Svenne, Chair
Senate Planning and Priorities Committee

/jml

March 23, 2004

Report of the Senate Committee on Curriculum and Course Changes on a proposal for a Joint Honours Program in Statistics and Economics

Preamble

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) is found in section 8.21 of the *Senate Handbook*, wherein SCCCC is charged "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".

2. SCCCC met on March 4, 2004 to consider a proposal for a new Joint Honours program in Statistics and Economics.

Observations

1. The Departments of Statistics and Economics propose the introduction of a Joint Honours Program in Statistics and Economics. The Joint Honours program will provide outstanding students with an in depth course of study in Statistics and Economics.

2. The Joint Honours Program combines required courses in Statistics, Economics, Mathematics and Computer Science. As proposed program consists entirely of existing courses, it provides students with a new program choice without the commitment of additional resources.

3. The program proponents anticipate any student enrolment of approximately five students.

4. As the program is comprised entirely of existing courses, library holdings are sufficient to support this new program.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends that Senate approve and recommend that the Board of Governors approve the proposed Joint Honours Program in Statistics and Economics.

Respectfully submitted,

Professor B.L. Dronzek, Chair
Senate Committee on Curriculum and Course Changes

/jml

UNIVERSITY OF MANITOBA | Asper School of Business
Faculty of Management

Dean's Office
324 Drake Centre
181 Freedman Crescent
Winnipeg, Manitoba
Canada R3T 5V4
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facsimile (204) 474-7544

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MEMORANDUM

DATE: April 7, 2004

TO: Jeff Leclerc, Office of the University Secretary

FROM: Fred Starke, Associate Dean, Asper School of Business F. A.

SUBJECT: Proposed New Department

The Asper School of Business would like to form a new department of Supply Chain Management. I understand that this proposal must proceed through several steps within the University, and this memo is designed to start that process.

The proposed new department was approved by Faculty Council at its March, 2004 meeting. The proposed new department, which will have 11 members, will focus on supply chain management, production management, operations research, and transportation. The members of the new department will be:

- 2 Operations Research professors (who are currently in the department of Business Administration)
- 3 Transportation professors (who are currently in the Transport Institute)
- 2 Production Management professors (one of whom is currently in the department of Business Administration, and another one who is a new hire who will start on July 1, 2004)
- 2 Supply Chain Management professors (both of whom are new hires who will be starting on July 1, 2004)
- 2 additional Supply Chain Management professors who will be hired during the next two years

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the report to Senate.

Proposed Department of Supply Chain Management
I.H. Asper School of Business

A. Summary of the Concept

An opportunity exists for the Asper School of Business to take advantage of the existing resources and strengths of the University of Manitoba Transport Institute (UMTI), the baseline funding for provided by COPSE for faculty positions in logistics, transportation and supply chain management, and the funding for the CN Chair in Sustainable Transportation and Logistics. The integration of these areas allows the Asper School of Business to further develop a strategically important academic area within the School. This new academic area has the potential of energizing several existing disciplines within the Asper School of Business (Operations Management and Management Science) by creating synergy between these disciplines and the new department. Under this proposal, a new department in the Asper School of Business would be created. The department would house the new undergraduate and graduate majors in Logistics and Supply Chain Management, the Transport Institute, and the CN Chair. There will be eleven baseline faculty positions in the new department at the outset.

B. The Emergence of Logistics, Transportation and Supply Chain Management as Strategic Areas of Business

Transportation and logistics functions were difficult to manage prior to the development of computers and data handling/transmission systems. The ability of managers to make strategic decisions was limited by the difficulty in gathering pertinent data, the special characteristics of logistics operations, and the rapid pace of change. In addition, transportation was burdened with regulatory constraints that narrowed the scope for creative management. Consequently, distribution functions were treated as an unavoidable cost of doing business and received scant attention at senior management levels.

The revolution in information technology and deregulation in transportation after 1980 have created a new status for logistics management. An old axiom of business states: "you can only manage what you measure". The use of bar code readers, satellite tracking and the Internet has enabled logistics data to be captured quickly and transmitted inexpensively. Computer-based algorithms developed by management science enabled firms to improve the productivity of inventory, delivery routing, queuing and other logistical functions. Most recently, enterprise software systems, e.g. SAP, have made the ability to measure the performance of warehousing, inventory, transportation and other logistical functions, a strategic high ground of business.

New approaches to manufacturing that integrated logistics demonstrated the strategic advantage of superior logistics management. For example, the North American automobile industry was forced by Japanese competition to adopt Just-In-Time (JIT) inventory systems that depended heavily on coordinated transportation. Dell Computers showed how logistics and e-commerce could be combined to deliver customized mass production and it now leads the retail computer business. Finally, Wal-Mart has become the world's largest retailer by using superior logistics and supply chain management to reduce their average prices below the competition. These

examples illustrate the emergence of logistics as a strategic tool of management that is now being represented at the top executive levels of all major corporations.

Businesses have also realized that in a global economy, cooperation within the supply chain, or supply chain management, can be critical to survival. Supply chain management involves the analysis and strategic management of the product from the beginnings of the production stage through to the final distribution to the consumer. Competitiveness requires all firms in the supply chain to examine their logistical and information systems practices in light of the impacts on other channel members.

These opportunities were recognized over a decade ago in the United States, where many business schools reorganized their curriculum to reflect the need for specialization in logistics and transportation. Canadian universities are also recognizing this opportunity, and the demand for qualified logisticians is causing change to occur in business school curricula. The University of Manitoba has been a leading center of transportation studies in Canada since 1966, and more recently has developed programming in logistics and transportation management. With the Transport Institute becoming part of the Asper School of Business in 2002 and the implementation of the undergraduate major in Logistics, Transportation and Supply Chain Management in 2003, it is important that the School formalize the integration of the disciplines that are the academic underpinnings of the area.

Illustrative of the growth in this area in business schools is the number of departments and programs that currently exist. The Appendix contains a sample list of department names at a number of U.S. universities.

C. The Role of the Transport Institute

The Transport Institute at the University of Manitoba was created under a Federal/Provincial Agreement to:

- promote and perform basic and applied research in areas related to transportation;
- develop and maintain appropriate statistical data bases on transportation in Canada and on relevant areas of international transportation;
- provide education in transportation management and other academic programs in engineering, economics, planning and analysis, and other disciplines related to transportation;
- provide training for individuals in technological transfer and operational aspects of transportation.

In April 2002, the Transport Institute formally became part of the Asper School of Business, with the Director of the Institute reporting to the Dean.

D. COPSE Funding

In 2001, the Asper School of Business developed a funding proposal for academic positions to begin a program in Logistics, Transportation and Supply Chain Management. It was proposed

that the School begin its programming with undergraduate courses, followed by a major in Logistics, Transportation and Supply Chain Management at the undergraduate level, with subsequent courses and degrees offered at the graduate level, including a major at the Ph.D. level. The proposal was presented to the Council on Post Secondary Education (COPSE). The proposal was supported by the Winnipeg and Manitoba Chambers of Commerce and the University of Manitoba. In 2002, the School received a $100,000 grant from COPSE to fund the development costs of the program.

The University was informed in 2002 that COPSE funding had been approved for $400,000 over a four-year period for four baseline faculty positions. The University had already committed one new baseline position and the Asper School of Business committed one new position in Operations Management to the area, for a total of six new positions available to be filled. The Director of the Transport Institute's position became part of the School's faculty complement when the Institute joined the School. Subsequently, the CN Chair has been filled on a part-time basis, for a total of eight positions in the area. In addition, two faculty members in Management Science and one in Operations Management have indicated a desire to join the new department, for a total membership of eleven faculty positions. There is also one full-time sessional lecturer teaching in the Operations Management area.

E. Hiring New Faculty Members Using COPSE Funding

One new faculty member was hired in the Transportation area beginning July 1, 2003 and two additional positions in Supply Chain Management have been filled for July 1, 2004, one at the Full Professor level and one at the Assistant Professor level. One full-time term appointment has recently been made in the Operations Management area. The remaining unfilled positions will be filled over the next three years as the COPSE funding is received.

F. Rationale

The following discussion points constitute the rationale for creating a new department in the Asper School of Businesses:

1) With eight positions available and with the others joining the new department, a critical mass of academic staff exists. At the outset, the department will have eleven full-time academic members, and could eventually reach thirteen or more faculty members.

2) The organizational history of the Asper School of Business is that majors reside in departments. If a major is located in a department that has a specific focus on the major, it is more likely that the major will develop and prosper. Note that the major in International Business, which was originally developed and managed by the Dean's Office, was recently transferred to the Department of Business Administration.

3) The new faculty members hired have stated a strong preference for a separate department focused on Transportation, Logistics and Supply Chain Management over having the area divided among different departments.

G. Opportunities for Related Disciplines

Operations analysis and operations strategy are major competitive tools in today's business environment. As noted previously, the best examples are companies such as Wal-Mart, Costco, Home Depot, Dell Computers and others. All of these companies attribute a large part of their success to their ability to effectively and efficiently integrate and manage the supply of goods and services from the production process through to the distribution to the consumer.

Several existing disciplines within the Asper School of Business are core to managing the operational aspects of organizations. These disciplines are production/operations management (POM), management information systems (MIS), and management science. The addition of logistics, transportation and supply chain management to these disciplines offers the potential for the Asper School to have a complete and integrated package capable of delivering high quality teaching and research programs in the general area of operations analysis and operations strategy.

Supply chain management is an interdisciplinary area incorporating the concepts, research, and practices of (but not limited to) Operations Management, MIS, and Management Science. [1] Integrating as many of these disciplines as possible into a single department will increase the potential of joint research, will stimulate program development in an area important to the Province's economy, and will provide a unique focus for Operations Management and Management Science, disciplines that have been relegated to service status in recent years because of lack of enrollment in their advanced courses. In contrast, the undergraduate major in transportation/logistics/supply chain management that has already been introduced is attracting strong interest from students, and there are additional plans to develop graduate courses and other programs.

An added benefit is that placing Operations Management and Management Science into the new department would provide the Department of Business Administration the opportunity to develop a sharper focus.

H. Implementation Issues

Following approval of the new department by Faculty Council, Senate, etc., an Acting Head will be appointed for a two-year period. Although Acting Head appointments are made by the Dean, a consultative process will be used similar to that normally used to appoint a Head.

I. Implementation Strategy

The initial draft of this proposal was discussed in 2001 with several faculty members in the areas. That same group discussed additional drafts of the proposal in 2003, followed by the formal expression of interest in joining the new department by relevant faculty members.

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[1] Faculty members in MIS have decided to remain in the Department of Accounting and Finance, but are interested in working with the new department in developing MIS courses related to supply chain management.

The Dean met with Department Councils to get additional feedback for revisions to the proposal during 2003 and 2004. Faculty Council approval (unanimous) was obtained in March 2004.

J. Relationship of the Transport Institute to the New Department

The Transport Institute is currently preparing a strategic plan based upon their new association with the Asper School of Business and the proposed department. Part of that plan will be a recommendation for structure and the reporting relationship. It is likely that the relationship would be much like the relationship between the Asper Centre for Entrepreneurship and the Department of Marketing.

K. Budget and Resources

Space already exists for a department head and secretary on the 4th floor of the Drake Centre. In the initial period of forming the department, the support staff function for the new department will be performed in cooperation with support staff in the Transport Institute. It is expected that any additional resources required will be minimal, and, with the approval of COPSE, could come from the new baseline funds. Existing departments will not have to relinquish any resources, except for funds associated with graders, which will be transferred with the courses.

L. Department Name

The founding members of the department have unanimously recommended the name Department of Supply Chain Management for the new department.

M. Founding Members of the New Department

The following individuals/positions would constitute the founding members of the department:

1. Barry Prentice, Professor
2. Paul Earl, Assistant Professor
3. Ed Tyrchniewicz (CN Chair)
4. Ron McLachlin, Associate Professor
5. Matthew Morris, Assistant Professor (new hire, July 1, 2004)
6. Earl Rosenbloom, Professor
7. C. Foropon, Assistant Professor (new hire, July 1, 2004)
8. Suresh Bhatt, Professor
9. Paul Larson, Professor (new hire, July 1, 2004)
10. Supply Chain Management (unfilled)
11. Logistics (unfilled)

Appendix

Sample department names from other universities

Boston College	Operations and Strategic Management Department (IT, POM, Strategic Mgmt., Decision Analysis)
Texas Christian U.	Department of Information Systems and Supply Chain Management
Arizona State U.	Department of Supply Chain Management
Michigan State U	Department of Marketing and Supply Chain Management
U of Maryland	Department of Logistics, Business and Public Policy
Penn State U	Department of Supply Chain and Information Systems Management
Ohio State U	Department of Marketing & Logistics
George Southern U	Department of Information Systems and Logistics
Iowa State U	Department of Logistics, Operations and Management Information Systems

Other names:

Operations Department
Department of Information Systems and Logistics
Department of Supply and Value Chain
Department of Operations and Logistics
Department of Logistics Management

Senate
Senate Chamber
Room 245 Engineering Building
WEDNESDAY, May 12, 2004
1:30 p.m.

AGENDA ADDENDUM

V MATTERS RECOMMENDED FOR CONCURRENCE WITHOUT DEBATE

2. Report of the Senate Committee on Medical Qualifications re Dr. Ethan Rubinstein

Note: A copy of Dr. Rubinstein's full *curriculum vitae* is available for inspection by member of Senate in the Office of the University Secretary, Room 312 Administration Building.

/jml

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April 19, 2004

TO: Mr. Jeff Leclerc
Acting University Secretary

FROM: J. Anderson, Ph.D.
Associate Dean (Academic)

RE: SCMQ - Dr. Ethan Rubinstein

On April 14, 2004, the Senate Committee on Medical Qualifications (SCMQ) considered the abovenamed physician's eligibility for registration and licensure with the College of Physicians and Surgeons of Manitoba under Section 64 of the Medical Act.

Dr. Ethan Rubinstein is being recruited by Dr. D. Roberts, Professor and Head, Department of Internal Medicine, as the Section Head, Section of Infectious Diseases, at the rank of Professor, and as the H.E. Sellers Research Chair.

Following his training in Medicine at Basel University in Switzerland and Johns Hopkins University Medical School in the U.S.A., Dr. Rubinstein did a fellowship in I.D. at New York University from 1972 to 1974 and also spent time studying infectious diseases in Paris from 1991-1992. From 1974 to 2002 he was Acting Head and then Head of Infectious Diseases at the Chaim Sheba Medical Center, Sackler School of Medicine at Tel Aviv University. Dr. Rubinstein's letters of recommendation are all laudatory. Dr. Bryan Kirk had suggested calling Dr. Mervin Shapiro in Jerusalem to obtain a reference on Dr. Rubinstein's clinical competence. Dr. Shapiro has sent an e-mail to Dr. Roberts stating that Dr. Rubinstein "has always exhibited outstanding diagnostic acumen, superb clinical judgement and great empathy of those patients for whom is he responsible. His experience has been garnered over many years during which he has practiced infectious diseases in a university department, and general medicine in the same hospital." Dr. Shapiro goes on to comment "I have no doubt at all that were I to need a personal opinion from an infectious disease expert, I would seek him out as my personal physician."

Members of the Senate Committee on Medical Qualifications are:

Dr. J.E. Anderson, Chair
Dr. K. Grant
Dr. S. Barakat
Dr. W. Pope
Dr. A. Chochinov
Dr. B. Kirk

Comments of the Senate Executive Committee:
The Senate Executive Committee endorses the report to Senate.

After considering Dr. Rubinstein's C.V., enclosed letters of reference, and consideration of a personal meeting held between Dr. Rubinstein and Dr. Bryan Kirk on behalf of the Chairman of the SCMQ on October 29, 2003, it was unanimously approved that Dr. Rubinstein be recommended for licensure and registration under Section 64 of the Medical Act and the Senate be so notified.

Copy to: Dr. D. Roberts