

Senate
Senate Chamber
Room 245 Engineering Building
WEDNESDAY, January 8, 2003
1:30 p.m.

AGENDA

I MATTERS TO BE CONSIDERED IN CLOSED SESSION

II MATTERS RECOMMENDED FOR CONCURRENCE WITHOUT DEBATE

1. Report of the Faculty
Council of Graduate Studies
re New Courses and Course Changes Page 17

III MATTERS FORWARDED FOR INFORMATION

1. In Memoriam - The Honourable Ronald J. Duhamel, P.C. Page 25
2. In Memoriam - Dr. Dennis King Page 26
3. Report of the Senate Committee on Awards Page 27
4. Statement of Intent: Master of Environment Page 31
5. Correspondence from COPSE re: Master of Environment Page 38
6. Statement of Intent: Joint Computer Science -
Physics and Astronomy Honours Program Page 39
7. Correspondence from COPSE re: Joint Computer Science-
Physics and Astronomy Honours Program Page 46

IV REPORT OF THE PRESIDENT

V QUESTION PERIOD

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

VI CONSIDERATION OF THE MINUTES OF THE MEETING OF DECEMBER 4, 2002

VII BUSINESS ARISING FROM THE MINUTES

**VIII REPORTS OF THE SENATE EXECUTIVE COMMITTEE
AND THE SENATE PLANNING AND PRIORITIES COMMITTEE**

1. Report of the Senate Executive Committee Page 47
2. Report of the Senate
Planning and Priorities Committee

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

**IX REPORTS OF OTHER COMMITTEES OF SENATE,
FACULTY AND SCHOOL COUNCILS**

X ADDITIONAL BUSINESS

1. Presidential Advisory Committee on Maclean's Final Report Page 48
 - a) Comments of the Senate Executive Committee Page 62

XI ADJOURNMENT

/jml

Preamble

The Programs and Planning Committee of the Faculty of Graduate Studies met on June 4, 2002 and made the following recommendation regarding the introduction of a course in the Faculty of Engineering.

Observations

1. There are three courses to be introduced in the department of Electrical and Computer Engineering.
2. The Faculty of Engineering approved the course introductions.
3. Statements of Library support for the proposed courses indicated that the Libraries will be able to support the courses.
4. Reasons for the course change accompany the course numbers and titles, which are included below.

Recommendation

The Programs and Planning Committee of the Faculty of Graduate Studies recommends that the Faculty Council of Graduate Studies approve the course introductions as indicated below.

Course to be introduced:

024.7xx Embedded Systems Engineering (3) A Structured approach to the design of modern digital systems is presented with specific emphasis on embedding computer applications. Topics will include the formal methodology of digital design together with selected topics from the current research literature

Reason for the introduction:

Embedded systems comprise the vast majority of all computing systems in existence today. In recent years there has been a sharp increase in both the numbers and complexity of these systems. This rise in complexity requires an increased emphasis on the use of formalized design techniques in the development of modern computing systems in order to ensure such systems meet their original design requirements and will function both correctly and reliably. At the present time, the Electrical and Computer Engineering department has several foundation courses in digital systems but does not offer a graduate course which approaches systems design at this level.

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses the report to Senate.

Course to be introduced: 024.7xy Micromachining and MEMS Technology (3) The course focuses on micromachining and micro-electro-mechanical systems (MEMS). Topics include microfabrication technologies, microactuators, and microsensors. Applications to optical, electrical, mechanical, chemical, and biological systems are discussed.

Reasons for the introduction: Micromachining is an emerging technology with broad application in many fields of science including semiconductor manufacture, analytical chemistry, aerospace and biomedicine. Micromachining uses UV lithography and thin film deposition to fabricate 3D structures with sub-micron feature sizes. This micro-manufacturing ability is becoming essential to many areas of research in the traditional sciences and engineering. There is currently no graduate course available which focuses on this technology.

Course to be introduced: 024.7xz Advanced Wireless Communication (3) The course covers several advanced issues in wireless communication networks. Topics of study will include trends and future of mobile computing, advanced wireless technologies, multimedia wireless LANs, wireless ad hoc networks, energy mgmt, channel coding, privacy issues in wireless networking. *Prerequisite:* Either 024.425 or 024.470

Reasons for the introduction: The convergence of wireless communications technology with the internet and the telephone infrastructure has spurred extensive research and development efforts both in academia and industry. The field of wireless communication networks and mobile computing is indeed very rapidly evolving. The proposed course will enable students to have an in depth knowledge in this area.

Net Change: +9 Credit Hours

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses the report to Senate.

Endorsed by the Faculty Council of Graduate Studies, November 14, 2002

Preamble

The Programs and Planning Committee of the Faculty of Graduate Studies met on September 13, 2002 and made the following recommendation regarding the change of the interdisciplinary graduate course number prefix to coincide with the major delivering department or faculty.

Observations

1. There are 10 courses with the interdisciplinary prefix code "036" to be deleted in the Faculty of Graduate Studies.
2. Interdisciplinary course numbers are being changed to correspond with the major delivering department/faculty.
3. The changes are being instituted to be consistent with all other grad courses taught at the University of Manitoba in that accountability should rest with the unit responsible for delivering the course. In addition, having the courses within a graduate program will assist students in selecting courses to suit their needs.
4. The prefix code of Interdisciplinary courses that do not have a major delivering department will be assigned to the Faculty of the delivering departments so as to maintain the interdisciplinary nature of the courses being taught within a Faculty. In the case where a course crosses Faculty boundaries, the course will be cross listed in both faculties (Food and Nutritional Sciences Ph.D.)
5. Courses will be introduced as follows: one course in the Department of Landscape Architecture; two courses in the Department of City Planning; two courses in the Faculty of Architecture; four courses in the Department of Native Studies; one course in Human Ecology cross listed in Agricultural and Food Sciences (Food and Nutritional Sciences Ph.D. program).
6. Each department and corresponding Faculty approved the course changes.
7. Statements of Library support for the proposed changes were not required as course numbers, not content constitutes the change.

Recommendation

The Programs and Planning Committee of the Faculty of Graduate Studies recommends that the Faculty Council of Graduate Studies approve the course changes as indicated below.

Course to be deleted:	036.601 Field Studies in Landscape Architecture
	036.707 Topics in Environmental Process & Design I
	036.708 Topics in Environmental Process & Design II
	036.712 Advanced Food and Nutritional Sciences Seminar
	036.715 Urbanization and Shelter in Developing Countries
	036.716 Planning and Design in Developing Countries
	036.721 Seminar in Native Studies
	036.722 Selected Topics in Native Studies
	036.723 Research Topics in Native Studies
	036.728 Native Studies Colloquium

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses
the report to Senate.

Net Change: -26 Credit Hours

Copies of the course proposal forms are available in the Faculty of Graduate Studies Office for review

COURSES TO BE INTRODUCED:

NATIVE STUDIES

- 032.7aa Seminar in Native Studies
- 032.7ab Selected Topics in Native Studies
- 032.7ac Research Topics in Native Studies
- 032.7ad Native Studies Colloquium

Net Change: +8 Credit Hours

LANDSCAPE ARCHITECTURE

- 031.6aa Field Studies in Landscape Architecture

Net Change: +3 Credit Hours

CITY PLANNING

- 073.7aa Urbanization and Shelter in Developing Countries
- 073.7ab Planning and Design in Developing Countries

Net Change: +6 Credit Hours

FACULTY OF ARCHITECTURE

- xxx.7aa Topics in Environmental Process and Design I
- xxx.7ab Topics in Environmental Process and Design II

Net Change: +6 Credit Hours

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses the report to Senate.

Endorsed by the Faculty Council of Graduate Studies, November 14, 2002

Preamble

The Programs and Planning Committee of the Faculty of Graduate Studies met on September 13, 2002 and made the following recommendation regarding a course introduction in the Natural Resources Institute.

Observations

1. There is one course to be introduced in the Natural Resources Institute (NRI).
2. NRI approved the course introduction.
3. A Statement of Library support for the proposed change was not required as the course is a research seminar course
4. Reasons for the course change accompanies the course number and title, which are included below.

Recommendation

The Programs and Planning Committee of the Faculty of Graduate Studies recommends that the Faculty Council of Graduate Studies approve the course introduction as indicated below.

<u>Course to be introduced:</u>	056.7xx Ph.D. Thesis Research Seminar (3) Designing research and methodology specific to a project; reviewing the philosophy of interdisciplinary approaches to Natural Resources and environmental management and trends in the field; analyzing appropriateness of a project with trends and directions in interdisciplinary research; conducting and administering research; communicating and disseminating results of research
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<u>Reason for the introduction:</u>	NRI launched a new Ph.D. program in 2001. This will provide a core course and common background for students in the first year of the program. It will complement a thesis research planning course by providing the philosophy of, and trends in, the interdisciplinary approaches to natural resources and environmental management.
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Net Change: +3 Credit Hours

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses the report to Senate.

Endorsed by the Faculty Council of Graduate Studies, November 14, 2002

Report of the Programs and Planning Committee of the Faculty of Graduate Studies on course proposals/modifications/deletions.

Preamble

The Programs and Planning Committee of the Faculty of Graduate Studies met on September 13, 2002 and made the following recommendation regarding a course changes in the Faculty of Nursing

Observations

5. There is one course to be introduced and one course to be deleted in the Faculty of Nursing.
6. The Faculty of Nursing approved the course changes.
7. A Statement of Library support for the proposed course concluded that the Libraries' collection is adequate to support the proposed course
8. Reasons for the course changes accompany the course numbers and titles, which are included below.

Recommendation

The Programs and Planning Committee of the Faculty of Graduate Studies recommends that the Faculty Council of Graduate Studies approve the course changes as indicated below.

Course to be deleted: 049.723 Advanced Health Assessment (3)

Course to be introduced: 049.7xx Advanced Health Assessment and Diagnostic Reasoning (6)
Designed to develop health assessment and critical thinking skills appropriate for clinical practice at an advanced level. The collection and in-depth analysis of subjective and objective health information and the use of diagnostic reasoning are emphasized. All students engage in practice with fellow students, clinical teaching associates and consenting patients. Required for students in the APN major.
Prerequisite: 049.211 or 049.212 plus 049.327 or 049.416 or equivalent or permission from instructor.

Reason for the course changes: Will replace the three credit hour course 049.723. Additional credit hours will focus on critical thinking and diagnostic reasoning necessary for the advanced practice role. The additional hours will also provide the student with credit for the laboratory hours currently attached to 049.723.

Net Change: +3 Credit Hours

Endorsed by the Faculty Council of Graduate Studies, November 14, 2002

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses the report to Senate.

Copies of the course proposal forms are available in the Faculty of Graduate Studies Office for review

Preamble

The Programs and Planning Committee of the Faculty of Graduate Studies met on September 13, 2002 and made the following recommendation regarding a course changes in the Faculty of Medicine

Observations

1. There is one course to be introduced and one course to be deleted in the department of Human Anatomy and Cell Science.
2. The Faculty of Medicine approved the course changes.
3. A memo from the Health Sciences Library indicated that the introduction of the new course was largely administrative and no significant changes to content occurred with respect to library support.
4. Reasons for the course change accompany the course numbers and titles, which are included below.

Recommendation

The Programs and Planning Committee of the Faculty of Graduate Studies recommends that the Faculty Council of Graduate Studies approve the course changes as indicated below.

Course to be deleted: 080.734 Morphological Techniques (6)

Course to be introduced: 080.7xx Morphological Techniques (3) Designed to develop advanced morphological techniques such as immunohistochemistry, in situ hybridization, immunogold, in situ PCR, cell culture, autoradiography, anterograde and retrograde tracing techniques.

Reason for the course changes: The content of 080.734 has been modified and credit hours reduced to three from six. New morphological techniques have been developed while some of the previous techniques such as general TEM are not in common use now. The new three credit hour course will address these concerns.

Net Change: -3 Credit Hours

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses the report to Senate.

Endorsed by the Faculty Council of Graduate Studies, November 14, 2002

Copies of the course proposal forms are available in the Faculty of Graduate Studies Office for review

For Information to the Faculty Council of Graduate Studies

The Programs and Planning Committee of the Faculty of Graduate Studies met on September 13, 2002 and approved a change in the Name of the Master of Music in Choral Conducting to Master of Music in Conducting.

The School of Music requested that the name of the program area in Choral Conducting be changed to Conducting to make it clearer for their students and potential students and to be consistent when discussing the program.

Endorsed by the Faculty Council of Graduate Studies, November 14, 2002

Comments of the Senate Executive Committee:

The Senate Executive Committee endorses the report to Senate.

IN MEMORY

The Honourable Ronald J. Duhamel, P.C.

March 2, 1938 – September 30, 2002

Born in St. Boniface, Senator Duhamel spent most of his childhood in northwestern Ontario, and he completed high school in Rainy River. In 1968, he received a B.A. degree from Lakehead University, and later earned M.Ed. and Ph.D. degrees from the University of Toronto. Ron had a successful career in education in Ontario, serving as a teacher, principal, consultant, director of education, and regional director for the provincial government. In 1979, he moved to Manitoba to become in turn Assistant Deputy Minister for French language education, Deputy Minister of Education, and Chair of the Universities Grants Commission.

In 1986, Ron left the civil service to accept a position as Professor in this Faculty's Department of Educational Administration and Foundations. For the next two years, he taught undergraduate and graduate courses in educational administration, supervised graduate students, wrote papers and co-edited a book, and served on several committees.

In 1988, Ron was elected to represent St. Boniface as a Member of Parliament. For the next 13 years, he served his constituents and the country in different roles which included Minister of Veterans Affairs, senior Minister for Manitoba, and Secretary of State for Western Economic Diversification, Science, Research, and Development, and La Francophonie. Ill health caused him to resign his seat in the House of Commons earlier this year, at which time the Prime Minister appointed him to the Senate.

Ron received many awards during his life including a Distinguished Alumni Award from Lakehead University, an appointment as Fellow of the Ontario Institute for Studies in Education, the Young Leadership of America Award, the Lieutenant-Governor's Medal for Excellence in Public Administration, a Grand Chevalier of the international l'Ordre de la Pleiade, and an Honorary Life Membership in the Canadian Education Association.

Senator Duhamel's titles and awards, while impressive, do not convey the full impact he had on a great number of people. Ron consistently promoted opportunities for all Canadians, and especially youth. He believed that everyone had something valuable to contribute, and he brought out the best in people who had the good fortune to work with him.

Ron leaves to mourn his wife Carolyn, daughters Kathie, Natalie, and Karine, four grandchildren, an extended family, and many friends.

In Memory

DENNIS KING, Ph.D., February 26, 1932-September 30, 2002.

At the time of his retirement on January 1, 1992, Dr. Dennis King was an Associate Professor in the Department of Curriculum: Humanities and Social Sciences, Faculty of Education. Dennis originally joined the Faculty as a seconded Assistant Professor in 1968. Throughout his career taught undergraduate and graduate courses in the areas of the teaching of social studies and geography. Originally a citizen of the United Kingdom, Dennis served for five years in the Royal Engineers of the British Army before completing a teacher education program, with distinction, at the University of London in 1956. From the same institution, Dennis also earned a B.Sc. (Hons.) in Economics in 1963. Following eight years of teaching in the United Kingdom, Dennis and his family came to Canada in 1965 at which time Dennis assumed a teaching position at Daniel McIntyre Collegiate. Dennis was a four-time alumnus of the University of Manitoba, having received his B.Ed. (1968), M.Ed. (1970), M.A. (1976) and Ph. D. (1979), with the last two degrees being in history.

Report of the Senate Committee on Awards respecting Awards

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 otherwise 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 November 27, 2002, SCOA reviewed 2 new awards offers, 6 award amendments, and 2 withdrawals and reports as follows.

Observation

On behalf of Senate, the Senate Committee on Awards approved and recommends that the Board of Governors approve 2 new awards, 6 award amendments, and 2 withdrawals as set out in Appendix "A" of the Report of the Senate Committee on Awards (dated November 27, 2002). These award decisions comply with the published guidelines of November 3, 1999, and are reported to Senate for information.

Respectfully submitted,

Diana Cindrie (for)

Professor R. Baydack, Chair
Senate Committee on Awards

SENATE COMMITTEE ON AWARDS REPORT TO SENATE - NOVEMBER 27, 2002

APPENDIX "A"

OFFERS

HELEN HUMPHREY ROSS AWARD OF EXCELLENCE

The Canadian Physiotherapy Association (CPA) annually offers a prize of \$100 and a certificate to the student who:

- (1) has completed both the first and second years of study in the School of Medical Rehabilitation at the University of Manitoba in the Physiotherapy stream;
- (2) has achieved the highest overall standing in the Physiotherapy Management courses in Years 1 and 2;
- (3) enrolls in the third and final year of study in the School of Medical Rehabilitation, Physiotherapy stream;
- (4) was a student member of CPA for both first and second year of the program.

The selection committee shall be the Awards Committee of the Division of Physical Therapy School of Medical Rehabilitation of The University of Manitoba.

SOCIOLOGY GRADUATE STUDENT ENTRANCE SCHOLARSHIP

The Sociology Graduate Student Entrance Scholarship valued at \$2,000 shall be awarded to the student who:

- (1) has been admitted to the first year of study in either the Master's or the PhD graduate program in the Department of Sociology;
- (2) has achieved the highest grade point average as calculated for admission purposes (minimum grade point average of 3.5).

For tie-breaking purposes, if two students are eligible with identical grade point averages the Graduate Committee will consider other factors such as the quality of the statement of purpose, letters of reference, and in the case of PhD applicants, the assessment by the Area Committee.

An alternate candidate shall be selected should the recipient fail to enter the program or fail to accept the scholarship. In the event no eligible candidate is found, the funds will be carried over to be awarded in future competitions.

Interest remaining after the \$2,000 award shall be added to the capital of the fund.

The selection committee shall be the Graduate Committee of the Department of Sociology.

The Chair of the Graduate Committee shall report annually to the departmental council on the

SENATE COMMITTEE ON AWARDS REPORT TO SENATE - NOVEMBER 27, 2002

status of the fund and the recipient of the scholarship. The terms of reference shall be reviewed every three years by the Graduate Committee.

AMENDMENTS

ABITIBI-CONSOLIDATED INC. SCHOLARSHIP

To reflect the name change of the company, the name of this scholarship in the Faculty of Engineering will be amended to ABITIBI-CONSOLIDATED COMPANY OF CANADA SCHOLARSHIP.

TD BANK FINANCIAL GROUP BURSARY

The amendment to this bursary shall reflect the terms of a new agreement. The terms of reference for this bursary state, "The TD Bank Financial Group offers an annual gift of \$102,000 to the University of Manitoba, starting in 2001 and ending in 2005." This shall be amended to, "The TD Bank Financial Group offers \$750,000 to be divided equally over eight years to make annual gifts beginning in 2001 and ending in 2008."

MORGAN W. WRIGHT CLINICAL PSYCHOLOGY AWARD

The name of this award shall be amended to the MARION AND MORGAN W. WRIGHT CLINICAL PSYCHOLOGY AWARD.

MAX AND MANLY ISAACS PRIZE IN LEGAL METHODS

The terms of reference for this award will be amended to indicate that the available annual income will be divided equally into prizes for the students who submit the best written assignment in each section of Legal Methods. Previously, only one prize was offered for the overall best written assignment.

JENNIFER M. SHAY BURSARY

This bursary in the Faculty of Science shall undergo several amendments. The third selection criterion will be the recipient must enrol in a field course in Botany or Ecology in the summer or fall session immediately following the regular session in which the bursary is awarded, and the funds will be disbursed after registration for the field course is complete. In all cases the recipient must provide proof of enrolment in a course that will receive credit from the University of Manitoba. The value and number of bursaries shall be set by the selection committee with an individual award having a maximum value of \$1,000. Previously, the award was valued at the available annual interest. If the number of applicants in any given year is insufficient to award all available funds, the remaining interest shall be reinvested in the fund. It will be added that a recipient can receive this bursary only once for a particular field course but it can be held a second time for a different field course.

SENATE COMMITTEE ON AWARDS REPORT TO SENATE - NOVEMBER 27, 2002

HART SCHOLARSHIP IN CLASSICS

This award in the Department of Classics will be amended so that the award is offered at the available annual interest (previously \$350).

WITHDRAWALS

HELEN HUMPHREY ROSS MEMORIAL PRIZE

This award in the School of Medical Rehabilitation is being withdrawn to be replaced by a new award.

WESTCO SCHOLARSHIP

This scholarship in the Faculty of Agricultural and Food Sciences is to be withdrawn. Westco is no longer in a position to contribute toward the scholarship due to a recent restructuring of their parent company and a decrease in their functions as a subsidiary.

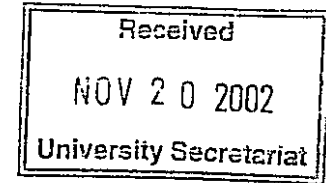


UNIVERSITY
OF MANITOBA

Office of the President

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Winnipeg, Manitoba
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19 November 2002

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

Dear Ms Gordon,

Statement of Intent: Master of Environment

On behalf of the University of Manitoba, I am pleased to submit the attached Statement of Intent for a new academic program, Master of Environment.

This interdisciplinary graduate program will permit students to pursue studies that focus on basic and applied research that deals with the complex relationships among the environment, the Earth, natural resources, and society at large. All students will be required to complete a new interdisciplinary graduate-level seminar course. In addition, students will choose, in consultation with an academic advisor, graduate course work and research projects in areas of their particular interests. We anticipate this program will attract about ten students per year, and expect graduates will find a variety of employment opportunities in Manitoba and indeed throughout Canada.

As described in the Statement of Intent, this new program is central to the academic mission of our new Faculty of Environment. We hope to build on existing partnerships, and to forge new links, with other Manitoba post-secondary institutions, government agencies and the private sector. For the most part, this new graduate program would make use of existing resources within the new Faculty and the University at large. Nonetheless, it is possible that the full program proposal will seek additional financial support from COPSE for one full-time academic position.

Master of Environment
November 19, 2002
page 2

If your Council requires any additional information, please contact me directly.

Sincerely,



Richard A. Lobdell
Vice-Provost (Programs)

Encl.

cc Emőke J. E. Szathmáry, President
 Robert Kerr, Vice-President (Academic) & Provost
 Tony Secco, Acting Dean, Faculty of Graduate Studies
 Wendy Dahlgren, Interim Dean, Faculty of Environment
 Beverly Sawicki, University Secretary

STATEMENT OF INTENT

Institution

- | | |
|--|--|
| <input type="checkbox"/> Brandon University | <input type="checkbox"/> Assiniboine Community College |
| <input checked="" type="checkbox"/> University of Manitoba | <input type="checkbox"/> Keewatin Community College |
| <input type="checkbox"/> University of Winnipeg | <input type="checkbox"/> Red River Community College |
| <input type="checkbox"/> Collège universitaire de Saint-Boniface | |

Program Overview

- Program Name: **Master of Environment**
- Credential to be offered: **MEnv**
- Does the program require accreditation from a licencing group? ☐ YES ☒ NO
If yes, name group

Accreditation for environmental practitioners is not yet required, however it is encouraged. The Canadian Council for Human Resources in the Environment Industry (CCHREI) and its certification arm, the Canadian Environment Certification Accreditation Board (CECAB) are developing guidelines for content in environmental programs that will eventually be applicable to this program. The University of Manitoba has representation on CCHREI to ensure that we are in receipt of up to date developments.

- Length of the program: 1 ☒ Years ☐ Months ☐ Semesters
- Proposed program start date: 01 / 09 / 2003
Day/Month/Year
- Which department(s) within the institution will have responsibility for the program?

Faculty of Environment

- As compared to other programs your institution will be proposing, is the priority of this program:
 - ☒ High
 - ☐ Medium
 - ☐ Low
- Is this a new program? ☒ YES ☐ NO
- Is this a revision of an existing program? ☐ YES ☒ NO
If YES, name program
What are the impacts of changing this program?
- Will the program be available to part-time students? ☒ YES ☐ NO
- Will this program have a cooperative education component? ☐ YES ☒ NO
If YES, how long with the field placement be?
- Will the program contain an option to assess the prior learning of students, to grant credit for the skills/knowledge already present? ☐ YES ☒ NO
Provide Details
- Will there be distance delivery options? ☐ YES ☒ NO
Provide Details

Initially, there will be no distance education courses, however, students involved in field research in remote locations, such as the sub-artic, will use the Internet for communication with their supervisor and colleagues. Eventually, special topics

courses will be made available via the Internet.

- Will this program be delivered jointly with another institution? ☒ YES ☐ NO

If YES, name the institution

A number of faculty members at Brandon University and the University of Winnipeg have expressed interest in holding part-time appointments in the Faculty of Environment and supervising students and/or serving on advisory committees. We are currently in discussion with Brandon University to allow students in the MEnv program to access graduate courses in the new Rural Development program.

- Are similar programs offered in Manitoba or other jurisdictions? ☐ YES ☒ NO

If YES, indicate why this program is needed (e.g., area of specialization)

At the graduate level, there are two programs in Manitoba that have the environment as their primary focus. These are the Master of Natural Resources Management (MNRM) and the PhD in Environment and Resources Management. It should be noted that the MNRM was never intended to be a degree that would typically follow undergraduate preparation in either environmental science or environmental studies. Most students enter this program after an undergraduate degree in which there may have been little content related to the environment.

There are similar, though different, programs in other provinces. In Alberta, for example, there is a Master of Environment and Native Studies. North Dakota is introducing a PhD degree in "Earth Systems" but has no plans for a master's degree.

At the University of Manitoba a wealth of content related to the environment exists in courses offered by a variety of Faculties and Departments in a variety of programs in which the program focus is something other than the environment. Thus, there is an opportunity to put together a research-based master's degree that is clearly an "environmental" degree utilizing existing resources. Students with undergraduate academic preparation in either environmental science or environmental studies will now be able to continue their studies at the graduate level at the University of Manitoba.

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

None.

Specific Program Information

1. Program Description

- Describe the program and its objectives:

The program will focus on basic and applied research that deals with the complex relationships of the environment, including the Earth, its resources, and society at large.

Specific objectives of this proposal are to ensure that:

1. A broad-based, interdisciplinary master's environmental research program is offered at the graduate level.
2. Improved coordination of environmental course offerings occurs at the graduate

level.

3. There are opportunities for greater interaction among students and faculty members from different disciplinary backgrounds.
4. Graduate students can gain an holistic understanding of the environment.

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

The program will follow the requirements of the Faculty of Graduate Studies found in the Graduate Studies Regulations Section of the calendar. Students are required to take a compulsory seminar course "Interdisciplinary Perspectives on Issues in the Environment". There will be no additional language reading requirement. Course selections will be approved by a faculty advisor. Example programs are listed below.

28.7AB Interdisciplinary Perspectives (3)

56.721 Systems view of the environment (3)

23.716 Geotechnical aspects of environmental impact assessments (3)

07.723 Geophysics of the earth's crust and mantle (3)

Thesis: Mine tailings in Northern Manitoba.

28.7AB Interdisciplinary Perspectives (3)

56.728 Regional development in Northern Manitoba (3)

93.722 Health and Health Services of Native and Northern Peoples (3)

93.746 Environmental and Occupational Health (3)

Thesis: An epidemiological study of Type II diabetes in the Northern Cree

28.7AB Interdisciplinary Perspectives (3)

56.721 Systems View of the Environment (3)

56.728 Environmental Assessment (3)

53.706 Urban land use (3)

50.759 Urbanism (3)

Thesis: Survey of brownfield sites in a large Canadian city.

28.7AB Interdisciplinary Perspectives (3)

07.744 Principles of Paleoclimatic Reconstruction (3)

22.738 Advanced Limnology (3)

53.727 Physical and Synoptic Climatology (3)

Thesis: Study of climate pattern in a sub-arctic region.

2. Enrollment

● What is the program's initial projected enrollment?

Year 1: 6-8

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

Years 2-3: 10 students annually

●Describe the expected student profile?

Students will be expected to hold honours or major undergraduate degrees in Environmental Science or Environmental Studies. Students from other institutions and programs who have completed significant course work on environmental topics will also be considered. Those students whose undergraduate work centred on other disciplines, but who have an interest in applying that knowledge to environmental issues, will normally be required to complete a qualifying year. Our most recent survey indicated that annually, 5 to 10 students must move out of the Province to pursue graduate work in the Environment.

3. Labour Market Information

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

The Environmental Sector has been growing steadily for over a decade, and comprises over 102,000 environmental practitioners in Canada. The majority of these hold at least one University degree. Practitioners work in environmental protection, conservation and preservation of natural resources, and environmental education, communication and research.

●Are there currently jobs in Manitoba in this field? ☒ YES ☐ NO

If yes, where (geographic location and industry)?

Jobs occur throughout Manitoba in the environmental industry, natural resource industries (forestry, mining, hydro), agriculture, in the manufacturing sector, at all levels of government, and in the not for profit sector. Over 40% of graduates will be employed in the environment industry with the remainder distributed among various levels of government, non-government organizations, and as private consultants.

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

CCHREI reports that the environment industry is one of the top five employers in Canada and that the industry is growing "by leaps and bounds". The latest survey, from 1999, indicated there were 4200 unfilled positions in Canada, of which approximately 7% (300) were in Manitoba.

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

In its latest budget, the Government of Manitoba has highlighted providing "a clean, safe environment" as one of its main priorities. Environmental concerns are integral to our economy, with its strong roots in natural resources, as well as to the culture and heritage of our citizens. The Government has stated "We will continue to initiate programs designed to enhance our leadership position while protecting our resources." The introduction of an interdisciplinary graduate research program should help the Province achieve these goals.

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

Brandon University, University of Winnipeg, St Boniface College, CCHREI, International Institute for Sustainable Development, plus non-government organizations such as Ducks Unlimited, Delta Waterfowl, and the Churchill Northern Studies Centre (CNSC).

● Is there any other information relevant to this program ? No

4. Financial Information

At present we are unable to forecast incremental program costs. The majority of Faculty of Environment appointments now are nil-salary, and this will continue until April 1, 2002, at which time departments and programs will transfer into the new Faculty. Three of the units transferring into the Faculty currently have Masters and PhD programs. With some reorganization within these programs, much of the administration of the new program can be accommodated. One additional full-time equivalent (academic) will be required to accommodate the additional course teaching, supervision of students, and the academic administration of the program. In addition, this academic will be responsible for curricular development, including the development of Web delivered courses. For the near term, facilities and equipment for graduate students will be the responsibility of the over 20 faculty members who have indicated that they will supervise students.

●Projected Program Costs:	Salary	1.0 FTE Assistant Professor	\$63,000
	Operating		
	Capital		
	Total cost		\$63,000
●Projected Program Revenue:	Tuition	10 students @ \$4177	
	Other_		
	Total revenue		\$41,770

Submitted by:

Wendy J Dahlgren, PhD

Name (print)

I/Dean, Faculty of Environment

Position

Wendy Dahlgren

Signature

Nov 19 / 02

Date

Dec. 5, 2002

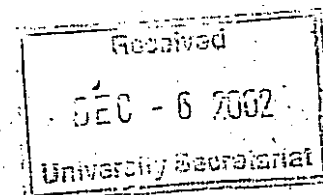
CC: T. Secco

W. Dahlgren

B. Sawicki

November 28, 2002

Dr. Emöke Szathmáry
President and Vice Chancellor
The University of Manitoba
Room 200 Administration Building
Winnipeg MB R3T 2N2



Dear Dr. Szathmáry: *Emöke*

Re: Statement of Intent: Master of Environment

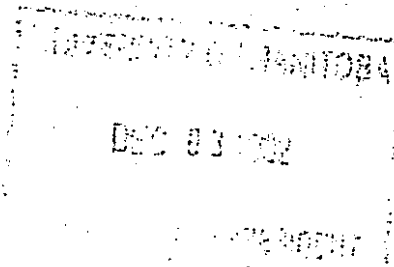
The Council on Post-Secondary Education has reviewed the above noted statement of intent submitted by the University of Manitoba.

Please feel free to proceed with developing the full program proposal to be submitted to Council for its approval.

Should you have any questions pertaining to this proposal, please do not hesitate to contact me at 945-1840.

Sincerely,

Louise Gordon
Louise Gordon
A/Executive Director





UNIVERSITY
OF MANITOBA

Office of the President

39
208 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Fax (204) 275-1160

5 November 2002

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:
Joint Computer Science-Physics and Astronomy Honours Program**

On behalf of The University of Manitoba, I am pleased to submit the attached Statement of Intent to establish a new joint Computer Science - Physics and Astronomy Honours degree program.

In recent years, the relationship between computer science and physics has developed rapidly. The proposed joint Honours program will provide undergraduate students the opportunity to learn the principles of computer science at the same time they learn the principles of thermodynamics, semiconductor physics, and quantum mechanics which are essential to an appreciation of computer technology and information theory. It is anticipated that this new program will graduate between 10 and 15 students annually, and that these graduates will find employment in Manitoba and throughout Canada.

This new program makes use of existing courses and available resources. Consequently, no additional resources are necessary from COPSE. We hope to implement this new program in September 2003.

.....2

Ms L. Gordon
November 5, 2002
page 2

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

Sincerely,



Richard A. Lobdell
Vice-Provost (Programs)

encl.

cc Emőke J. E. Szathmáry, President
 Robert Kerr, Vice-President (Academic) and Provost
 Jim Jamieson, Dean, Faculty of Science
 Beverly Sawicki, University Secretary

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STATEMENT OF INTENT

- | | |
|--|--|
| <input type="checkbox"/> Brandon University | <input type="checkbox"/> Assiniboine Community College |
| <input checked="" type="checkbox"/> University of Manitoba | <input type="checkbox"/> Keewatin Community College |
| <input type="checkbox"/> University of Winnipeg | <input type="checkbox"/> Red River Community College |
| <input type="checkbox"/> Collège universitaire de Saint-Boniface | |

Program Overview

- Program Name: Joint Honours Computer Science – Physics and Astronomy
- Credential to be offered: BSc (Hon)
- Does the program require accreditation from a licencing group? ☐ YES ☒ NO
If yes, name group

- Length of the program: 4 Years ☐ Months ☐ Semesters

- Proposed program start date: xx/09/03
Day/Month/Year

- Which department(s) within the institution will have responsibility for the program?
Computer Science (074) and Physics and Astronomy (016)

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

- ☒ High
- ☐ Medium
- ☐ Low

- Is this a new program? ☒ YES ☐ NO
- Is this a revision of an existing program:
If YES, name program ☐ YES ☒ NO

Is program be delivered jointly with another institution?
name the institution

☐ YES x NO

● Are similar programs offered in Manitoba or other jurisdictions?
If YES, indicate why this program is needed (e.g., area of specialization)

☐ YES x NO

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

Normal transfer of credit policies apply.

Specific Program Information

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1. Program Description

- Describe the program and its objectives:

The relationship between computer science and physics has developed rapidly in recent years. Much of the current research activity in physics is computational in nature. Conversely, considerable effort is currently being devoted to the development of quantum computers, for which a knowledge of fundamental physical principles is essential. The proposed program will hybridize the core elements of the Computer Science Honours program and the Physics and Astronomy Honours program into a Joint Computer Science-Physics and Astronomy Honours program which will provide students the opportunity to learn the principles of computer science at the same time that they learn the principles of thermodynamics, semiconductor physics, and quantum mechanics which are essential to an appreciation of computer technology and information theory.

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

The program will consist of 30 credit hours in each of 4 years. The first year will consist of six credit hours of physics, six credit hours of computer science, nine credit hours of math, plus six credit hours from Arts, plus three credit hours of electives. In each of the remaining 3 years, the 30 credit hours will be divided equally between 15 credit hours of computer science and 15 credit hours of physics. The student will be exposed to most of the content of the first three years of each honours program, plus a number of 400 level courses in Year IV.

2. Enrollment

- What is the program's initial projected enrollment? 5-10
- What is the projected enrollment for the 2nd and 3rd years? 10-15
- Describe the expected student profile?
Students pursuing a degree in Computer Science or Physics

3. Labour Market Information

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

● Is there any other information relevant to this program ?

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4. Financial Information

● Projected Program Costs:

Salary
Operating
Capital
Total cost

● Projected Program Revenue:

Tuition 5 x \$4,000
Other_
Total revenue \$20,000

Submitted by:

Dr. R. M. Roshko
Name (print)

DAVID SCUSE

Professor of Physics
Position

COMPUTER SCIENCE

Signature

Rm Roshko

David Scuse

September 10, 2002
Date

COMPUTER SCIENCE – PHYSICS & ASTRONOMY JOINT HONOURS PROGRAM
Introduction of New Program (Subject to approval of the Council on Post-Secondary Education)
2003-2004

The departments of Computer Science and Physics & Astronomy offer a joint Honours program for in-depth study in both Computer Science and Physics & Astronomy.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
JOINT COMPUTER SCIENCE - PHYSICS AND ASTRONOMY HONOURS¹ 120 CREDIT HOURS			
016.105 (B) (or 016.102 (B+)) and 016.107 ² (B), 136.130 ³ (B), 136.153 ³ (B), 136.173 ³ (B), 074.101, 074.102 (B)	016.226, 016.237, 016.250, 016.265 ³ , 074.208, 074.213, 074.214, 074.219, 074.222	016.260, 016.261, 016.341, 016.370, 074.317, 074.343 Plus 9 credit hours of 300 and 400 level courses from Computer Science	15 credit hours of 300 and 400 level Honours Physics courses, with at least 6 credit hours at the 400 level Plus 12 credit hours of 300 or 400 level courses from Computer Science, with at least 9 credit hours at the 400 level by the end of Year 4 Plus 3 credit hours of electives
Plus 6 credit hours from the Faculty of Arts, which may include the "W" course			
Plus 3 credit hours of electives			
A "W" course must be taken in University 1 or Year 2 ⁴			
30 Hours	30 Hours	30 Hours	30 Hours

NOTES:

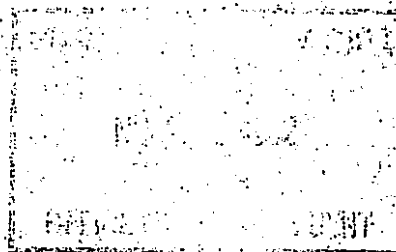
¹The courses required in this program will satisfy the University mathematics requirement.

²016.103 is not suitable for entry to the Honours and four year Major program. Students must also take 016.107 if they have already taken 016.103.

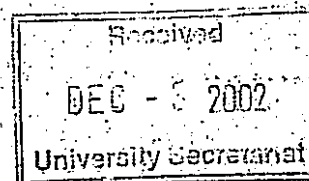
Star

?

November 20, 2002



Dr. Emöke Szathmáry
President and Vice Chancellor
The University of Manitoba
Room 200 Administration Building
Winnipeg MB R3T 2N2



Dear Dr. Szathmáry: *Emöke*

Re: Statement of Intent: Joint Computer Science – Physics and Astronomy Honours Degree Program

The Council on Post-Secondary Education has reviewed the above noted statement of intent submitted by the University of Manitoba.

Please feel free to proceed with developing the full program proposal to be submitted to Council for its approval. It is understood that the new degree program will not require additional funds or courses.

Should you have any questions pertaining to this proposal, please feel free to contact me at 945-1840.

Sincerely,

Louise

Louise Gordon
Vice Executive Director

December 2, 2002

*Dr. Janusz
B. Sawicki*

December 11, 2002

Report of the Senate Executive Committee

Preamble

The Executive Committee of Senate held its regular monthly meeting on the above date.

Observations

1. **Speaker for the Executive Committee of Senate**

Professor William Christie will be the Speaker for the Executive Committee for the January meeting of Senate.

2. **Comments of the Executive Committee**

Other comments of the Executive Committee accompany the report on which they are made.

Respectfully submitted,

Dr. E.J.E. Szathmáry, Chair
Senate Executive Committee

Terms of Reference: *Senate Handbook* (Revised 1992), Section 9.

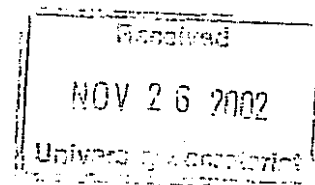
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UNIVERSITY
OF MANITOBA

Office of the President

202 Administration Building
Winnipeg, Manitoba
Canada R3T 2N2
Fax (204) 275-7925



November 22, 2002

TO: Bev Sawicki, University Secretary

FROM: Emőke J.E. Szathmáry, President and Vice-Chancellor *Emőke*

SUBJECT: Presidential Advisory Committee on Maclean's

I have enclosed a copy of the final report of the Presidential Advisory Committee on Maclean's magazine. As noted in the terms of reference, it is to be circulated to the Executive Committee of Senate.

encl.
/hld

REPORT OF THE PRESIDENTIAL ADVISORY COMMITTEE ON *MACLEAN'S* MAGAZINE

In response to concerns articulated by members of the Senate and members of the Board of Governors about the status of the University of Manitoba as judged by *Maclean's* magazine, the President of the University established an advisory committee in the spring of 2002 to examine the relevant issues. The Committee was given the mandate to

- review the design of the *Maclean's* Ranking of Canadian Universities to understand the approach taken by the magazine,
- review the rankings in the context of the Vision and Mission of the University of Manitoba to understand how the latter may influence the outcome of the University's placement in the survey,
- determine whether any changes can or should be made to improve the University's ranking in specific categories,
- make recommendations, if any, and
- report to the External Relations Committee of the Board of Governors and the Senate Executive Committee by August 15, 2002 so that the report may be presented to Senate and the Board of Governors at their next scheduled meetings, respectively.

The composition of the Committee and its members are given in Appendix A.

ACTIVITIES OF THE COMMITTEE

The Committee met five times in the period March 1 - September 16, 2002. As background preparation members received documents for reading, as detailed in Appendix B.

March 5: Ms. Thelma Lussier, Director of Institutional Analysis, presented an overview of the design of *Maclean's* Canadian University Rankings, outlined what elements of the statistical approach were in the public domain, which ones were not disclosed by the magazine, and what approximations permitted a reasonable replication of the ranking of universities published by *Maclean's*. Ms. Lussier then provided a summary of the history and experience of the University of Manitoba with *Maclean's* survey. Finally, she provided a number of "what if" scenarios, which illustrated the impact that specific changes on the measures used by *Maclean's* would have on the overall rank of the University of Manitoba among its group of 15 medical-doctoral universities.

April 2: Ms. Thelma Lussier reviewed and clarified elements of the design of *Maclean's* University Rankings, and focused in particular on the two most heavily weighted

items, which influence greatly the overall score of an institution: the entrance average of first year students, and the reputational survey. Ms. Lussier was asked to undertake two more sets of analyses, including one that excluded the "reputational rank", which is the most heavily weighted item in the rankings.

John Danakas, Director of Public Affairs, outlined for the Committee activities undertaken by his department to improve the University's rating on the reputational survey. Efforts have been made across four areas: distribution of publications and special projects, articles in *The Bulletin*, media relations, and marketing. For example, in June 2000, promotional packages were mailed to members of government, senior administrators at Canadian universities and to campus recruiters. In September 2000, advertisements were placed in Ontario School Counsellors Association magazine (distributed nationally). In October 2000, the Annual Report was sent to government, presidents of Canadian universities and departments for distribution to their constituencies. In November a full page, colour ad about the University was placed in the *Globe and Mail*, and the Winnipeg Free Press carried an insert about the University ("*At the Centre of it All*"). Since then, additional print advertising has been added in different outlets as well as the world wide web advertising outlet, and 1 minute television ads were broadcast (TSN) during the Churchill Bowl and CIAU Volleyball championship games (men and women, respectively). Every year, greater coverage has occurred of the university, especially locally.

Committee members then turned their attention to the influence an institution's rank may have on student recruitment, the public's perception of institutional quality, and what measures might be taken to counterbalance potential negative impacts. John Danakas, Director of Public Affairs, reported that it is not possible to obtain the sums the top 5 universities in *Maclean's* ranking actually spend on advertising. However, after discussing the matter with one of his counterparts he concluded that significantly more resources are provided to market the top universities in *Maclean's* relative to those given at the University of Manitoba.

April 23: Ms. Kelly Risbey, Institutional Analysis, presented the outcome of the additional analyses the Committee requested: reporting category points of a set of medical-doctoral universities (Alberta, Saskatchewan, Calgary and Manitoba) that showed each university's estimated total "points"

- on each of the 22 items measured by *Maclean's*,
- over each of the six categories (student body, classes, faculty, finances, library, reputation),
- total points, and
- overall rank in 2001

As well, Ms. Risbey showed, comparing the same four universities, the impact on

each institution's total point score and overall rank, of the exclusion of the reputational survey results.

Mr. Peter Dueck, Director of Enrolment Services, and Ms. Iris Reece presented their assessment of the role *Maclean's* ranking plays in the ability of the University of Manitoba to recruit students at local, national and international levels.

Dr. Szathmáry outlined the University of Manitoba's Mission and Vision statements, and the principles that give this institution its defining character. The Committee discussed whether it would be worth modifying the mission of the institution and some of its principles if it were to increase the rank of the University of Manitoba in *Maclean's* University ranking.

June 20: Ms. Thelma Lussier reviewed the changes that *Maclean's* magazine proposes to make in the 2002 survey. The Committee discussed two additional scholarly articles, one which considered the validity of *Maclean's* rankings, and the other, which considered the validity of *U.S. News and World Report* ranking of American Universities and degree-granting colleges. The Committee then considered an alternative ranking report, which does not deal with universities individually, but in the aggregate, by province (*Missing Pieces III: An Alternative Guide to Post Secondary Education*).

The Committee discussed at length whether any change can, or should be made to improve the University's rankings in specific categories, and whether it should make any recommendations to the President.

September 16: The Committee reviewed an analysis of the data submitted for the 2002 survey. The Committee then discussed the draft report and its recommendations, and finalized the document.

OBSERVATIONS

History of Maclean's Rankings of Universities

1. Participation in *Maclean's* University Rankings survey is voluntary. Of the more than 90 universities that are members of the Association of Universities and Colleges of Canada, fewer than 50 have participated in the survey since 1996.

2. Initially (1991) *Maclean's* ranked all participating universities in a single array, regardless of institutional size or complexity of programming, and used a statistical approach that was inappropriate. The resultant outrage forced *Maclean's* to revise its methods. In 1994 AUCC lobbied against *Maclean's* and urged universities not to participate in the survey, hoping that there would be a national movement to bring about further changes in methods.

Survey Methods

1. *Maclean's* refined its approach in response to the protests. Participating universities are now categorized according to their size and function into three groups:

- primarily undergraduate (liberal arts and science programs),
- comprehensive (basic arts and science, some professional programs, masters' and some doctoral programs), and
- medical doctoral (full range of undergraduate and graduate programs, professional programs, and the presence of a medical school).

2. The survey design now includes six reporting categories, within which data on 22 sub-categories are provided by the medical-doctoral universities. There is no audit of the material submitted. Each sub-category is not equally important in the calculation of the final university scores, as each item has a weighting factor assigned by the magazine. The summed weights, by the six categories are the following:

- student body: 22%
- classes: 17%
- faculty: 17%
- finances: 12%
- library: 12%
- reputation: 20%
- total 100%

The two most heavily weighted sub-categories are the entrance average of new students (11.5%) and the reputational survey outcome (15%). The magazine's "value-added" measure, which ranks institutions according to their success in attaining timely graduations relative to the entrance average of students, is not considered in the ranking of institutions.

3. The reputational survey consists of two pages. One page contains the list of all participating universities, which the recipient is asked to rank. The second page asks the recipient to rank the institutions in his/her geographic region as "highest quality", "most innovative", and "leaders of tomorrow." The sum of ratings of an institution on these three measures yields the "best overall" category.

4. More than 7,000 questionnaires are distributed to high-school guidance counsellors, university officials, heads of organizations, CEOs, and recruiters at corporations. *Maclean's* has been reporting the proportion of completed surveys received by group contacted since 1997. Since 1996, less than 15% of surveys sent out have been received back by *Maclean's* in any given year.

5. The University of Manitoba's geographic region includes all four western provinces.

6. *Maclean's* tabulates percentage scores for each sub-category, and then converts the percentages into ordinal rankings. The result is that differences are maximized, and that it is not possible to tell by the ranks alone whether there are true differences in the scores attained by the institutions. *Maclean's* uses a two-step methodological process to derive its ordinal rankings. In the first step, a mean and standard deviation are calculated for a sub-category, based on the institutions' raw values. Then, using the mean, standard deviation, and normal distribution function (standard formula), raw values are transformed into normalized scores (under the bell curve). In the second step, normalized scores are multiplied by the sub-category's weight to obtain the institutions' sub-category points. By using the normal distribution function, small differences in raw scores are exaggerated. For example, the average entering grade for University A is 86.3 and University B is 86.8. This actual difference of 0.5, once normalized using the normal distribution function, could result in a 9.0 point difference between University B and University A. This exaggeration is compounded as points are summed for each of the 23 sub-categories, which results in *Maclean's* overall ordinal rankings.

7. The reality is that the survey results are designed to sell magazines. It is claimed that the issue with the rankings is the top seller each year. There is little chance of *Maclean's* ending the survey unless readers "tire" of the results.

The University of Manitoba's Rankings

1. In 1991 the University of Manitoba ranked 19 out of 46 participating universities. In each of 1992 and 1993 the University was ranked 15 out of 15 participating medical-doctoral universities.

2. In 1994 the University of Manitoba joined the boycott of *Maclean's*, noting that it was opposed to the magazine's methodology. Its rank in earlier years had brought the institution considerable negative media coverage. The University's position was that its accessibility mandate earned it a low ranking because the magazine placed too high an emphasis on the entrance average. The University stayed out in 1995 also, and received negative media coverage for failing to participate.

3. In 1996, with the arrival of a new president, the University re-entered the survey. By then evidence had begun to accumulate that showed that the university's international enrolments were suffering, and absence from *Maclean's* rankings was interpreted abroad to mean that the University had lost "accreditation".

4. The University's rankings have been the following since 1996:

- 1996: 13 out of 13
- 1997: 15 out of 15
- 1998: 15 out of 15
- 1999: 13 out of 15
- 2000: 14 out of 15
- 2001: 15 out of 15

5. The University of Manitoba ranks lowest among the group of medical-doctoral universities on

the entrance average and reputational measures.

6. "What if" scenarios showed that:

- a) If the University increased its rank to 7 or 8 on each of the following
 - number of smaller classes
 - number of international students
 - operating budget
 - scholarship and bursary budget
 - student services budget
 - number of library acquisitions,
 its overall rank would move to 14 from 15. **The estimated total increase in resources necessary to make these changes is \$19.5 million in 2000-01 dollars.**
- b) If the University increased
 - the average entering grade from 80.5% to 85%,
its entrance average rank would change from 15 to 7;
 - the proportion of entering students with 75% or higher, from 73.9% to 91.0%, on
this rank it would change from 15 to 7;
 - its reputational rank from 15 to 10;
 its overall rank would move to 14 from 15;
- c) Even if the reputational survey outcomes were excluded from consideration, among our "natural competitors" (the Universities of Alberta, Calgary, Saskatchewan) and Manitoba, there would be no change in the overall rankings attained in 2001; the University of Manitoba would still rank lowest among these four.

Other Rankings

The Committee reviewed two other rankings of universities.

1. The Gourman Report

The Report ranked the University of Manitoba 9th of 60 Canadian universities. The information on the Gourman Report claims that the "Gourman Report uses an 198-point criteria in the evaluation of institutions and programs. Statistical data are collected and reduced to a concise three digit score for determining overall rank. Information is gathered from public records, the evaluated institutions, and agencies that make accurate projections of the relative success of graduates." The University provides no data to the Gourman Report, and has no means whereby it could assess the validity of the data used and the methods of assessment.

2. "Missing Pieces III: An Alternative Guide to Post-Secondary Education"

The study, prepared by the Canadian Center for Policy Alternatives in March 2002, does not

provide institutional ranking but focuses on Provincial rankings. The study focuses on the defining principles of post-secondary education: quality, equity, accessibility / affordability / opportunity, and public accountability. Of the ten provinces, Manitoba ranks as follows in the various categories:

Equity	3
Quality	3
Accountability	5
Accessability	4
Overall	3

Impact of Ranking of Colleges and Universities on Student Recruitment

1. American data show that rankings do not significantly affect the college decisions of the following groups of students:

- low income
- first generation
- non-traditional
- students living at home
- students over 25
- students attending institutions within 10 miles of home
- students considering local and regional in-state public colleges and universities

2. American data show that rankings increase in importance when making college decisions as the following increase:

- student ability
- parental income
- parental education

3. The importance of *Maclean's* University Ranking was examined among students at 19 Canadian universities.

- In 1998, overall, 19.15% rated the rankings as "very important". Only 4.41% of University of Manitoba students rated the rankings as "very important";
- In 2001, of students surveyed, across Canada as a whole, 72% had read *Maclean's* ranking, but 77% of University of Manitoba students had read it;
- In 2001, Canada wide, 16% of students rated *Maclean's* rankings as "very important", but only 6% of University of Manitoba students rated the rankings as "very important".

4. Based on American experience, the University anticipates that *Maclean's* ranking will have the following impacts:

- a) In Manitoba: students with the highest academic ability, who are from affluent, educated families are the most likely to be influenced by the rankings. They may expect that U of M education is inferior, which will hamper recruitment efforts.
- b) Nationally: *Maclean's* is widely read by students considering university education. The University of Manitoba's ability to recruit from Ontario (double cohort) will be hampered, and locally, there are increasing challenges by out-of-province universities recruiting and using *Maclean's* ranking.
- c) Internationally: Knowledge of Canadian universities is very limited, and *Maclean's* is widely available. Other universities promote rankings in their material. In some countries, prestige and name recognition are important. A low ranking is equated by some to a low quality university.

What changes if any, should or could be made to improve the University's rankings in specific categories and overall?

1. The design of the survey and "what if" scenarios suggest that only minimal change in the overall ranking of the University of Manitoba can be obtained if the focus is on improving ranks in the lower-weighted sub-categories. Nevertheless, the estimated costs of the associated improvements are beyond the University's ability to provide.
2. The same gain in overall rank - from 15th to 14th - can be attained if
 - the University were to increase its entrance average significantly as well as the proportion of students who enter with averages of 75% or higher;
 - the ranking on the reputational survey went from 15th to 10th position.
3. Raising the entrance average so significantly would put the University in conflict with its fundamental responsibilities to educate - as the only medical-doctoral institution in Manitoba - all who have the capacity to succeed in its programs.
4. Raising the reputational rank of the University of Manitoba through advertising that shows the true value and achievements of the University, requires increases in advertising funding.
5. The Committee considered a number of initiatives in addition to advertising which might assist in raising, in particular the reputational rank. Some of these activities are already in place but might be expanded. Initiatives discussed included: Ambassadors in the high schools; further education of the public about ranking systems and more emphasis on alternative ranking which focus on accessibility; recognition of the achievements of alumni; more alumni becoming "advocates" for the University; graduates visiting high schools to promote the University and its programs.

CONCLUSIONS

1. The University of Manitoba is unique among the universities in the medical-doctoral category in the *Maclean's* survey as it is the only university which has the sole responsibility for all professional and doctoral programs in the province, and for the vast majority of Masters programs. With one exception (Memorial University of Newfoundland), which has chosen to be ranked in the group of "comprehensive" universities, all other universities in the medical-doctoral category share the responsibility with at least one other university in their province. This reduces our University's flexibility to restrict enrolments or modify programs. This provincial responsibility, combined with the University of Manitoba's high priority on accessibility, limits what the University might do to influence the *Maclean's* rankings. The Committee concluded that it would not recommend that any major steps be taken to influence *Maclean's* rankings which would require changing the University's commitment to be an accessible university.
2. While the Committee concluded that changes should not be made for the sake of influencing *Maclean's* ranking, nevertheless there are some factors in the *Maclean's* survey which, if more support was given, would improve education and research. The Committee suggests that a plan should be developed which would maximize the ability of the University to make improvements in these areas. Examples are Libraries, and Student Services and financial support.
3. The Committee spent some time reviewing the reputational survey and the impact that the university's ranking had on student recruitment, and the public perception of institutional quality. While many steps have been taken to counter balance the negative image of quality that is created by the *Maclean's* ranking, the Committee concluded that a multi-year plan should be developed which focuses on not only a local but also a national focus.
4. The Committee in discussing whether any changes could or should be made to improve the University's ranking, considered the question of whether the University should withdraw from the survey which was an action taken by the University on a previous occasion. At that time there was more than one university which withdrew but now 46-47 universities participate and all medical-doctoral ones do so. The Committee concluded there would be more negative impact on withdrawing than continuing to participate and receive a low ranking in the medical-doctoral colleges. However it should be understood that the rankings are not likely to improve for the University because the methodology favors universities with a different set of values than the University of Manitoba. The University ranked 10th to 15th in 17 of the 23 categories, although in many cases the differences between the first ranked and the last ranked were negligible. There should be no expectation that the University's current ranking will change much given the methodology and the focus of the *Maclean's* survey.

RECOMMENDATIONS

1. The University of Manitoba should not veer from the principle that has been its most enduring character: be an accessible university that delivers a high quality education to all who have the capacity to benefit by it.

2. The University should set out a multi-year plan whereby it maximizes its ability to provide resources to make improvements in those areas of education and research and their supporting infrastructure that are consistent with its mission and vision.
3. The University should develop a multi-year plan that focuses locally and nationally to counterbalance the negative image of its quality that is created by *Maclean's* ranking. Part of the plan must focus on changing the perception of the University of Manitoba among the groups that are surveyed annually by *Maclean's*.
4. The University should continue to participate in the *Maclean's* survey.

APPENDIX A

Composition of the Committee

Chair Dr. Emőke Szathmáry
Vice-Chair Mr. Terry Sargeant, Board of Governors

Appointed from the Board of Governors

Mr. Gerry Dureault
Ms. Joanna Plater
Dr. Ian Smith
Ms. Shirley Van Schie

Appointed from Senate

Dr. Brian Stimpson, Faculty of Engineering
Dr. Juliette Cooper, Faculty of Medicine
Mr. James Kusie, Vice-President, University of Manitoba Students' Union (and also a member of
the Board of Governors)
Dr. George Tabisz, Faculty of Science
Dr. Arlene Young, Faculty of Arts

Resource Support

Ms. Thelma Lussier, Director, Institutional Analysis
Mr. John Danakas, Director, Public Affairs
Mrs. Betty Borsboom, University Secretariat

APPENDIX B

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Comments of the Senate Executive Committee:

The Committee discussed the Final Report on the Presidential Advisory Committee on the Maclean's Survey and endorses its recommendations to Senate.

The Senate Executive Committee wishes to further articulate its strong support for recommendation number one of the report which reads as follows:

- "1. The University of Manitoba should not veer from the principle that has been its most enduring character: be an accessible university that delivers a high quality education to all who have the capacity to benefit by it."

/jml