Senate
Senate Chamber
Room E3-262 Engineering Building
WEDNESDAY, June 23, 2010
1:30 p.m.
Regrets call 474-6892
AGENDA
I MATTERS TO BE CONSIDERED IN CLOSED SESSION ..... - none
II ELECTION OF SENATE REPRESENTATIVES

1. Election of a Student Member to the Senate Executive Committee ..... Page 3
III MATTERS RECOMMENDED FOR CONCURRENCE WITHOUT DEBATE
2. Report of the Faculty of Graduate Studies RE: Curriculum ..... Page 4 Changes in the Master of Physician Assistant Studies and the Department of Family Social Sciences
3. Report of the Executive Committee of the Faculty of ..... Page 7
RE: Department of Biological Sciences
4. Report of the Executive Committee of the Faculty of ..... Page 11
Graduate Studies [April 23, 2010] RE: Department of Statistics, Department of Food Science, Faculty of Nursing, I.H. Asper School of Business MBA and Master of Physician Assistant Studies Program
IV MATTERS FORWARDED FOR INFORMATION
5. Report of the Senate Committee on Awards - Part A ..... Page 15
6. Senate Membership 2010-2011 ..... Page 29
7. Student Advocacy 2008-2009 Annual Report ..... Page 33
8. In memoriam: Dr. Ralph Gordon Stanton ..... Page 43
9. Implementation of B.A. Integrated Studies ..... Page 45
V REPORT OF THE PRESIDENT ..... Page 46
VI QUESTION PERIODSenators are reminded that questions shall normally be submitted in writing to theUniversity Secretary no later than 10:00 a.m. of the day preceding the meeting.
VII CONSIDERATION OF THE MINUTESOF THE MEETING OF MAY 19, 2010
VIII
10. Correspondence from Dean Doering, Faculty of Graduate Studies RE: Graduate Students studying in Departments within the Faculty of Medicine

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

1. Report of the Senate Executive Committee

Page 57
2. Report of the Senate Planning and Priorities Committee

The Chair will make an oral report of the Committee's activities.
X REPORTS OF OTHER COMMITTEES OF SENATE, FACULTY AND SCHOOL COUNCILS

1. Report of the Senate Committee on Approved Teaching Centres with Respect to Cross-Registered Courses and Instructors
2. Report of the Faculty of Graduate Studies Page 61 RE: Master of Landscape Architecture
3. Proposal to establish an Endowed Chair in Hepatology
4. Report of the Senate Committee on Awards - Part B
5. Report of the Senate Committee on Instruction and Evaluation RE: Faculty of Kinesiology and Recreation Management
6. Report of the Faculty of Graduate Studies Page 87 RE: Department of Statistics
7. Report of the Senate Committee on Admissions RE: Respiratory Therapy Program, School of Medical Rehabilitation
8. Report of the Faculty of Graduate Studies RE: Proposal for a M.Sc. and Ph.D. in Biomedical Engineering

Page 92
a) Report of the Senate Planning \& Priorities Committee

Page 94
b) Program Proposal

## XI ADDITIONAL BUSINESS

1. Proposed Policy: the Co-Curricular Record

## Election of a Student Senator to the Senate Executive Committee

1. The composition of the Executive Committee makes provision for three student assessors. The Assessors are as follows:
2. President of UMSU (or designate) term: May 1, 2010 - April 30, 2011
3. President of GSA (or designate) term: May 1, 2010 - April 30, 2011
4. Student Senator appointed by caucus of Student Senators
term: May 1, 2010 - April 30, 2011
5. The composition of the Executive Committee makes provision one elected Student member of Senate Executive Committee. A candidate for this position is nominated by the caucus of Student Senators at Senate. Term for this position: May 1, 2010 - April 30, 2011

## Procedures:

(a) A nomination for the position shall be provided by the Student Senate Caucus.
(b) Senators shall vote by a show of hands.

## Preamble

1. The Faculty of Graduate Studies has responsibility for all matters relating to the submission of graduate course, curriculum and program changes. Recommendations for new programs or program changes are submitted by the Faculty Council of Graduate Studies for the approval of Senate.
2. In October 2007, the Faculty of Graduate Studies approved a process of Streamlining Course Introductions, Modifications, \& Deletions which allows the Executive Committee to approve these changes in lieu of Faculty Council when the courses are not associated with a new program or program changes.
3. The Faculty of Graduate Studies Executive Committee voted via email on May $26^{\text {th }}$ to consider proposals from the Master of Physician Assistant Studies and Dept. of Family Social Sciences.

## Observations

1. The Master of Physician Assistant Studies, Faculty of Medicine, proposes the introduction of one course, PAEP 7150 Year 1 Comprehensive Examination (0), and the deletion of one course, PAEP 7400 National Certification Examination (0). The professional certification exam is not an appropriate requirement for a degree program. PAEP will administer a program-administered comprehensive didactic examination at the end of Year 1 of the program.
2. The Dept. of Family Social Sciences, Faculty of Human Ecology, proposes the deletion of two courses, FMLY 7900 Understanding the Inner City: Processes (3) and FMLY 7910 Understanding the Inner City: Issues (3), and the introduction of two courses, FMLY 7920 Globalization, Families and Communities (3) and FMLY 7930 Social Development in Theory and Practice (3). The course introductions replace the deletions and thereby fill a gap in the curriculum, which was identified by an internal curriculum review in 2008/09.

The Dept. of Family Social Sciences has inquired with the Depts. of Sociology and Political Studies, Social Work and the Natural Resources Institute to ensure that there is no overlap in course content between the units.

[^0]
## Recommendations

The Executive Committee recommends THAT: the course and program changes from the units listed below be approved by Senate:

## Master of Physician Assistant Studies <br> Dept. of Family Social Sciences

Respectfully submitted,
Dean J. Doering, Chair
Graduate Studies Executive Committee

## Master of Physician Assistant Studies

Course Deletion
PAEP 7400 National Certification Exam -0

Course Introduction
PAEP 7150 Year 1 Comprehensive Examination +0 A pass/fail, multiple choice examination designed to assess students' knowledge of clinically relevant Year 1 material prior to entry into the clinical year.

NET CHANGE IN CREDIT HOURS: +0

Dept. of Family Social Sciences

Course Deletions
FMLY 7900 Understanding the Inner City: Processes -3
FMLY 7910 Understanding the Inner City: Issues -3
Page 2 of 3

## Course Introductions

FMLY 7920 Globalization, Families and Communities +3
This course examines the effects of globalization on families and communities from an interdisciplinary perspective. It has been implicated as one cause of inequality, indebtedness, marginalization, unemployment and homelessness. This course examines how responses to the challenges and opportunities of globalization affect the well-being of families and communities.

FMLY 7930 Social Development in Theory and Practice
$+3$
This advanced seminar examines the concepts and practices of social development in the real world. Specifically, it examines the interplay between theory and practice and the epistemological underpinnings of social development research, programs, and policies as applied to families and communities. Case studies are assessed and critiqued.

NET CHANGE IN CREDIT HOURS:

# Report of the Executive Committee of the Faculty of Graduate Studies on Course and Curriculum Changes in Excess of Nine Credit Hours 

## Preamble

1. The Faculty of Graduate Studies has responsibility for all matters relating to the submission of graduate course, curriculum and program changes. Recommendations for new programs or changes are submitted by the Faculty Council of Graduate Studies for the approval of Senate.
2. In October 2007, the Faculty of Graduate Studies approved a process of Streamlining Course Introductions, Modifications, \& Deletions which allows the Executive Committee to approve these changes in lieu of Faculty Council when the courses are not associated with a new program or program changes.
3. The Faculty of Graduate Studies Executive Committee met on the above date to consider proposals from the Dept. of Biological Sciences.

## Observations

1. The Dept. of Biological Sciences proposes the deletion of 24 courses, BIOL 7070 Advanced Parasitology (6), BIOL 7130 Ichthyology (6), BIOL 7150 Selected Topics in Avian Biology (6), BIOL 7160 Animal Ecology (6), BIOL 7230 Advanced Topics in Zoology (6), BIOL 7240 Wetland Ecology (6), BIOL 7270 Problems in Evolution (3), BIOL 7300 Advanced Embryology (6), BIOL 7310 Selected Topics in Animal Behaviour (6), BIOL 7320 Nematology (6), BIOL 7340 Problems in Developmental Zoology 1 (3), BIOL 7350 Problems in Developmental Zoology II (3), BIOL 7370 Special Topics in Algal Ecology (6), BIOL 7380 Advanced Limnology (6), BIOL 7390 Advanced Mammalogy (6), BIOL 7400 Biological Resource Management I (3), BIOL 7410 Special Topics in Botany (3), BIOL 7412 Biological Resource Management II (3), BIOL 7470 Plant Molecular Development (3), BIOL 7480 Plant Stress Physiology (3), BIOL 7490 Advanced Plant Ecology (3), BIOL 7500 Fungal Symbioses (3), BIOL 7510 Microtechniques in Plant Biology (3), BIOL 7520 Advanced Plant Systematics (3), the introduction of seven courses, BIOL 7502 Cell and Developmental Biology (3), BIOL 7302 Environmental Biology and Ecology (3), BIOL 7202 Evolutionary Biology (3), BIOL 7352 Aquatic Biology (3), BIOL 7600 Topics in Biological Sciences (3), BIOL 7602 Directed Studies in Biological Sciences (3), BIOL 7250 Advanced Systematics and Evolution (3), and the modification of one course, BIOL 7140 Advanced Physiology (3). The course offerings in the Dept. of Biological Sciences have been streamlined to maintain the teaching of specialized groups, reduce redundancy, and eliminate courses without representative expertise, while maintaining the breadth and flexibility of the graduate program.

## Recommendations

The Executive Committee recommends THAT: the course changes from the unit listed below be approved ${ }^{\text {' }}$

## Dept. of Biological Sciences

Respectfully submitted,
Dean J. Doering, Chair
Graduate Studies Faculty Council

Dept. of Biological Sciences

## Deletions

BIOL 7070 Advanced Parasitology 6
BIOL 7130 Ichthyology 6
BIOL 7150 Selected Topics in Avian Biology 6
BIOL 7160 Animal Ecology 6
BIOL 7230 Advanced Topics in Zoology 6
BIOL 7240 Wetland Ecology 6
BIOL 7270 Problems in Evolution 3
BIOL 7300 Advanced Embryology 6
BIOL 7310 Selected Topics in Animal Behaviour 6
BIOL 7320 Nematology 6
BIOL 7340 Problems in Developmental Zoology I 3
BIOL 7350 Problems in Developmental Zoology II 3
BIOL 7370 Special Topics in Algal Ecology ..... 6
BIOL 7380 Advanced Limnology ..... 6
BIOL 7390 Advanced Mammalogy ..... 6
BIOL 7400 Biological Resource Management I ..... 3
BIOL 7410 Special Topics in Botany ..... 3
BIOL 7412 Biological Resource Management II ..... 3
BIOL 7470 Plant Molecular Development ..... 3
BIOL 7480 Plant Stress Physiology ..... 3
BIOL 7490 Advanced Plant Ecology ..... 3
BIOL 7500 Fungal Symbioses ..... 3
BIOL 7510 Microtechniques in Plant Biology ..... 3
BIOL 7520 Advanced Plant Systematics ..... 3
Total Deletions: ..... $-108$
Introductions
BIOL 7302 Environmental Biology and Ecology ..... 3An in-depth study of topics selected from environment and ecology interests of thedepartment, including population ecology, fisheries biology, plant/animal interactions,animal behaviour, ecosystem dynamics and restoration. Topics will be chosen toacquire specialized knowledge in a particular topic.
BIOL 7202 Evolutionary Biology3An in-depth study of topics selected from research interests within the department thatmay cover an evolutionary theme. This course will allow students to acquire or expandon specialized knowledge in a particular evolutionary topic through a series of readingsor a combination of readings and lectures.
BIOL 7502 Cell and Developmental Biology ..... 3An advanced topics course which will be an in-depth study of current research topics incellular and developmental biology. An undergraduate background in cell and
developmental biology or related areas is required.

BIOL 7352 Aquatic Biology
3
An in-depth study of topics covering all aspects of aquatic biological interests in the department including wetland ecology, limnology, oceanography, toxicology, conservation, and others. Topics will focus on the research interests of students so they may acquire specialized knowledge in particular areas.

## BIOL 7250 Advanced Evolution and Systematics <br> 3

This course will first consider theoretical and practical aspects of systematics, and then consider how systematic and population-level studies have illuminated our understanding of evolutionary processes.

## BIOL 7600 Topics in Biological Sciences <br> 3

A general topics course to reflect an in-depth study of current interest topics to extend or acquire specialized knowledge in a particular area of biological interest. A subtitle may be added to the current title to reflect specialized interests.

> BIOL 7602 Directed Studies in Biological Sciences
> A course to provide a broad knowledge of different topics within Biological Sciences peripheral to the specific topic of the student's thesis and will not become the introductory chapter of the thesis. Students will complete assignments by themselves but will participate and be evaluated as a group.

Total Introductions: +21

Course Modification
BIOL 7140 Advanced Physiology 3
An in-depth study of topics related to how changing internal and external environments influence life sustaining physiological processes. Topics include plant and animal stress, endocrine \& electrophysiology, metabolism and molecular biology of solute transport.

Total Modifications:

## Report of the Executive Committee of the Faculty of Graduate Studies on Course and Curriculum Changes

## Preamble

1. The Faculty of Graduate Studies has responsibility for all matters relating to the submission of graduate course, curriculum and program changes. Recommendations for new programs or changes are submitted by the Faculty Council of Graduate Studies for the approval of Senate.
2. In October 2007, the Faculty of Graduate Studies approved a process of Streamlining Course Introductions, Modifications, \& Deletions which allows the Executive Committee to approve these changes in lieu of Faculty Council when the courses are not associated with a new program or program changes.
3. The Faculty of Graduate Studies Executive Committee voted via email on the above date to consider proposals from the Dept. of Statistics, Dept. of Food Science, Faculty of Nursing, I.H. Asper School of Business MBA, and Master of Physician Assistant Studies.

## Observations

1. The Dept. of Statistics, Faculty of Sciences proposes the introduction of two courses, STAT 7350 Advanced Topics in Statistics 3 (1.5), STAT 7360 Advanced Topics in Statistics $4(1.5)$ to provide a wider range of topics available to the student and the ability for the department to offer some advanced statistical topics in a shorter time frame (1.5 credit hours rather than 3 credit hours).
2. The Dept. of Food Science proposes the deletion of one course, FOOD 7250 Advanced Food Packaging (3). The instructor has left and the department no longer has the expertise in the subject area.
3. The Faculty of Nursing proposes the modification of three courses, NURS 7260 Health Care in Advanced Practice Nursing 1 (6), NURS 7300 Advanced Health Assessment and Diagnostic Reasoning (6), and NURS 7360 Integrative Focus (6) to reflect revised pre-requisites.
4. The I.H. Asper School of Business MBA program proposes the modification of one course, FIN 6072 Corporate Finance (3) to reflect a "not to be held with" caveat.
5. The Master of Physician Assistant Studies program proposes the modification of one course, PAEP 7300 Comprehensive Assessment of Clinical Skills (CACS) (0) to amend the course description to more accurately reflect the course curriculum.

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

## Recommendations

## The Executive Committee recommends THAT: the course changes from the units listed below be approved by Senate:

Dept. of Statistics
Dept. of Food Science
Faculty of Nursing
1.H. Asper School of Business MBA

Master of Physician Assistant Studies

Respectfully submitted,
Dean J. Doering, Chair
Graduate Studies Executive Committee

## Dept. of Statistics

Course Introductions
STAT 7350 Advanced Topics in Statistics 3 ..... 1.5
Special advanced research topics in Statistics.
STAT 7360 Advanced Topics in Statistics 4 ..... 1.5
Special advanced research topics in Statistics.
NET CHANGE IN CREDIT HOURS: ..... $+3$
Dept. of Food Science
Course Deletion
FOOD 7250 Advanced Food Packaging ..... 3

Faculty of Nursing

Course modifications
NURS 7260 Health Care in Advanced Practice Nursing 1
(Formerly 049.726) An examination of the assessment and intervention strategies for individuals from birth to adolescence, including sexuality and reproductive health. Designed to provide the necessary knowledge and experience to assist individuals and their families with the most common health problems. Concepts of health promotion and health maintenance are integrated throughout the course. Integrated clinical practicum ( $12 \mathrm{hrs} /$ week). Prerequisites: NURS 7250 , NURS 7300, NURS 7370, NURS 7380, NURS 7390.

NURS 7300 Advanced Health Assessment and Diagnostic Reasoning
(Formerly 049.730) 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.

## NURS 7360 Integrative Focus

The purpose of this course is to allow the student to focus in-depth in a substantive area of nursing practice: clinical practice, education or administration. Students will engage in practice in the area of focus, and be guided by the faculty adviser with respect to the goals and direction of the practicum and associated readings. Students will participate in seminars facilitated by the faculty at designated times throughout the practicum. Prerequisite: NURS 7090, NURS 7210, NURS 7220, and NURS 7340. Co-requisite: NURS 7350.

NET CHANGE IN CREDIT HOURS:

## I. H. Asper School of Business MBA

Course Modification
FIN 6072 Corporate Finance
The financial management of businesses including agency problems, valuation, capital budgeting, risk/return relationships, the term structure of interest rates, market efficiency, longterm financing, capital structure, and the use of options and future for risk management. Not to be held with either of the former 009.607 or FIN 6070 . Prerequisite: ACC 6050 (or 009.605) or IDM 7720.

NET CHANGE IN CREDIT HOURS:

## Master of Physician Assistant Studies

## Course Modification

PAEP 7300 Comprehensive Assessment of Clinical Skills (CACS)
The Comprehensive Assessment of Clinical Skills is a comprehensive summary of clinical performance using information from PA-ITRES, mini-CEX evaluations, and observed histories/physical exams. This assessment will be graded on a pass/fail basis.

NET CHANGE IN CREDIT HOURS:

## REPORT OF THE SENATE COMMITTEE ON AWARDS - PART A

## Preamble

Terms of reference for the Senate Committee on Awards 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 the policy on the NonAcceptance of Discriminatory Awards, such offers shall be submitted to Senate for approval. (Senate, October 7, 2009)

## Observations

At its meeting of May 10, 2010, the Senate Committee on Awards approved sixteen new offers and eighteen amended offers, as set out in Appendix A of the Report of the Senate Committee on Awards - Part A (dated May 10, 2010).

## Recommendations

On behalf of Senate, the Senate Committee on Awards recommends that the Board of Governors approve sixteen new offers and eighteen amended offers, as set out in Appendix A of the Report of the Senate Committee on Awards - Part A (dated May 10, 2010). These award decisions comply with the published guidelines of November 3, 1999, and are reported to Senate for information.

Respectfully submitted,
Dr. Philip Hultin
Chair, Senate Committee on Awards

## Appendix A

# MEETING OF THE SENATE COMMITTEE ON AWARDS <br> May 10, 2010 

## 1. NEW OFFERS

Canadian Bio-Systems Inc. Graduate Scholarship

Canadian Bio-Systems Inc. provides \$5,000 annually to the University of Manitoba, to offer a scholarship for graduate students in the Department of Animal Science. The purpose of the award is to encourage qualified graduates of faculties other than the Faculty of Agricultural and Food Sciences, to explore the excellent career opportunities available in the area of animal nutrition. One scholarship will be offered to a graduate student who:
(1) is a Canadian citizen or permanent resident;
(2) has completed an undergraduate degree in a faculty other than the Faculty of Agricultural and Food Sciences (or equivalent);
(3) is enrolled full-time in the Faculty of Graduate Studies, in the first year of the M.Sc. or Ph.D. in Animal Science;
(4) has achieved a minimum degree grade point average of 3.5 (or equivalent) based on the last 60 credit hours;
(5) has proposed to undertake thesis research in the area of nutritional biochemistry.

If, in any given year there is no qualified candidate who holds an undergraduate degree from a faculty other than Agricultural and Food Sciences (or equivalent), the Scholarship may be offered to another qualified candidate who meets criteria (1) and criteria (3) through (5).
Candidates will be required to submit an application that will consist of: (a) a description of their proposed research project (maximum 500 words), (b) a curriculum vitae, and (c) a current academic transcript(s).
The Canadian Bio-Systems Inc. Graduate Scholarship is to be offered in addition to the Department of Animal Science's minimum suggested level of graduate support for an M.Sc. or Ph.D. student, as appropriate.
The Dean of the Faculty of Graduate Studies (or designate) will ask the Chair of the Awards Committee of the Faculty of Agricultural and Food Sciences to convene the selection committee for this award.

## Consulate General of the Republic of Poland Prize for Polish Studies

The Consulate General of the Republic of Poland has established a prize for Polish Studies at the University of Manitoba. The purpose of the prize is to encourage and support students in continuing their study of Polish language and culture. One prize valued at $\$ 1,000$ will be offered annually to an undergraduate student who:
(1) has successfully completed any two of the following courses: Introductory Polish (currently numbered POL 1890), Intermediate Polish (currently numbered POL 2890), Advanced Polish (currently numbered POL 3890), Polish Civilization (POL 2530), Polish Language and Culture (POL 2690);
(2) has achieved a minimum degree grade point average of 3.0 ;
(3) has demonstrated an interest in the study of Polish language and culture through the submission of a 500-word statement outlining their reasons for pursuing studies in Polish language and culture.

The selection committee will be named by the Head of the Department of German and Slavic Studies and will include two faculty members in the Department, one of whom must be an instructor of Polish courses, and one representative of the Canadian Polish Congress (or designate).

## Faculty of Medicine Student Accessibility Bursary

The Faculty of Medicine has established an endowment fund at the University of Manitoba, with an objective to provide bursary assistance to students enrolled in the Undergraduate Medical Education Program. The Faculty of Medicine Student Accessibility Bursary is supported by contributions from the Faculty of Medicine, members of the faculty, students, alumni, and friends of the Faculty. The available annual interest from the fund will be used to offer one or more bursaries to students who:
(1) are enrolled full-time in the Undergraduate Medical Education Program in the Faculty of Medicine and are in good standing;
(2) have demonstrated financial need on the standard University of Manitoba bursary application form.
The selection committee will have the discretion to determine the number and value of bursaries offered each year based on the available revenue and the level of financial need demonstrated by bursary candidates.

The selection committee will be named by the Dean of the Faculty of Medicine (or designate) and will ordinarily be chaired by the Assistant Dean Student Affairs.

## Marianne Galpin and Bill Stevenson Bursary

In memory of his wife Marianne Galpin, Bill Stevenson has established an endowment fund at the University of Manitoba. The Manitoba Scholarship and Bursary Initiative has made a contribution to the fund. The available annual interest from the fund will be used to offer one bursary to a student who:
(1) is enrolled full time in the Marcel A. Desautels Faculty of Music;
(2) (i) as an entering student, has achieved a minimum $70 \%$ (or equivalent) on those high school courses considered for admission, or (ii) as a continuing student, has achieved a minimum degree grade point average of 2.5 ;
(3) has demonstrated financial need on the standard University of Manitoba bursary application form.

The selection committee will be the Scholarship and Awards Committee of the Marcel A. Desautels Faculty of Music.
The Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

## Peter Gosman Memorial Scholarship in Marketing

Through a generous donation from CN Rail, a scholarship fund has been established at the University of Manitoba in memory of Mr. Peter Gosman. The Manitoba Scholarship and Bursary Initiative has made a contribution to this fund. The available annual income from this fund will support a scholarship which will be offered to a student who:
(1) is enrolled as a full-time student in the I.H. Asper School of Business at the University of Manitoba, specifically in the Marketing major;
(2) has achieved a minimum degree grade point average of 3.5;
(3) has demonstrated leadership skills and abilities, either within the University community or outside the University community.
Preference in selection shall be given to students who either are CN Rail employees or who are a son, daughter, or spouse of a CN Rail employee. Applicants for the scholarship will be required to submit: a) a brief statement (maximum 250 words) of their extracurricular involvement and leadership skill and abilities, and b) proof that the student is an employee of, or the dependent or the spouse of, an employee of CN Rail, if appropriate. The application will be submitted to the I.H. Asper School of Business each year on or before the designated deadline date.
The selection committee shall be named by the Dean of the I.H. Asper School of Business.

## Dr. Lane Graham Honours Thesis Prize for Biological Sciences

Upon the occasion of his retirement, Dr. Lane Graham has established an endowment fund at the University of Manitoba, with additional gifts from colleagues and friends. The purpose of the fund is to offer a prize to the student who submits the top Honours thesis in the Department of Biological Sciences. The available annual interest from the fund will be used to offer the prize to a graduating student who:
(1) has successfully completed the requirements for the Bachelor of Science (Honours) degree, in any theme of study offered by the Department of Biological Sciences;
(2) has achieved a minimum degree grade point average of 3.5 ;
(3) has submitted the top Honours thesis, as determined by the selection committee, with a minimum grade of 4.5 .
The selection committee will be the Honours Committee of the Department of Biological Sciences.
The Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

## Emil and Lynette Hain Scholarship for Oncology Research

Mr. Emil Hain (B.Sc.(C.E.)/59) and Mrs. Lynette Hain have established an endowment fund at the University of Manitoba, with an initial gift of $\$ 25,000$ in 2010. The purpose of the award is to support students undertaking oncology research. The available annual income from the fund will be used to offer one scholarship to a student who:
(1) is enrolled full-time in either the (i) Faculty of Graduate Studies in a Masters or Doctoral program delivered by a department in the Faculty of Medicine or (ii) Postgraduate Medical Education Program, in the Faculty of Medicine, either as a resident or a fellow;
(2) has demonstrated excellence in the area of oncology research.

Candidates will be required to submit an application including (i) a current transcript(s), (ii) a curriculum vitae, (iii) two academic letters of reference from professors at a post-secondary institution, and (iv) a description of their proposed or ongoing research (maximum 500 words).

Graduate student recipients may hold the Emil and Lynette Hain Graduate Scholarship for Oncology Research with any other awards, consistent with policies in the Faculty of Graduate Studies. Postgraduate residents or fellows may hold the Scholarship with any other award.

The Dean of the Faculty of Medicine (or designate) and the Dean of the Faculty of Graduate Studies (or designate) will jointly name the selection committee and any graduate student recipients named to receive the scholarship under category (1)(ii) above will be reported through the Dean of the Faculty of Graduate Studies.
The Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

## Dr. Alan H. Lipson Memorial Award in Medicine

In memory of Alan Harvey Lipson (M.D./81), his wife, Avis Raber, and his sons, Mark, Daniel, Jonathan, and Benjamin Lipson have established an annual prize for students in the Faculty of Medicine at the University of Manitoba. The Jewish Foundation of Manitoba, which stewards the capital used to generate the annual amount for the award, will confirm the award value with Financial Aid and Awards at the University on an annual basis. One prize will be offered to an undergraduate student who:
(1) has completed the second or third year of study in the Undergraduate Medical Education Program and is in good academic standing;
(2) has demonstrated participation and leadership through volunteer and extracurricular activities, either in the Faculty of Medicine or the community at large.

Preference may be given to candidates who have taken a leadership role in an administrative capacity.
Candidates will be required to submit an application that will consist of: (a) a statement (maximum 500 words) describing their volunteer activities and demonstrated leadership abilities, (b) a minimum of one up to a maximum of two letters of reference (maximum 500 words each). The letters of support should address the candidate's leadership abilities and volunteer activities.
A student may hold only one Dr. Alan H. Lipson Memorial Award in Medicine in his or her lifetime.
The status of the investment at the Jewish Foundation of Manitoba will be reviewed from time to time and, if the earnings on the fund permit, the number of awards may be increased to two or more.

The selection committee will be named by the Dean of the Faculty of Medicine (or designate) and will include at least one, and at most two of Dr. Alan Lipson's immediate family members or heirs (designate(s) to be named by the family, and who may change from time to time). If there is no heir (or designate) the selection committee shall proceed to distribute the award. Lack of an heir (or designate) shall never prevent the distribution of this award.

## Mildred I. Lucky Scholarship in Nursing

Ms. Mildred I. Lucky has established an endowment fund at the University of Manitoba to provide a scholarship for Nursing students. The Manitoba Scholarship and Bursary Initiative has made a
contribution to the fund. The available annual income from the fund will be used to offer one scholarship to an undergraduate student who:
(1) has completed the second year of full-time study in the Baccalaureate Nursing Program;
(2) has achieved high standing, with a minimum degree grade point average of 3.5 ;
(3) in the next ensuing academic session, is enrolled full-time in the third year of the Baccalaureate Nursing Program.

The selection committee shall be the Student Promotions and Awards Committee of the Faculty of Nursing.

## Medicine Class of 1968 Bursary

The Medicine Class of 1968 has established an endowment fund at the University of Manitoba, which will be used to offer bursaries to undergraduate students in the Faculty of Medicine. The available annual income from the fund will be used to offer one or more bursaries to students who:
(1) are enrolled full-time in any year of study in the Undergraduate Medical Education Program in the Faculty of Medicine and are in good standing;
(2) have demonstrated financial need on the standard University of Manitoba bursary application form.

Preference may be given to students who have completed at least one year of the B.Sc.(Med.) program.
The selection committee will have the discretion to determine the number and value of bursaries offered each year based on the available funding.
The selection committee for this award will be named by the Dean of the Faculty of Medicine (or designate).
The Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

## Elsie C. Nesbitt Award

Mrs. Elsie C. Nesbitt (B.F.A./70) has bequeathed $\$ 1,000$ to the University of Manitoba. The gift will be used to offer a one-time scholarship to a student entering the first intake of the Master of Fine Arts program, in the 2010-2011 academic session. The scholarship, valued at $\$ 1,000$, will be offered to a student who:
(1) is enrolled full-time in the Faculty of Graduate Studies, in the first year of the Master of Fine Arts;
(2) has achieved a minimum degree grade point average of 3.5 (or equivalent) based on the last 60 credit hours of study;
(3) is returning to post-secondary studies in order to pursue fine arts as his or her second career and possesses the qualities of commitment and determination exemplified by the Award's benefactor, Mrs. Elsie C. Nesbitt;
(4) from among those candidates who meet criteria (1) through (3), has been ranked highest on his or her application for admission to the Master of Fine Arts program.

The Dean of the Faculty of Graduate Studies (or designate) will ask the Director of the School of Art (or designate) to name the selection committee.

## Douglas Rennie Graduate Scholarship

In honour of Dr. Douglas Rennie, upon the occasion of his retirement, colleagues and friends established a fund at the University of Manitoba in 1996. The available annual income from the fund will be used to offer either the Douglas Rennie Graduate Scholarship or the Douglas Rennie Undergraduate Prize (Award \#00000). In any year that the undergraduate prize is not offered, one scholarship will be offered to a graduate student who:
(1) is enrolled full-time in the Faculty of Graduate Studies, in the pre-Master's, M.A., or Ph.D. in Sociology;
(2) has achieved a minimum degree grade point average of 3.5 (or equivalent) based on the last 60 credit hours;
(3) has demonstrated exceptional academic and research skills at either the undergraduate or graduate level, as determined by the selection committee.
If in any given year there is no suitable candidate for either the Douglas Rennie Graduate Scholarship or the Douglas Rennie Undergraduate Prize, no award will be offered and the interest will be capitalized.

The Dean of the Faculty of Graduate Studies (or designate) will ask the Chair of the Graduate Committee of the Department of Sociology to convene the selection committee for this award.

## Douglas Rennie Undergraduate Prize

In honour of Dr. Douglas Rennie, upon the occasion of his retirement, colleagues and friends established a fund at the University of Manitoba in 1996. The available annual income from the fund will be used to offer either the Douglas Rennie Graduate Scholarship (Award \#00000) or the Douglas Rennie Undergraduate Prize. In any year that the graduate scholarship is not offered, one prize will be offered to an undergraduate student who:
(1) has successfully completed the requirements for the Bachelor of Arts (Honours) in Sociology;
(2) has achieved a minimum degree grade point average of 3.5 ;
(3) has prepared an outstanding honours thesis, as determined by the selection committee.

If in any given year there is no suitable candidate for either the Douglas Rennie Graduate Scholarship or the Douglas Rennie Undergraduate Prize, no award will be offered and the interest will be capitalized.
The selection committee will be the Graduate Committee of the Department of Sociology.

## Konrad Gordon Sigurdson Graduate Award

In memory of her dear friend, Konrad Gordon Sigurdson (B.A./66), Katherine Shotton has established an endowment fund at the University of Manitoba, with an initial gift of $\$ 10,000$ in 2010. The purpose of the fund is to provide scholarship support for students of Icelandic language and literature. It will be used to offer the Konrad Gordon Sigurdson Graduate Award and, in years where there is no qualified graduate candidate, the Konrad Gordon Sigurdson Undergraduate Award (Award \#00000).

The available annual interest from the fund will be used to offer one scholarship to a graduate student who:
(1) is enrolled full-time in the Faculty of Graduate Studies, in the M.A. in Icelandic;
(2) has achieved a minimum degree grade point average of 3.5 (or equivalent) based on the last 60 credit hours;
(3) is undertaking or has proposed to undertake thesis research pertaining to the history and /or culture of the Icelandic community in Canada.
Candidates must apply in writing indicating their suitability for the award.
The Dean of the Faculty of Graduate Studies (or designate) will ask the Head of the Department of Icelandic Language and Literature (or designate) to name the selection committee for this award.
The Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

## Konrad Gordon Sigurdson Undergraduate Award

In memory of her dear friend, Konrad Gordon Sigurdson (B.A./66), Katherine Shotton has established an endowment fund at the University of Manitoba, with an initial gift of $\$ 10,000$ in 2010. The purpose of the fund is to provide scholarship support for students of Icelandic language and literature. The fund will be used to offer the Konrad Gordon Sigurdson Graduate Award (Award \# 00000) or, in years where there is no qualified graduate candidate, the Konrad Gordon Sigurdson Undergraduate Award. The available annual interest from the fund will be used to offer one scholarship to an undergraduate student who:
(1) is enrolled full-time in the Faculty of Arts', in either the Major or Honours program in Icelandic;
(2) has achieved a minimum degree grade point average of 3.5;
(3) has submitted the best essay in one of the following courses: Contemporary IcelandicCanadian Literature (ICEL 2230), Poetics of Immigration in Icelandic-Canadian Literature (ICEL 2420), or Translation of Cultures in Icelandic-Canadian Literature (ICEL 2430).
Instructors for ICEL 2230, ICEL 2420, and ICEL 2430 will each nominate the student, in his or her course, who has prepared the best paper in the academic session immediately preceding that in which the award is tenable. Instructors must forward the name of the nominee, together with a copy of the student's paper, to the selection committee.
The selection committee will be named by the Head of the Department of Icelandic Language and Literature (or designate).
The Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

## Mark Sobering Memorial Award

In memory of Mark Sobering (LL.B./06), friends and family have established an endowment fund at the University of Manitoba, in 2010, with an initial gift of $\$ 18,770$. The fund will be used to offer bursaries for students in the Faculty of Law. The donors have made an additional gift of $\$ 882$, which will be used to offer the initial bursary in the 2010-2011 academic session. In subsequent years, the
available annual interest from the fund will be used to offer one bursary to an undergraduate student who:
(1) has completed the second year of the Bachelor of Laws program;
(2) in the next ensuing academic session is enrolled full-time in the third year of the Bachelor of Laws program;
(3) has achieved a minimum degree grade point average of 2.0 ;
(4) has demonstrated an interest in Criminal Law;
(5) has shown evidence of extra-curricular involvement outside of academics;
(6) has demonstrated financial need o the standard University of Manitoba bursary application form.

The selection committee will be the Faculty of Law Awards Committee.
The Board of Governors of the University of Manitoba has the right to modify the terms of this award if, because of changed conditions, it becomes necessary to do so. Such modification shall conform as closely as possible to the expressed intention of the donor in establishing the award.

## 2. AMENDMENTS

## BDO Dunwoody LLP Prize for Intermediate Accounting - Equities

The name of the BDO Dunwoody LLP Prize for Intermediate Accounting - Equities has been changed to: BDO Canada LLP Prize for Intermediate Accounting - Equities. Two references to the name of the donor have also been updated in the terms of reference.

## Botany Department Prizes

Terms of reference for the Botany Department Prize have been amended, to reflect administrative and curriculum changes that followed from the amalgamation of the Departments of Botany and Zoology several years ago, to create the Department of Biological Sciences.

- The name of the award has been changed to: Biological Sciences Department Prizes.
- The revised terms indicate that the award is offered by the Department of Biological Sciences, rather than the Department of Botany.
- Two prizes are offered each year to students who have achieved high standing in an Honours or Major program in Biological Sciences, rather than Botany; one to a student who has completed the third year and one to a student who has completed the fourth year.
- The selection committee will be named by the Head of the Department of Biological Sciences (or designate). Previously, the committee was named by the Head, Department of Botany.


## Maxwell Cohen Family Award

A number of amendments have been made to the terms of reference for the Maxwell Cohen Family Award, which was formerly offered to the second or third year student who achieved highest standing in the course International Law (LAW 3740).

- The name of the award has been amended to: Dean Maxwell Cohen and Family Award.
- The value of the prize has been changed from: $\$ 150$ to: the available annual interest from the fund.
- The prize will now be offered to a third year student in the Faculty of Law who has excelled in International Law (LAW 3740) and at least one other of the following: Human Rights Law (LAW 3980, T07, CRN 15562), International Trade Law (LAW 3980, T02, CRN 22411), International Internships or Exchange Opportunities (LAW 0000), or such other related courses as may be included in the curriculum in the future.
- A number of editorial changes have been made.


## Karen Hudson (Kowbel) Memorial Physiotherapy Award

The terms of reference for the Karen Hudson (Kowbel) Memorial Physiotherapy Award have been amended in order to convert the award from a bursary to a scholarship.

- The scholarship will be offered to a student who is enrolled full-time in the third year of the Bachelor of Medical Rehabilitation (Physical Therapy) program. Previously, the bursary was open to students in any year of the program.
- A requirement that the recipient has achieved the highest average in the Objective Structured Clinical Examinations (OSCE) for PT 2760 - Orthopaedic Assessment and Management I and PT 2770 - Orthopaedic Assessment and Management 2, from among those students who meet other criteria for the scholarship, has been retained.
- In criterion (3), 'cumulative degree grade point average' has been replaced with 'degree grade point average.'
- A requirement that candidates have demonstrated financial need has been deleted.
- A number of editorial changes have been made.


## Brad Jonk Award

The following amendments have been made to the terms of reference for the Brad Jonk Award.

- A monetary prize of $\$ 300$ will now be offered annually, in addition to the plaque that has been presented in past years.
- The course name and number for Farm Business Planning Project (65.062) have been updated to Management Planning Project 2, DAGR 0690.
- A number of editorial changes have been made.


## Winston Leathers Award

Several amendments have been made to the terms of reference for the Winston Leathers Award, which is offered to students in Year 3 of a Bachelor of Environmental Design program.

- In criterion (2), City Planning has been deleted as an eligible Option and the Landscape Architecture Option has been updated to Landscape and Urbanism.
- In criterion (3), 'cumulative degree grade point average' has been replaced with 'degree grade point average.'
- A number of editorial changes have been made.


## Graham C. Lount Family Foundation Bursary

The following amendments were made terms of reference for the Graham C. Lount Family Foundation Bursary.

- The pool of eligible undergraduate students has been expanded to include students in Years 3 and 4 of any Option within the Bachelor of Environmental Design program. Formerly, eligible undergraduate candidates were limited to students in Year 3 of the B.Env.D. (Architecture Option). Master of Architecture students will continue to be eligible for the Bursary but students in the pre-Master's Qualifying program will not, as the program has been closed.
- In criterion (3), two references to 'cumulative degree grade point average' have been updated to 'degree grade point average.' The revisions clarify that graduate students' degree gpa will be calculated based on the last 60 credit hours.
- A statement describing the donor's preference that the available funds be used to disburse ten bursaries of $\$ 5,000$ each among students in the different programs and years of study has been amended following changes to the pool of eligible candidates, as described above.
- A number of editorial changes have been made.


## Manitoba Egg Producers Bursary

The name the Manitoba Egg Producers Bursary has been amended to: Manitoba Egg Farmers Bursary. In criterion (2), 'cumulative degree grade point average' has been updated to 'degree grade point average.'

## Manitoba Egg Producers Scholarships

A number of amendments have been made to the terms of reference for the Manitoba Egg Producers Scholarships.

- The name of the award has been amended to: Manitoba Egg Farmers Scholarships.
- Course names and numbers have been updated, as follows:


2420



 B350)
- A number of editorial changes have been made.


## Leon Provancher Prize in Systematic Zoology

Terms of reference for the Leon Provancher Prize in Systematic Zoology have been amended, to reflect administrative and curriculum changes that followed from the amalgamation of the

Departments of Botany and Zoology several years ago, to create the Department of Biological Sciences.

- The pool of candidates has been changed to undergraduate or pre-Master's students in the Department of Biological Sciences. Formerly, the award was open to students at the same levels of study in Zoology.
- The prize will continue to be offered to a student who prepares an outstanding zoological collection, undertakes a research project of merit pertaining to systematic zoology, or has been nominated for an outstanding performance on a suitable course assignment from any systematic zoology or animal taxonomy related course.
- The selection committee will be named by the Head of the Department of Biological Sciences (or designate). Previously, the committee was named by the Head of the Department of Zoology.
- A number of editorial changes have been made.


## Marion Saydak Memorial Scholarship

The following amendments have been made to the terms of reference for the Marion Saydak Memorial Scholarship, which is open to students in the Master of Nursing Program.

- Criterion (1) has been amended to open the award to full-time students. Part-time students will continue to be eligible.
- In criterion (4), 'cumulative degree grade point average' has been updated to 'degree grade point average.'
- Criterion (5) has been amended to clarify that candidates must demonstrate a research/clinical/educational interest in one or both of the health of cancer patients and in follow-up support systems for family members. Previously, the terms required that candidates have demonstrated interest in both of these areas.
- The application deadline and the date by which a recipient must be selected have been deleted.


## Peter and Dorothy Saydak Memorial Scholarship

The following amendments have been made to the terms of reference for the Peter and Dorothy Saydak Memorial Scholarship, which is open to students in the Master of Nursing Program.

- Criterion (1) opens the award to full-time students. Part-time students will continue to be eligible.
- The application deadline has been deleted.
- A number of editorial changes have been made.


## William E. Sheets Scholarship and Bursary in Architecture

Several amendments have been made to the terms of reference for the William E. Sheets Scholarship and Bursary in Architecture.

- The pool of undergraduate candidates for the Bursary will be restricted to students in the final year (Year 4) of the Bachelor of Environmental Design (Architecture Option). Formerly,
undergraduate students in any year of the this program and options were eligible. The Bursary remains open to students in any year of the Master of Architecture program.
- A number of editorial changes have been made.


## Sociology Graduate Student Entrance Scholarship

The following amendments have been made to the terms of reference for the Sociology Graduate Student Entrance Scholarship, which is open to students in the first year of either a Master's or PhD program offered through the Department of Sociology.

- The first paragraph now indicates that the endowment fund supporting the Scholarship was established by faculty and alumni of the Department of Sociology.
- The award value has been changed from: one scholarship of $\$ 2,000$ to: one or more scholarships. The selection committee will have the discretion to determine the number and value of awards offered each year based on the available revenue from the endowment fund.
- Given the change to the number and value of awards, the award can no longer be limited to the candidate with the highest degree grade point average. Criterion (3) has been amended to set a minimum required degree grade point average of 3.5 (or equivalent) based on the last 60 credit hours.
- In addition, candidates will now be required to have demonstrated strong potential in their proposed areas of thesis research, as judged by the selection committee.
- The description of the selection committee has been amended to reflect the role that the Faculty of Graduate Studies has in administering the University's graduate awards program.
- A number of editorial changes have been made.


## Speechly/Tache Residents' Bursary Fund

The terms of reference for the Speechly/Tache Resdients' Bursary Funds, which is used to provide bursaries to students who might otherwise be forced to leave residence for financial reasons, have been amended as follows.

- The name of the award has been changed to: Housing and Student Life Residence Bursary.
- The pool of candidates has been broadened from: residents of Speechly/Tache to: residents of any University of Manitoba residence.
- Applicants for the bursary must be referred by the Director or the Assistant Director of Housing and Student Life. Previously, the terms stated that applicants would most often be referred by the Office of Housing and Student Life or Speechly/Tache Residence.
- A statement that the fund is not to be capitalized but shall be held available for disbursement at any time has been deleted, as the capital funds have been invested in a specific trust within the University Investment Trust. The following statement has been added: 'The capital in the trust fund established for the Bursary will be available for spending.'
- A number of editorial changes have been made.


## Ronald K. Stewart - Hay Memorial Bursary

Terms of reference for the Ronald K. Stewart - Hay Memorial Bursary have been amended, to reflect administrative and curriculum changes that followed from the amalgamation of the Departments of Botany and Zoology several years ago, to create the Department of Biological Sciences.

- The value of the award has been changed from: one bursary valued at $\$ 300$ to: one or more bursaries. The selection committee will have the discretion to determine the number and value of bursaries offered each year based on the available annual revenue from the fund.
- The pool of candidates has been amended from: students in the fourth year of the B.Sc.(Hons.) in Zoology to: students in the fourth year of the B.Sc.(Hons.) in Biological Sciences.
- In criterion (3), 'high standing' is now defined as a minimum degree grade point average of 3.0.
- Criterion (4) has been added to make explicit that candidates for the bursary must have demonstrated financial need on the standard University of Manitoba Bursary application form.
- The selection committee will be named by the Head of the Department of Biological Sciences (or designate). Previously, the committee was named by the Head, Department of Zoology.
- A number of editorial changes have been made.


## University Gold Medal in Fine Art

The terms of reference for the University Gold Medal in Fine Art and the various Program Medals have been amended to indicate that the School accepts transfer courses and the grades obtained in these courses in consideration of the medals.

## H.E. Welch Award of Excellence in Zoology

Terms of reference for the H.E. Welch Award of Excellence in Zoology have been amended, to reflect administrative and curriculum changes that followed from the amalgamation of the Departments of Botany and Zoology several years ago, to create the Department of Biological Sciences.

- The name of the award has been changed to: H.E. Welch Award of Excellence in Biological Sciences.
- The terms have been updated to reflect that the value of the prize is set at the available annual income from the fund.
- The prize will be offered to the student who has completed the requirements for a B.Sc.(Honours) or B.Sc.(Major) in Biological Sciences and has achieved highest standing in Biological Sciences core courses. The prize was formerly offered to graduates of a B.Sc.(Honours) or B.Sc.(Major) in Zoology or Ecology, who had achieved highest standing in Zoology core courses.
- The selection committee will be named by the Head of the Department of Biological Sciences (or designate).
- A number of editorial changes have been made.


## President

David T. Barnard 2008.07.01

## Chancellor

Harvey Secter 2010.01.01
Vice-Presidents
Digvir Jayas 2009.04.28
Deborah McCallum 2003.01.11
Joanne Keselman 1997.01.09
John Alho (acting) 2010.01.01

## Deans of Faculties

Agricultural \& Food Sciences:
Architecture:
Arts
Clayton H. Riddell Faculty of Environment, Earth, and Resources
Dentistry
Education
Engineering
Graduate Studies
Human Ecology
Law
I.H. Asper School of Business

Medicine
Marcel A. Desautels Faculty of Music
Nursing
Pharmacy
Kinesiology and Recreation
Management
Science
Social Work
Director of the School of Art
Dean, Extended Education
Director, Libraries
Vice-Provost (Student Affairs)

Michael Trevan
David Witty
Richard Sigurdson
Norman Halden
Anthony lacopino 2007.07.01
John Wiens 2001.08.01
Doug Ruth
John Doering
Gustaaf Sevenhuysen 2005.07.01
Lorna Turnbull* 2010.05.01
Glenn Feltham 2004.07.01
Dean Sandham 2004.10.01
Edmund Dawe 2007.07.01
Dauna Crooks 2007.07.01
David Collins 1999.07.01
Jane Watkinson 2007.07.01
Mark Whitmore 2004.07.01
Harvey Frankel 2008.07.01
Paul Hess 2008.07.01
Lori Wallace 2006.07.01
Karen Adams 2008.07.01
Dave Morphy 1982.10.01

## Heads of Constituent or Member Colleges

St. John's College
St. Paul's College
University College

Janet Hoskins
1997.07.01

Denis Bracken 2007.07.01
Richard Sigurdson 2006.05.01

## Appointed by the Board of Governors

TBA 2010.06.01-2012.05.31
TBA 2010.06.01-2012.05.31

## President of UMSU

Heather Laube
2009.05.01-2010.04.30

Ms. Karen Holden
Mr. Evan Kuz
2009.06.01-2010.05.31
2009.06.01-2010.05.31

## Elected by Faculty and School Councils ( $\mathrm{R}=\mathrm{Re}$-elected)

| Agricultural \& Food Sciences | Kees Plaizier Merv Pritchard Martin Scanlon | $\begin{aligned} & 2010.06 .01-2013.05 .31 \\ & 2008.06 .01-2011.05 .31 \\ & 2009.06 .01-2012.05 .31 \end{aligned}$ |
| :---: | :---: | :---: |
| Architecture | Lancelot Coar | 2009.05.01-2012.05.31 |
|  | Jean Trottier | 2006.06.01-2012.05.31 |
|  | I/r Karen Wilson Baptist | 2010.07.01--2011.06.20 |
| Arts | Timothy Anna (R) | 2005.06.01-2011.05.31 |
|  | Elizabeth Comack | 2009.06.01-2012.05.31 |
|  | Roisin Cossar | 2009.06.01-2012.05.31 |
|  | Mark Gabbert (R) | 2003.06.01-2012.05.31 |
|  | Ellen Judd | 2009.06.01-2012.05.31 |
|  | Judith Owens (R) | 2003.06.01-2012.05.31 |
|  | Wayne Simpson | 2009.06.01-2012.05.31 |
|  | Arlene Young (R) | 2003.06.01-2012.05.31 |
| Dentistry | Joanna Asadoorian | 2008.06.01-2011.05.31 |
|  | James Gilchrist | 2010.06.01-2013.05.31 |
| Education | Richard Hechler | 2010.06.01-2013.05.31 |
|  | Sandie Kouritizin | 2008.06.01-2011.05.31 |
| Engineering | Witold Kinsner | 2008.06.01-2011.05.31 |
|  | Hassan Soliman | 2010.06.01-2013.05.31 |
|  | Dimos Polyzois | 2005.06.01-2011.05.31 |
| Clayton H. Riddell Faculty of |  |  |
| Environment, Earth and Resources | lain Davidson-Hunt | 2009.06.01-2012.05.31 |
|  | John Hanesiak | 2010.06.01-2013.05.31 |
| Extended Education and Counseling |  |  |
| Services (Student Affairs) | Nancy Chislett | 2008.10.01-2011.05.31 |
| Human Ecology | Michael Eskin | 2010.06.01-2013.05.31 |
| I.H. Asper School of Business | Sarath Abeysekera | 2005.06.01-2011.05.31 |
|  | Mary Brabston (R) | 2004.06.01-2013.05.31 |
| Law | John Irvine (R) | 2010.06.01-2013.05.31 |
| Libraries | Christine Bone | $2006.06 .01-2012.05 .31$ |
|  | Jan Guise | 2009.06.01-2012.05.31 |


| Medicine | Aaron Chin <br> Kevin Coombs <br> Elizabeth Cowden <br> Heather Dean <br> Brenda Elias <br> Joanne Embree (R) <br> Murray Enns <br> Emily Etcheverry (R) <br> Alan Katz <br> Lorrie Kirshenbaum (R) <br> Andrew McDiarmid <br> Bob Mcllwraith <br> Ira Ripstein (R) <br> Peter Nickerson <br> Steven Pistorius (R) <br> Louise Simard (R) <br> Reeni Soni <br> Don Smyth (R) <br> Robert Tate <br> Kristel van Ineveld <br> Maria Vrontakis (R) <br> Deborah Wirtzfield <br> Klaus Wrogemann | $\begin{aligned} & 2010.06 .01-2013.05 .31 \\ & 2003.06 .01-2012.05 .31 \\ & 2006.06 .01-2012.05 .31 \\ & 2007.06 .01-2013.05 .31 \\ & 2010.06 .01-2013.05 .31 \\ & 2005.06 .01-2011.05 .31 \\ & 2009.06 .01-2012.05 .31 \\ & 2004.06 .01-2013.05 .31 \\ & 2010.06 .01-2013.05 .31 \\ & 2005.06 .01-2011.05 .31 \\ & 2008.06 .01-2011.05 .31 \\ & 2007.06 .01-2013.05 .31 \\ & 2006.06 .01-2012.05 .31 \\ & 2005.06 .01-2011.05 .31 \\ & 2003.06 .01-2012.05 .31 \\ & 2006.06 .01-2012.05 .31 \\ & 2008.06 .01-2011.05 .31 \\ & 2004.06 .01-2013.05 .31 \\ & 2003.06 .01-2012.05 .31 \\ & 2009.06 .01-2012.05 .31 \\ & 2005.06 .01-2011.05 .31 \\ & 2009.06 .01-2012.05 .31 \\ & 2010.06 .01-2013.05 .31 \end{aligned}$ |
| :---: | :---: | :---: |
| Marcel A. Desautels Faculty of Music | Steven Kirby (R) | 2005.06.01-2011.05.31 |
| Nursing | Marie Edwards Diana McMillan | $\begin{aligned} & 2008.06 .01-2011.05 .31 \\ & 2008.06 .01-2011.05 .31 \end{aligned}$ |
| Pharmacy | Yeuwen Gong (R) | 2005.06.01-2011.05.31 |
| Kinesiology and Recreation Management | Michael Campbell (I/r Christine Van Winkle) Jennifer Mactavish | $\begin{aligned} & 2008.06 .01-2011.05 .31 \\ & 2010.06 .01-2011.05 .31 \\ & 2008.06 .01-2011.05 .31 \end{aligned}$ |
| Science | John Anderson Judy Anderson Tom Berry (R) Michael Freund Tom Booth Elizabeth Worobec John van Rees (R) | $\begin{aligned} & 2008.06 .01-2011.05 .31 \\ & 2009.06 .01-2012.05 .31 \\ & 2003.06 .01-2012.05 .31 \\ & 2009.06 .01-2012.05 .31 \\ & 2010.06 .01-2013.05 .31 \\ & 2008.06 .01-2011.05 .31 \\ & 2003.06 .01-2012.05 .31 \end{aligned}$ |
| School of Art | Sharon Alward | 2008.06.01-- 2011.05.31 |
| Social Work | Eveline Milliken l/r Brenda Bacon | $\begin{aligned} & 2008.06 .01-2011.05 .31 \\ & 2011.01 .01-2011.06 .30 \end{aligned}$ |

## Heads of Affiliated Colleges

| St. Andrew's College | Roman Bozyk (Acting) | 2003.05.01 |
| :--- | :--- | :--- |
| St. Boniface College | Raymonde Gagne | 2003.09 .01 |

## Deputy Minister of Education

Heather Reichert (designate Dan Smith)

Elected by the Students (2010.04.01-2011.03.31)

Agricultural \& Food Sciences TBA
Architecture TBA
School of Art TBA
Arts
Clayton H. Riddell Faculty of Environment, Earth and Resources

TBA
Dentistry/Dental Hygiene
Education
Engineering
Graduate Studies
Human Ecology
I.H. Asper School of Business

Law
Medical Rehabilitation
Medicine
Marcel A Desautels Faculty of Music
Nursing
Pharmacy
Kinesiology and Recreation Management
Science
Social Work

## Assessors

Vice-Provost (Academic Affairs)
Vice-Provost (Academic Planning And Programs)
Associate Vice-President (Research)
Associate Vice-President (Research)
Associate Dean of Graduate Studies
Associate Dean of Continuing Education
Chair SPPC
UMFA Representative
St. Boniface College
Director of Admissions
Registrar
Executive Director, Student Services
Chair SCCCC
Vice-President UMSU
President GSA
Director U1
U1 Students
-updated June 1, 2010
*=acting
1/r=leave replacement

Karen Grant
Richard Lobdell (David Collins as of July 1, 2010)
Janice Ristock
Gary Glavin
Karen Jensen
Kathleen Matheos
James Blatz
Cameron Morrill
Ibrahima Diallo
Peter Dueck
Neil Marnoch
Lynn Smith
n/a
Murat Ates
Meaghan Labine (term ending April 30, 2011)
Christine Blais
TBA, TBA, TBA

University of Manitoba


Office of the Vice-President (Academic) \& Provost

208 Administration Building Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 480-1408
Fax (204) 275-1160

## Memorandum

To: Mr. Jeff Leclerc, University Secretary
From: Dr. D. R. Morphy, Vice-Provost (Student Affairs)
Date: $\quad$ May 26, 2010
Re: $\quad$ Student Advocacy 2008-2009 Annual Report

Attached is the 2008-2009 Student Advocacy Annual Report which I request be placed on the next Senate Executive Agenda for consideration.

Please note that Lynn Smith, Heather Morris and I will attend the meeting should any questions arise.

DRM:md
Attachment
$\begin{array}{ll}\text { cc: } & \text { Dr. Lynn M. Smith, Executive Director, Student Services } \\ & \text { Ms Heather Morris, Acting Director, Student Advocacy and Resource Services }\end{array}$


# Student Advocacy Annual Report 

## 2008-2009

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Meetings and Hearings Staff ..... 8

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The mission of the Student Advocacy office is to ensure that students are treated fairly in their dealings with the University. The Student Advocacy office is dedicated to educating the University community concerning student rights and responsibilities and assisting students in the resolution of conflicts arising from actions or decisions taken by the University.

While serving the University, Student Advocates maintain a student focus by providing information, investigating complaints, resolving conflict through alternative and formal systems, representing students at hearings, and reviewing policies and recommending change.

## 

This report summarizes the activities of the Student Advocacy office for the time period from September 1, 2008 to August 31, 2009.

## Cosediactis

In 2008-2009, the Student Advocacy office received a total of 1901 contacts for assistance.

During the reporting year, the office opened case files to assist 976 students. In addition, there were 39 student case files with issues continuing on from the previous reporting year. This carry forward exists because; a) some matters are complex and resolution requires a significant amount of time that extends beyond the reporting year time frame; and b) some students contact near the end of the reporting year. Table 1 provides a breakdown of the types of contacts the office received.


There were 743 students who contacted either the front desk or an advocate with a question, and were given general information or advice, which did not necessitate opening a case file ( 36 of these contacts came via online chat). This number also includes students who made an appointment
to meet with an advocate but subsequently cancelled or chose not to attend ( $\mathrm{n}=120$ ). They are not included in our individual student cases because the issue could not be identified. There were a total of 23 students involved (in different combinations) across 8 group cases or issues.

In addition to assisting students, we also provide advice and consultation services to faculty and staff on campus. Faculty or staff may contact us for assistance with how to handle a particular student matter or for information about policy and procedures. In 2008-2009, we received a total of 135 staff or faculty contacts. Although slightly lower, this is comparable to the previous year.

## Dexuag easpliess

Of the 1096 students who contacted the office and scheduled an appointment with an advocate in the 2008-2009 year, ( 976 case files and 120 no show/cancellations), $44.4 \%$ were male, and $55.6 \%$ were female.

When a student contacts the office to schedule an appointment with an advocate, they are asked to self-identify on our intake form whether or not they are an international student. This is optional, however, in some cases, this information is gleaned from the student during a meeting or from their student history. In 2008-2009, a total of 227 students who contacted our office to schedule an appointment with an advocate (21\%) were identified as international students. According to the Office of Institutional Analysis 2008-2009 IS Book, there were 8.1\% international students admitted to the $U$ of $M$ in Fall 2008. It is important to note that Student Advocacy did not verify whether every student was admitted as an international student.

We also recorded data on students' Faculties of registration (at the time of intake with our office). Most students were enrolled in U1 (23\%), followed by Science (20\%), Arts ( $15 \%$ ) and Graduate Studies ( $9 \%$ ). This is consistent with our data from previous reporting years. Although these are also the four faculties with the highest enrollments for 2008-09, the order for highest enrollment differed (U1, Graduate Studies, Arts, and Science; according to the Office of Institutional Analysis 2008-2009 IS Book). The remaining 33\% of cases were spread across the other faculties.

## 5issosees

In 2008-2009, there were a total of 1098 issues that the advocates assisted students with. Note that the number of "issues" is different than the number of individual student cases (976) because some students present with more than one issue. The number of issues is slightly lower compared the previous year (1173 issues in 2007-2008).

Although the number of issues has slightly decreased, the amount of time the advocates spend on individual cases has continued to increase. Unfortunately, this is not necessarily conveyed through the actual numbers. For example, an advocate may have fewer numbers of active student cases at any given time, but the nature of the issue requires significantly more hours of work on the part of the advocate. Typically a student advocate's work with a student involves any or all of the following:
» meeting with the student in person or over the phone (each appointment can take up to an hour);
» corresponding with the student via email;
» researching policies and procedures relevant to a student's case;
» making contacts with other staff and faculty on the student's behalf;
» preparing with the student for upcoming meetings and/or hearings with an administrator or committee;
» attending meetings/hearings with the student and administrators/committees; and
» follow up with the student depending on the outcome of their issue.

There are various reasons why some cases involve a significant amount of time, including the student's program (e.g., graduate studies or professional program) or the impact of the decision (e.g., withdrawal from a program). Other times it may be because a student's response to the issue requires more frequent meetings and phone calls with the advocate. In some cases, a student may present difficult or disruptive behaviour, requiring additional time on the part of the advocate to appropriately manage the student's behaviour.

The office has implemented various 'streamlining' strategies to provide more timely and efficient services for certain issues. The intention is that if a particular matter can be initiated by the student, it may not necessarily require a formal appointment with an advocate. This allows the advocates' time to be more readily available for complex and timesensitive issues that do require more assistance from our office. We have a number of resources available to students (both in hard-copy as well as on our website, depending on how the student contacts us) for common issues, including the process and forms required for Final Grade Appeals, Authorized Withdrawals, Deferred Exams, and Tuition Fee Appeals. These materials allow students to proceed immediately with some issues on their own, or can help to move the process forward as they wait to meet with an advocate (which during busy times, can be up to 10 working days).

## Setuctelit i

The majority of student issues can be categorized as "academic" ( $71 \%$ ), followed by "discipline" ( $16 \%$ ), "administrative" (9\%), "admission" ( $2 \%$ ) and "equity" ( $2 \%$ ). This distribution across categories changed slightly from last year. In this reporting year the "discipline" category was the second highest category, whereas "administrative" was the second highest category in our previous reporting year.

## 

The Academic category is divided into sub-categories of issues. Figure 1 shows how the sub-categories comprise the overall academic issues. The sub-category division is consistent with the previous reporting year.



The first and largest sub-category of academic issues is special requests (64\%). These are issues in which a student needs to make a special request for an academic concession, or a waiver to an existing rule or regulation. Examples of such requests are:
" authorized withdrawals or retroactive voluntary withdrawals from courses;
» deferred tests or examinations;
» extensions on coursework; or
» leaves of absence from an academic program.

These types of requests are normally based on extenuating circumstances such as medical, personal, or compassionate grounds. Requests made on such grounds almost always require some formal supporting documentation from a professional submitted by the student to an administrator. Other requests, which may not require supporting documentation, include waiver of requirements, transfer credit, or letters of permission. The majority of special requests in 2008-2009 were authorized withdrawals, followed by deferred exams, which is comparable to the previous year's data.

The next sub-category of academic issues is complaints ( $21 \%$ ). These are issues where the student is bringing forward a concern, complaint, or where they are seeking clarification about a policy or rule. This may include a concern about a grade, course syllabus, or a conflict with an advisor (e.g., graduate students) or professor. Appeals of academic decisions would also fall under this category. As with the previous year, the majority of complaint issues were grade appeals.

The third sub-category of academic issues is academic deficiency ( $13 \%$ ) i.e., students not meeting minimum academic performance requirements in their programs. This includes situations where students are seeking advice or submitting appeals regarding academic probation or suspension, requirement to withdraw, or starting a program afresh. The majority of academic deficiency issues in 2008-2009 were academic suspensions, followed by requirement to withdraw from the program.

The final sub-category of academic issues is professional conduct (2\%). This has increased slightly from the previous reporting year in which less than $1 \%$ of academic issues were related to professional conduct. It is important to note that this type of conduct is distinguished from behavior that is investigated as a discipline matter. These types of issues occur in the context of an academic program and are handled under academic policies (i.e., professional unsuitability or debarment policies). This category commonly includes practicum, clinical, or field placement issues, and applies mainly to students in programs with clinical or practical components, such as Pharmacy, Nursing, Education, or Social Work.

## (1)

We divide the discipline issues into two categories. The first is academic discipline, which refers to issues of academic dishonesty. Table 2 presents the numbers of issues according to the main types of academic dishonesty, and compares the numbers to the previous reporting year. There was an increase in the number of students seen for inappropriate collaboration and plagiarism over last year. However, it is important to note that this is not necessarily an indication of an increase in these types of behaviours by students across the University, but rather could also be attributed to a larger number of students being referred to our office for assistance with these matters, and/or more vigilant detection and reporting practices used by instructors. The University Discipline Committee (UDC) Annual Report for 2008-2009 stated that there was a University-wide increase from the year prior in the number of plagiarism and inappropriate collaboration cases reported.

There was a slight decrease in the areas of false admission information and academic fraud compared to the previous year.

| Tablem a caneinich |  |  |
| :---: | :---: | :---: |
| Cheating | 26 | 28 |
| Plagiarism | 62 | 52 |
| Inappropriate Collaboration | 43 | 16 |
| Unauthorized Materials | 21 | 22 |
| False Admissions Information | 2 | 4 |
| False Documentation | 4 | 3 |
| - Academic Fraud | 1 | 3 |
|  |  |  |

The second category of student discipline is non-academic. This pertains to student behavior outside of academic issues. As can be seen in Table 3, there was an increase in the number of non-academic discipline issues seen by our office compared to the previous year primarily in the area of 'inappropriate or disruptive behaviour'. The UDC report also noted an increase in non-academic discipline cases reported for the same time period. As commented on regarding academic discipline, this does not necessarily indicate in increase in these behaviours, but rather, instructors and staff may be more vigilant in reporting and responding to these behaviours in a formal way. The category "other" non-academic discipline included issues such as campus ban, prohibited drug and alcohol use, and indecent exposure.


Beyond the direct service to students who contact regarding non-academic discipline issues, our office assists the University community more broadly with such cases. Independent of the issues in Table 3, Brandy Usick, in her capacity as Director, consulted with $U$ of $M$ staff or faculty about eight inappropriate/disruptive student issues.

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The issues in this category represent areas that are handled by an administrative office (e.g. Registrar), such as tuition fee appeals, or transcript notation removal. It can also include administrative issues related to graduation, or matters normally outside jurisdiction of the University, such as student visas or student loans. This category comprised 9\% of all issues in 2008-2009.

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Admission issues comprised the same percentage of overall issues as the previous year, $2 \%$ of our total caseload. These mainly involved situations where students were appealing an admissions decision from a prospective faculty/program.

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During the 2008-2009 reporting year, 18 (or $2 \%$ of all issues) issues fell under the 'equity' category. Such issues involved a spectrum of concerns including human rights complaints, personal harassment (bullying), and sexual harassment.

The majority of the issues (15) were brought forward by students who had complaints about the behavior of another student or staff-person (instructor, administrator etc.) on campus. Of those student complaints, the majority were related to personal harassment. Only a small few (2) students approached our office to find assistance regarding complaints that had been brought against them. Finally, one student received ongoing support from our office for a complaint they filed in the previous year.

The student advocates provided information and advised students regarding their rights and responsibilities under policies such the Respectful Work and Learning Environment (RWLE). In addition, most students who received our assistance were referred to Equity Services for further support. Students who went on to work with Equity Services sometimes continued to use our services in tandem as they resolved their concern.

## 

The goal of the Student Advocacy office is to resolve matters at the lowest level possible (i.e., seek informal resolution involving those people most closely connected to the issue). Table 4 provides the details of our issue resolution patterns, which are comparable to the previous year.

In 2008-2009, the majority of issues (67\%) were resolved informally. Of those resolved informally, most students were given general advice and information. The advocates made requests on behalf of students, or mediated a concern in nearly one-third of these cases. When students are given information or advice, there is less work involved on the part of the advocate, whereas if the advocate needs to mediate or make a request on behalf of a student, more time is involved. As previously noted, there is a significant trend of increased amounts of work and time the advocates spend on student cases. Significantly more direct intervention was required on the part of the advocate in resolving matters at an informal level compared to last year (i.e., $18 \%$ of issues last year vs. $29 \%$ of issues this year). In approximately $1 \%$ of the issues resolved informally, students were referred to other services, or their issue was not further pursued.

Formally resolved issues comprised $32 \%$ of the total number of issues in 2008-2009. This is slightly less than in the previous year. As with the trend of last year, most of the formal resolutions resulted in the students' requests or appeals being granted. Some resulted in denials and others resulted in modified resolutions. We consider a resolution to be 'modified' when a compromise or alternative outcome was reached between what the student was asking for, and what the faculty granted the student. An example of this would be where a student was requesting a Authorized Withdrawals (AW) but was instead granted retroactive Voluntary Withdrawals (i.e., there was not sufficient documentation or grounds for an AW, but the circumstances warranted an academic concession). In $5 \%$ of the formallyresolved issues, the final decision was pending at the end of the reporting year.

The remaining few formal resolutions (1\%) were categorized as follows: student withdrew their formal appeal or request ( 3 issues) and student retained a lawyer ( 4 issues). As compared to the previous year, more students chose to work with a lawyer on their issue ( 1 student in 2007-2008).


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In 2008-2009, advocates attended a total of 195 meetings. This includes both academic and discipline meetings. This represents a significant increase in the total number of meetings attended in the previous year (127 in 2007-2008). We define meetings as being at a lower level and less formal in terms of procedures and number of decision makers involved. One explanation for this increase is related to an increase of 31 more academic discipline issues seen by our office. Such issues always involve a meeting at the preliminary stages (i.e., with a Department Head). Another reason for the higher number of meetings could be attributed to the advocates attending more academic meetings with students. We noted that an increasing number of Associate Deans are recommending a student contact our office prior to attending a meeting with himi/her to discuss matters related to academic progress in a program or course.

The advocates attended a total of 129 hearings. This includes both academic and discipline hearings that usually involved a committee and formalized procedures. The number of hearings represents a slight increase from the previous year ( 120 hearings in 2007-2008).

## Trends

Figure 2 displays the trends for academic meetings and hearings in 2008-2009. In keeping with the expected trend, the number of academic hearings tended to peak in September, January, and May, coinciding with beginning/end of academic sessions. These may include students appealing decisions pertaining to academic status (i.e., suspensions, required to withdraw), or requesting AW's following an unsuccessful term or year.
Academic meetings are less common. As with previous years, these meetings tend to increase during the mid-term period (in 2008-2009 they peaked in March, and again in October). Academic meetings are normally arranged to discuss student progression in a program, or in a course, and may include discussions of debarment from a course.


Figure 3 displays the trends for discipline meetings and hearings for 2008-2009. The general trend of discipline meetings and hearings remained the same from the previous reporting year. The trend being that there are usually more discipline meetings than hearings. A discipline meeting would normally include the first level of an investigation of a discipline matter. A discipline hearing would take place if a student appealed a decision made by a lower administrative level. Having more issues resolved at a meeting is consistent with our office's approach of resolving matters at a lower level if possible.

There were significantly more discipline meetings compared to 2007-2008. For example, advocates attended 104 discipline meetings with students last year, and 150 discipline meetings with students this year. The frequency of discipline meetings tended to peak toward the end of each term in 2008-2009 (November/December and April/May). Discipline hearings were consistently infrequent throughout the year, with the highest numbers taking place in September and June, a trend that was different for discipline hearings in 2007-2008, which peaked in April/May.


In general, and as seen in our data from previous reporting years, the numbers of meetings and hearings for both discipline and academic matters tend to follow administrative and teaching 'cycles' within the University. Institutional activities and timetables such as application, registration, holidays, examination, assessment and admissions all strongly correlate with the trends in our office's attendance and involvement at meetings and hearings.

## Tige eederdelics

Approximately $67 \%$ of the contacts made by students (who had a case file opened), were referred to us from another on-campus office (please see Figure 4). This is comparable to the previous year. The main referral source was from a faculty ( $49 \%$ of all referrals), followed by referrals from other Student Affairs offices ( $23 \%$ of all referrals). The next most common referral came from academic departments
(1.1\%). The higher percentage of referrals from academic departments can be attributed to more academic discipline issues seen by our office (as most academic discipline matters originate from the department level). The other two main referral sources were friends and family ( $9 \%$ ), and from our own outreach efforts (4\%). Student Advocacy outreach includes workshops and orientations and website. Referrals from our outreach efforts increased slightly from last year.


## 

The staff prepared and presented a total of 59 workshops and orientations to several different audiences including $U$ of $M$ students, parents of students, staff, and instructors/ faculty. This is consistent with the previous year ( $\mathrm{n}=60$ ). Table 5 provides a breakdown of the types of educational outreach that was done in 2008-2009.
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Academic Integrity Week is an annual event hosted by Student Advocacy that involves a week-long focus on, and promotion of, academic integrity. Integrity 12 activities and events included:
" Academic Integrity booths (set up in University Centre and other locations across the University). At the booths, students were encouraged to enter a prize draw by completing an integrity quiz.
" Student presentation entitled Know your University's Expectations as part of the International Centre for Students Skills for Success series.
» Academic Integrity Quiz Show- A new event in which we hosted a game show with student participants who answered questions about academic integrity, in order to win prizes. This was held in the Fire Place Lounge (University Centre). We were fortunate to have various units and Faculties across campus sponsor prizes for this event.

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## Peers: Students Helping Students (SHS)

Peers: SHS is a program funded jointly between Student Affairs and the University of Manitoba Students' Union. Heather Morris continued as Program Administrator and Chair of the Steering Committee. Angela Kennedy continued in the student position of Program Coordinator, working in the Peer office and coordinating the student volunteers.

The program had another successful year in 2008-2009. There were 17 volunteers who contributed a significant amount of time toward the program and provided a valuable peer-to-peer support service on campus. Eleven offices and programs on campus provided placement opportunities for the volunteers to apply the communication skills learned in training, and continue to help fellow students.

## Academic Integrity in High Schools

This outreach project began in 2007-2008 with funding from the $U$ of $M$ Major Outreach Award program. In the current reporting year, staff worked on researching academic integrity programs foi high schools which are offered by other post-secondary institutions in Canada. Brian Barth worked on creating a survey to be administered to high school teachers and administrators to determine academic integrity teaching practices in secondary schools. This is an ongoing project that will carry over into the next year.

## Strategic Program Developiment Fund

Last year, Brandy Usick and Miriam Unruh, (Learning Assistance Centre), received funding for Multimedia Project: Creating Web Resources for Students. The funds were used to purchase Articulate software, laptops, and hardware. Staff began creating interactive multi-media tutorials (for online use) on topics such as requesting Authorized Withdrawals and submitting Final Grade Appeals.

## Virtual Learning Commons (VLC)

Nathan Kessler continued work to maintain the graduate community portion of this website. He developed a thesis template available for download on the VLC.

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» Brandy Usick and Heather Morris co-instructed an online course offered by Centre for Higher Education Research and Development (CHERD) entitled The Role of Student and Student Needs, in October 2008. This is a required course for the web-based program "Certificate in University and College Administration."
» Heather Morris continued work with Marlene Pomrenke (Student Counselling and Career Centre) on their research project on social workers and careers in Student Affairs. Student Affairs staff across Canada, who were also social workers, completed an online survey and results were presented at 2 national conferences.
» Brandy Usick was the Central Representative for the newly created professional organization CAISJA (Canadian Academic Integrity and Student Judicial Affairs), a division of the Canadian Association of College and University Student Services, and worked with the other CAISJA executive members to promote and help build membership in this division.

## Publications and Presentations

» Morris, H. \& Pomrenke, M. (2009, June). Social Workers in Student Affairs: Experiences of Canadian Colleagues. Canadian Association of College and University Student Services conference, University of Waterloo, Waterloo, ON.
» Pomrenke, M. \& Morris, H. (2009, May). Intersecting Social Work and Student Affairs. Canadian Association of Social Work and Education, Carleton University, Ottawa, ON.
» Usick, B., Martin-Strong, M., \& Juliano, G. (January 2009). What you need to know as academic staff about the new student discipline by-law. Path to Pedagogy, 17(2), pp. 10. University Teaching Services, University of Manitoba.

## Sedssis

Valentina Ly continued as a part-time student in 2008-2009 working mainly at the front desk and helping out with various office projects. Kaleigh Strath was hired as our summer student for 2009.

Marcel Peloquin was a volunteer with Peers, and completed his Peer placement in the Student Advocacy office. Angel Therrien and Ali Wood provided training for the placement.

The Student Advocacy office and Disability Services worked together to offer a field placement opportunity for a Social Work student. Avram Sarbit completed his field placement, as part of the requirement for his Bachelor of Social Work degree, under the supervision of Heather Morris and Carolyn Christie/Roslyn Gaetz (Disability Services). All staff participated in training Avram in various aspects of Student Advocacy work.

## Committee Work

Student Advocacy staff are committed to playing an active role in Student Services, Student Affairs and University committees. Staff participation is summarized below:
" Brandy Usick was involved with Council of Student Affairs (COSA), Faculty of Graduate Studies Guidelines and Policy Committee, Student Services Research Meeting (Chair), Student Affairs Research Group, and Student Leadership Task Force and Program Design Subcommittee, and Student Affairs Orientation (Passport to Success).
» Brian Barth continued to be a member of the $U$ of $M$ Joint-Research Ethics Board.
» Staff were also involved with selection committees including: Disability Services Sign Language Interpreters (Brandy), ACCESS Program (Ali), and Student Affairs Participation Award Committee (Ali).

## Professional Development

Student Advocacy staff are committed to participating in educational opportunities that lead to the development or enhancement of skills or provides reflection of our services. The following are highlights:
» Heather and Ali attended CACUSS conference at University of Waterloo, Waterloo, ON (June 2009).
» Brandy completed two on-line courses; Introduction to Emerging Technologies and Open Educational Resources.
" Ali audited the Administrative Law course taught by Karen Busby in the Faculty of Law.
» Brian participated in training for NTree Point (to assist with website maintenance).
» Brian completed a Mandarin language course at University of Winnipeg.
» Heather completed Level 3 French through the Louis Riel School Division Continuing Education program.
" All staff attended Student Affairs Professional Development day (March 2009).
" All staff attended the annual Student Advocacy and Resource Services Staff Retreat held at the St. Norbert Arts Centre (May 2009).

Staff also attended sessions offered by various units on campus including Student Affairs, and Learning and Development Services.

## Staff Outreach

Staff also participated in programs and events for the $U$ of $M$ community, as well as the Winnipeg community. For example, Disability Services Access Awareness Day, United Way Rainbow Auction, Holiday Hampers coordinated through Financial Aid \& Awards, Evening of Excellence, Info Days, Parents' Program, University 1 Orientation (Meeter and Greeter), Campus Beautification Day and Sneaker Day.

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## High School Outreach

Over the next academic year, Student Advocacy plans to
Over the next academic year, Student Advocacy plans to
administer the web survey that was created for high school teachers and administrators in the Winnipeg School divisions. This will allow us to receive more formalized feedsions. This will allow us to receive more formalized feed-
back on academic integrity education and programming that exists and how Student Advocacy may be of assistance in these educational areas.

## Multirmedia

The staff will utilize the training received on the Articulate software to develop and implement interactive tutorials for common student requests. These tutorials will be available on the Student Advocacy website for students to access.

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## Acir

The Student Advocacy staff would like to acknowledge all those who continue to work collaboratively with our office and make referrals to us as a way to help students become informed of their rights and responsibilities and to receive preparation for impending meetings or hearings. This includes Associate Deans, Department Heads, Academic Advisors, front-line office staff, and fellow Student Affairs offices.

## 

Contacts - students or staff who contact the Student Advocacy office with questions or to arrange an appointment with an advocate.

Issue - a matter in which a student is seeking assistance (e.g., concern, complaint, appeal, etc.). An "issue case" applies when there is an overall issue affecting a large number of students.

Cases - a case file is opened for a student to follow a particular issue/request/appeal.

Group Case - a group of students contact the office with the same issue.

Category - the way in which issues are classified or grouped.

## In memoriam: Dr. Ralph Gordon Stanton

Dr. Ralph Gordon Stanton, Distinguished Professor, Computer Science, passed away on April 21, 2010, in St Boniface hospital, of cardiac arrest, at the age of 86 . He was an active academic to the end, having published works that have not yet appeared in print, and taught classes up until 2009. He had announced his upcoming retirement for July 1, 2010, but only due to doctor's orders. He was not a man to give up working willingly.

He was born on October 21, 1923, in southern Ontario not far from Guelph. He received a B.Sc. (Honours Mathematics and Physics) from the University of Western Ontario in 1944, and both an M.Sc. and Ph.D. in Mathematics from the University of Toronto in 1945 and 1948. He chose to move to Kitchener-Waterloo to work on a planned expansion of Waterloo College that would include co-operative education. The expansion soon became the fledgling University of Waterloo, now regarded as a premier institution in Canada, and Ralph's energy and efforts played a significant role in the early development. He was recognized as the founder of the Faculty of Mathematics and was awarded a Founder's Medal for his contributions. He moved to the University of Manitoba in 1970 to establish the Computer Science department, and he served as its first Head until 1989.

Ralph's list of honours and awards is extensive. He was named a Distinguished Professor in 1984, and became a Killam Laureate in 1985. He has received honorary doctorate degrees from the Universities of Newcastle (Australia), Queensland, Natal, and Waterloo. He received merit awards for research at the University of Manitoba in 2000 and 2004.

He founded not only Faculties and Departments, but conferences and research institutions as well. He was instrumental in the creation of the Southeastern Conference on Combinatorics, Graph Theory, and Computing, now one of the largest conferences in this area in the world. Shortly after arriving in Manitoba, he began hosting the Manitoba Conference on Numerical Mathematics and Computing. Utilitas Mathematica Publishing was started in the early 1970s, publishing conference proceedings in Mathematics and scientific computing. The Charles Babbage Research Centre, a registered charitable organization, was set up to promote workshops and conferences and facilitate the publication of research. The Institute of Combinatorics and Its Applications (ICA) is internationally recognized, with members worldwide, and annually presents awards recognizing leadership and ongoing research in Combinatorics and related areas of Mathematics.

He was a prolific researcher, with well over 300 publications. (The exact number cannot be given, because they are still appearing.) He supervised 13 PhD students, three of which are currently faculty members at the University of Manitoba.

Everyone who knew him has a "Ralph story" to tell. At Waterloo, Ralph was legendary for wearing gaudy ties, and this later inspired students to drape a gigantic pink tie over the MC building on its opening in 1968, which became the un-official mascot of the faculty. One student recalls a certain class where the midterm was particularly poorly done. Ralph separated the returned exams into piles (A's, B's and others). The others were swept off the desk into a waste basket at the side where we had to pick them out. This was highly motivating, no doubt. He had a
prodigious memory and his lesson on the works of Alexander Pope consisted of reciting, from memory, all 1300 heroic couplets of the Essay on Criticism. He played competitive duplicate bridge and achieved Life Master status. He remembered every bid and card played and his knowledge of probabilities made him an almost faultless player.

He was devoted to stamp collecting, books in general and Portuguese literature in particular. His collection of 4500 titles was donated to the Fisher Rare Book Library at the University of Toronto where it is now known as "the Stanton Collection".

He was a good friend to many people, and lived life to the fullest. He asked for little more than a shelf of good books, his stamp collection, a little good food, and some congenial company. He will be remembered, and missed.

208 Administration Building Winnipeg, Manitoba Canada R3T 2N2 Telephone (204) 480-1408 Fax (204) 275-1160

May 28, 2010

TO: Richard Sigurdson, Dean, Faculty of Arts Lori Wallace, Dean, Extended Education Division
FROM: Joanne C. Keselman, Vice-President (Academic) \& Provost leunallunlme SUBJECT: Implementation of B.A. Integrated Studies

At its meeting of 14 May 2010, the COPSE Council approved our proposal for the establishment of the B.A. Integrated Studies program.

Because this new program requires no additional financial resources, I hereby approve its implementation with effect from September 2010.

On behalf of the University, I extend congratulations to all those who have worked so hard to design this innovative program. I look forward to hearing of its development and success in the years ahead.

[^1]
## GENERAL

On May 17, it was announced that the University of Manitoba would receive up to $\$ 10$ million over seven years for a Canada Excellence Research Chair (CERC) in Arctic Geomicrobiology and Climate Change. This CERC was one of 19 chairs awarded across the country to 13 universities. Premier Greg Selinger announced, at the same time, that the province would award $\$ 3.5$ million to support the CERC at the University of Manitoba. Dr. Clayton H. Riddell also announced a gift of $\$ 2.5$ million for the addition of a floor to the Wallace Building, where the CERC team will be housed. The floor will be named the Nellie Cournoyea Arctic Research Facility, in honour of Nellie Cournoyea, an Officer of the Order of Canada and the first female premier of a Canadian territory: she was the leader of the Northwest Territories from 1991 to 1995 . In all, the $\$ 10$ million CERC is expected to leverage an additional investment of over $\$ 25$ million over its seven-year period from the University and its partners. The total investment of over $\$ 35$ million will be used to create and allow access to world-class research space for Arctic research as well as to provide support for faculty positions, graduate students, postdoctoral fellows and research associates.

The chair holder is Søren Rysgaard, professor and head of the Greenland Climate Research Centre at the Greenland Institute of Natural Resources. He will join the team of 17 researchers already involved in sea ice research in the Clayton H. Riddell Faculty of the Environment, Earth, and Resources on April 1, 2011. Thanks to the efforts of our Public Affairs group, the media coverage of this event was excellent, including extensive coverage in the Winnipeg Free Press and in Maclean's Magazine.

A few years after the possibility was first identified, construction at the University of Manitoba on the new home field of the Winnipeg Blue Bombers and the University of Manitoba Bisons is set to begin. At the official sod-turning on May 20, the project's many partners spoke to its potential as a recreational and athletic resource for our community, while providing a world-class facility for our teams. The new facility is scheduled to open for the start of the 2012 CFL season.

The University marked the falling of another domino on May 28, when a groundbreaking ceremony signaled the start of construction of the Art and Research Technology Laboratory (ARTLab). The project includes more than $\$ 18$ million from the Province and a $\$ 15$ million investment under the federal government's Knowledge Infrastructure Program. I was joined by Premier Greg Selinger and MP Rod Bruinooge, chair of the Conservative Post-Secondary Education Caucus, acclaimed Canadian artist Ivan Eyre (a graduate of the University and honorary co-chair of the Taché Arts Complex Campaign) and Paul Hess, Director of the School of Art to mark the construction of the 70,000 square foot facility for art, multimedia and design. Debbie McCallum, Vice-President (Administration) hosted the event.

Work is continually underway to advance the priorities articulated in the University's Strategic Planning Framework, which was approved about a year ago. Prevailing as an outstanding employer by providing our exceptional and dedicated staff with leadership, growth and development opportunities is the fourth strategic priority articulated in the University's Strategic Planning Framework and we are set to pursue an Outstanding Employer Initiative, under the leadership of Rosalyn Howard, Director, Learning and Development Services. Plans are being developed for broad based community involvement to transform this priority into specific actions.

The graduation and Convocation season has now concluded and during this time, we had the opportunity to recognize the achievements of hundreds of new graduates at the undergraduate and graduate levels and the accomplishments of many of our outstanding staff and faculty, and to honour the outstanding contributions of six new honourary degree recipients. The University of Manitoba community also had the opportunity to officially welcome Harvey L. Secter as its newest Chancellor at his installation on June 1.

## ACADEMIC MATTERS

- John Wiens, Dean of Education, has been appointed to the Premier's Advisory Council on Education, Poverty and Citizenship. The Advisory Council will focus on four key areas to reduce poverty including: education, jobs and income support; safe and affordable housing; strong, healthy families and accessible social services.
- Michelle Lobchuk, Nursing, received an Excellence in Professional Nursing Award from the College of Registered Nurses of Manitoba.
- Zana Lutfiyya, Education, was nominated for a Manitoba Access Awareness Award by the Disabilities Issues Office (DIO) Province of Manitoba in recognition of Manitoba Access Awareness Week (MAAW) and for her dedication to creating or enhancing opportunities for participation by people with disabilities.
- The Faculty of Architecture is pleased to announce that Dead on Arrival Faculty Journal was awarded the Manuela Dias Book Design of the Year Award. The Manuela Dias Book Design Award is based on the overall design of the book, which includes artistic merit, innovation of form, quality of production values and appropriateness to the intended market.
- This year there were 355 registrations in courses offered by English Language Programs, representing a $27 \%$ increase over the same period last year and 120 registrations in the May offering of the new, English as an Additional Language for Newcomers Program.
- Yvonne Halden, Graduate Student Advisor for City Planning, Landscape Architecture and Interior Design is one of ten internationally who has been selected for the 2010-2012 Class of Emerging Leaders for the National Academic Advising Association (NACADA). NACADA promotes and supports quality academic advising in institutions of higher education to enhance the educational development of students.
- David Tang, Science student alumnus, was awarded the Let's Talk Science National Site Coordinator Award. This award recognizes the site coordinator who has made an outstanding contribution by demonstrating excellence in leadership through innovation, site development, effective communication, and contributions to science outreach and science literacy. Under Tang's leadership, Let's Talk Science, based out of the Faculty of Science, created new partnerships with Rossbrook House, the Aboriginal Head Start Biomedical Youth Program and the Boys and Girls Clubs of Winnipeg, bringing Science awareness to young people from disadvantaged groups and providing meaningful volunteer experiences and opportunities to university students, primarily from the Faculty of Science.
- On May 28, 2010, the Let's Talk Science Partnership Program at the University of Manitoba organized the All Science Challenge, a science competition for middle school students. The All Science Challenge is an enrichment event meant to inspire students in middle school to acquire science knowledge beyond their curriculum.


## RESEARCH MATTERS

- Dr. Javier Mignone, Family Social Sciences, received an RH Award for his contributions in the area of social development and Indigenous health. His research has taken him from remote Indigenous communities in Canada and Latin America to rural villages in India. He is recognized nationally and internationally for his work on social capital (connections within and between social networks) as a determinant of health and well-being, in particular, as it relates to First Nations communities. He developed a related framework that has been adopted by the Assembly of First Nations and a measurement technique now used by researchers in the United States and Australia.
- Three graduate students were awarded Vanier Canada Graduate Scholarships, each receiving $\$ 50,000$ annually for three years to assist them during their studies. The three students are: Renée El-Gabalawy (clinical psychology), who is analyzing data to find out if there is a link between physical health problems and mental disorders and whether this has negative implications in men and women age 55-plus; Julia Gamble (anthropology), is seeking to better understand if and how our health in childhood affects our health as adults, by analyzing tooth enamel in the remains of a large Danish medieval population who experienced significant socioeconomic change; and Oleksandr Maizlish (mathematics), who is working on several approximation theory applications which can be applied to image processing. The Vanier Canada Graduate Scholarships recognize students who demonstrate leadership skills and a high standard of scholarly achievement in graduate studies in the social sciences and humanities, natural sciences and engineering, and health. 174 scholarships were awarded students across the country.
- Three researchers received funding totalling $\$ 380,500$ from the Brewing and Malting Barley Research Institute, Manitoba Conservation Districts Association (MCDA) and Manitoba Hydro. Project leaders are Marta Izydorczyk (food science), Kimberly Ominski (animal science), and David Barber (environment and geography). The projects include, respectively, the characterization and quantification of arabinoxylans in Canadian malting barley, beneficial management practices evaluation project (off-site watering systems), and ship time for a plume survey offshore of the Nelson and a post-doctoral fellowship linked to Francois Saurcier's model.
- Six health researchers received funding totalling $\$ 1,609,546$ from four sponsors: Canadian Cancer Society Research Institute, Canadian Institutes of Health Research, Manitoba Health Research Council, and University Medical Group. Project leaders are James Davie (biochemistry/medical genetics/cell biology), Jiming Kong (human anatomy /cell science), Grant Pierce (physiology), Benita Cohen(nursing), S. Driedger (community health sciences), Kevin Coombs (medical microbiology/internal medicine), and Rakesh Arora (surgery). The six projects cover the areas of cancer gene expression, ALS, effects of chlamydia pneumonia infection, building public heaith capacity to promote health equity, pandemic communication strategies and their effectiveness, influenza virus infection, and statin therapy and its effect on the natural history of bioprosthetic valves.
- Seven women who are staff and graduates of the University of Manitoba were honoured at the 34th Women of Distinction awards held on April 28. The YMCA-YWCA of Winnipeg presents the awards every year to recognize the outstanding contributions made by local women to Winnipeg, Manitoba, Canada and the world. Awardees were: Kim Clare (BSW/74) received the 2010 Eira Friesen Lifetime Achievement Award. This award recognizes those who help to create new opportunities for women and youth and promote international linkages through their volunteer work with local and provincial organizations. Patricia Martens (community health sciences and Manitoba Centre for Health Policy) received the Health and Wellness award for her project called The Need To Know Team, which facilitates the dissemination and application of research in health-care decision making. Karmin 0 , (animal science, physiology) received the Research and Innovation award which recognizes outstanding achievement in discovery and development in all fields of research, science, technology and environment. Marie Bouchard (MA/86) received the Arts and Culture Award; Janet Ingersoll (BSW/72) received the Business and Professions award; Linda Bulka (Med/02) received the Education and Training awardand Nancy Chippendate (BA/89) received the Creative Communications award. Nominees from the University of Manitoba were: Zahra Kazem-Moussavi (computer and electrical engineering), Elizabeth Ready (kinesiology and recreation management), Judith Chipperfield (psychology), Amber Skrabek (engineering) and Janet Sealey (arts).
- On May 4th the University of Manitoba Centre for Human Rights Research Planning Initiative (CHRRPI) held a day-long roundtable. Unfinished Business: Human rights issues in the 21st century was held in the Faculty of Law and was open to the public. It featured a series of seminars and speakers with topics revolving around issues concerning human rights. David Asper presented a lecture titled Wrongful Convictions and Human Rights"
- On May 18th and 19th the Office of Research Services presented a 2-day event titled May Days. The event consisted of a series of presentations to assist researchers in preparing their application for SSHRC. Topics included: Preparing a SSHRC Standard Research Grant, Building Partnerships for SSHRC, overviews of submission processes, SSHRC Selection Committee Comments, and Turning Your Luck Around: Getting Over the Dreaded "4A." All sessions were well attended.
- On June 2, the Canadian Institutes of Health Research - Institute of Gender and Health (IGH), presented to researchers and students on the role of the Institute in fostering research excellence regarding the influence of gender and sex on the health of women and men throughout life, and the application of these research findings to identify and address pressing health challenges. The session was led by Dr. Joy Johnston, Scientific Director of the IGH, Dr. Blye Frank, Chair of the IGH Advisory Board, and Vice-Chair, Dr. Joan Bottorff.
- On June 2, the IGH co-hosted a Café Scientifique with the Office of the Vice-President (Research) at McNally Robinson Grant Park. The café was titled Mind the Gap: Does gender make a difference for health policy and practice? Panelists were Randy Fransoo (community health sciences and Manitoba Centre for Health Policy), Margaret Haworth-Brockman (Prairie Women's Health Centre of Excellence), and Maureen Heaman (nursing, and CIHR Chair in Gender and Health). The moderator for the discussions was Dr. Joy Johnston from IGH.


## ADMINISTRATIVE MATTERS

- Phase 2 of the ROSE project, the Design Phase, has been underway for the past three months with significant engagement from more than 400 University of Manitoba staff. Work streams were assembled to optimize specific processes and develop pilot approaches in selected areas. The findings of the "As Is" assessments have given stakeholders, participants and the project team an improved understanding and appreciation for the University of Manitoba's current processes and have highlighted some strengths to build upon. A number of different opportunities were also discovered to streamline processes, improve service and reduce costs which teams have been designing revised processes through participation in the "To Be" sessions.
- Joanne Keselman and Debbie McCallum sent an e-mail to all-employees on May $28^{\text {th }}$ that provided a detailed update on the recent work completed as well as a summary of the opportunities that the University has begun to act on, as well as some anticipated benefits. The complete e-mail can be found on the Resource Optimization Web Site http://www.umanitoba.ca/admin/rose/2174.htm which is regularly updated.
- Deans, Directors and Administrative Unit Heads have been provided an updated communication toolkit designed to assist leaders who want to provide face-to-face updates about ROSE.
- Regular updates from all streams are being provided to both the Operating and Steering Committees which provide opportunity for questions and discussion. The Change Management team has also developed a network of staff from the units who will be provided regular updates and will meet regularly to discuss impacts, share information and ask questions which will help the change management and communication teams partner for effective communication, learning session and support materials.
- Budget Development - The 2010-2011 operating budget and financial plans for all other fund types (Research and Special, Capital, Trust and Endowment) were approved by the Board of Governors (BoG) on May 18, 2010. This is the first year that an aggregate plan for all funds was presented to the BoG. The 2010-2011 Operating Budget was developed on the basis of a $2 \%$ base grant increase and a $5 \%$ tuition increase for all programs. Following notification from the Council on PostSecondary Education (COPSE) regarding tuition and base grant increase levels, the general operating revenue and expenditure projections were refined to reflect updated information and 2009-2010 actual experience resulting in a projected shortfall of $\$ 6.2 \mathrm{M}$. In order to address this shortfall and create a reallocation pool to meet the University's most critical needs and strategic priorities, a baseline reduction of $3.25 \%$ was applied to most units' basic budgets (net of any income target). In addition, baseline funding for the Extended Education Division was reduced by $\$ 500,000$. The long term strategy is to make Extended Education fully self-supporting subject to further discussions with the Dean. The University will draw down $\$ 4,115,000$ from the Specific Provisions in order that fiscal only funding can be provided in 2010-2011 to support one-time costs and assist units transition to reduced baseline funding.

Special fee increases for a number of professional programs were forwarded to COPSE for consideration. However, the approved operating budget did not presuppose approval of professional program fees. At the time of writing, we have not yet received a formal response from the Council. Any fee increases approved by COPSE will be forwarded to the Board for approval.

- Year End Activities - Staff in both Financial and Treasury Services spent significant time preparing year end entries and completing the draft financial statements which have now been submitted to the Board of Governors for approval. This took tremendous effort on the part of the staff involved as they were simultaneously heavily engaged with ROSE workshops.
- The 13th annual Campus Beautification Day took place on May 27, 2010. Approximately 1200 staff, students, faculty and retirees participated by planting flowers and trees, pulling weeds, raking, sweeping, picking up litter etc. This highly popular event provides an opportunity for staff, students and retirees to work together to beautify the campus instilling a sense of pride in the University. The signature project for Campus Beautification Day was the planting of raised planters along Curry Place. This was the largest, single planting project, ever undertaken by volunteers. A noon hour barbeque featuring a "low waste" lunch sponsored by ARAMARK was held in the quadrangle on the Fort Garry Campus and in front of the Brodie Centre on the Bannatyne Campus. The Book Store and other campus businesses donated "door" prizes for the event. The grand prize of two airline tickets was donated by West Jet.
- The fifth annual Awards of Excellence reception was held on May $20^{\text {th }}$ and honoured the contributions and achievements of support staff. Their work is vital to the University and these awards formally recognize those whose contributions are outstanding. The following awards were presented this year:
o The President's Award:
Maggie Duncan, Equity Services Advisor
- Leadership Award:

Aarti Paul, IS Manager, Faculty of Medicine
Tina Riggs, Special Events Coordinator, University 1

- Service Awards:

Sol Chu, Web CT/Technology Trainer, Training Ctr. And Learning Management/Portal Erwin Dirks, Electronic Technologist, Electrical and Computer Engineering Henry Kunkel, Technician, Physical and Astronomy Allan McKay, Chief Technologist, Electrical and Computer Engineering Eleanor Reimer, Library Supervisor, Fine Arts Tom Deakin, Utility Caretaker, Physical Plant

- Team Awards:

Psychology Support Staff Team
Aboriginal Student Centre Staff

- The search for a Chief Information Officer (CIO) (formerly Executive Director of Information Services and Technology) is underway. Caldwell Partners International has been retained to assist with the recruitment of potential candidates.
- The AESES Security bargaining unit have applied for the assistance of a provincial Conciliation Officer. The collective agreement will terminate on September 17, 2010.
- Risk Management Activities - Students from the Faculty of Education were scheduled to go to Thailand for a student exchange program. Given the tensions and unrest in Thailand, and after many phone calls, e-mails and updates between the Faculty of Education and the Director of Risk Management, the exchange program was deemed too dangerous to proceed and the project was cancelled.

The Director of Risk Management met with various internal and external stakeholders including Audit Services, Security Services, Environmental Health and Safety, University Insurers (CURIE and MARSH), Manitoba Liquor Control Commission, Manitoba Public Insurance, Canada Border Services and the City of Winnipeg Police Services to discuss and identify trends and potential risks that the University could face. A risk/hazard database will be established using Enterprise Risk Management evaluation tools (TeamRisk).

Work has also begun on the 2010 mass appraisal of the University of Manitoba buildings, contents and library collections as required by American Appraisal.

- Physical Plant was successful in attaining the Certificate of Recognition (COR) recertification. The Construction Safety Association of Manitoba though a self-audit and verification review process determined that the University of Manitoba Physical Plant Department continues to meet the necessary documentation, observation and interview requirements of the COR National Standard (Manitoba).
- A design for the Smartpark New Event Centre is complete and the tenders closed on May 26. Four bids were received and are presently under review. The proposed construction start date is June 2010 and a proposed completion date of March 2011.
- The Tim Hortons at Brodie Centre won the Western Canadian Award for the best managed Kiosk this year. The staff at this location received $\$ 5,000$ as an award.
- The University of Manitoba Starbucks continues to be one of the most successful in Canada as it is measured for Customer Services, Average Check Sales and overall Store Standards as set out by Corporate Starbucks.
- Outreach Pharmacist Meera Thadani, University Centre Pharmacy, received the 2010 Award of Merit from the Manitoba Society of Pharmacists for outstanding contribution to the profession of pharmacy and outreach activities.
- Residences
- A total of 1,663 applications have been received for this fall with 710 returning and 953 new.
- The Pembina Hall relocation project is now complete.
- In the month of May, Arthur Mauro Residence was at $100 \%$ capacity for its summer lease rooms. University College residence for summer lease was at $74 \%$ capacity for the month of May.
- The University Club Wrap-Up is complete. All outstanding debts have been paid and all University Club bank accounts closed. Some used furniture/equipment has been sold to Degrees, St. John's College and Aramark. Some pieces of equipment are being kept for future use by the University, and the remainder of goods will be assessed and sold to a used restaurant equipment dealer. \$16,500
has been recovered through equipment and small wares sales. Total overall expenses: \$95,973.42 that includes the outstanding demand loan of $\$ 63,000$. This is significantly less than the $\$ 190,000$ requested as compensation for closing the Club from June to November 2010.
- A 'mini-domino' effort is underway to relocate the Centre for Higher Education and Development, University Teaching Services, Learning and Development Services, and Geography. The goal is to have all units relocated by September 2010.
- Public Affairs worked with Creswin Properties Limited to organize and host a media event on May $20^{\text {th }}$ to mark the sod-turning of the new stadium. Public Affairs provided organizational, logistical and media relations support for this event. The construction fence is now up around the site and preparation for excavation has begun.
- Refresh Everything Campaign - The office of the Associate Vice-President Administration is submitting applications for an online grant program that supports projects which "are intended to improve communities and will make the world a better place." Winners are based on an online voting process.
- Plans are underway to convert Rooms 205-207 University Centre into restaurant space offering a full-service lunch-time dining experience. A menu has been developed by Daryl Lucyk of Aramark Services. The space will be renovated over the summer and an October launch date is planned.
- Eureka Project/Smartpark - The formal separation of eureka project from Smartpark has a target date set for on or about July $1^{\text {st. }}$. New marketing materials have been developed and a Board of Directors established with two representatives from the University and six representatives from the business community.
- Duff Roblin Fire Recovery Update - Re-occupancy of the East side is now scheduled for August 2010 for Psychology and Anthropology. The West side re-occupancy date is still tentatively scheduled for September 2011. The trailers will be modified for dry lab use for Biological Sciences once Psychology has re-occupied Duff Roblin. Human Anatomy and Physiology courses will be taught in the trailers, meeting the needs of nearly 2,000 students. Slight modifications will be required (safety audit) and a move-in date of August is anticipated for September term. The rental of the warehouse has been extended to August 31 ${ }^{\text {st }}, 2010$.
- Debbie McCallum presented to the 2010 CAUBO conference in St. John's, Newfoundland Lessons Learned from Two Major Campus Fires with Terry Sullivan from McMaster University. She also presented on Business Process Redesign (ROSE) with the Vice-President Finance at the University of Calgary.
- The construction of the Pembina Hall Residence is on schedule. The site has been boarded and piling/caisson pouring is now complete. Construction will begin on the steel superstructure in midJuly. Pembina Hall is now closed. Aramark has moved operations to University Centre and Residence Life has moved their offices over to Arthur Mauro Residence. The former University Club space will be re-purposed for study/lounge space for residence students. Mary Speechly Residence is also closed over the summer months to reduce pedestrian traffic in that area as the superstructure is built over Pembina Hall.
- The Manitoba Marathon Super Run will be routed around the Fort Garry Campus for the first time this year (June $20^{\text {th }}$ ). Organizers are also using the Welcome Centre as the main communications hub for the event. Communication will be sent out to the campus community prior to the event to notify staff and students that University Crescent, Sifton, Dysart, Saunderson and Freedman will be temporarily closed from 7:15 a.m. until 8:20 a.m. (the campus will still be accessible, but limited and controlled for that period only).


## EXTERNAL MATTERS

- Total funds raised as of June 7, 2010: \$1,940,516.49
- The 2009/2010 Annual Report to Donors was mailed out to University of Manitoba donors and stakeholders during the week of June 7, 2010 with an online edition at: umanitoba.ca/giving impact/
- A university-wide council has been formed to encourage collaboration, consultation and the sharing of ideas among alumni association staff and representatives from faculties, schools, libraries, colleges, extended education, student recruitment, housing and student life, international relations, international centre for students, recreation services/active living, Bison sports, public affairs, development and advancement services. The council will be chaired by the executive director, alumni association/director of alumni affairs, and will meet three times a year. The inaugural meeting of the council is on June 21, 2010.
- The University of Manitoba's Homecoming 2010 will see two centennials (human ecology and geological sciences) and sixty class reunions [medicine (9), home ec/human ecology (17), agriculture (7), architecture(2), education (1), integrated education/human ecology (1), commerce (2), dentistry (1), dental hygiene (1), engineering (7), law (4), music (1), pharmacy (4), phys ed (1), science (2). Additional reunions include a multi-year Bison men's basketball team reunion and a 50 -year judo club reunion. Almost all of the reunions will be held during Homecoming.
- Development and Advancement Services participated in a national survey of donors in March 2010, a partnership of 55 prominent not-for-profit organizations across North America and Cygnus Applied Research, Inc., a Hamilton-based firm specializing in donor research. Cygnus covered the full cost of this project and all partners received the results free of charge. Respondents in Manitoba accounted for $8 \%$ of the total survey responses. Some of the key findings in Canada showed that donors:
- prefer to give to charities that provide measurable results;
- are increasingly influenced by the cost-per-dollar raised; and
- have reduced support of charities that over-solicit.

New trends also indicate that donors are moving away from national and umbrella groups and are instead supporting local charities where they can see their gifts at work. When compared to U.S. donors, Canadians prefer to make at least one gift online, whereas Americans tend to give by mail. Mail is predominantly preferred by donors over age 35, while younger donors want to have online forms of giving available.

- External Relations on Bannatyne and Public Affairs organized a media conference on May 11 attended by federal health minister, Leona Aglukkaq and provincial health minister, Theresa Oswald, among others, to announce new funding to expand the Northern and Remote Family Medicine Residency program.
- Six MPs from the Federal Conservative's Post-Secondary Education Caucus, including Chair Rod Bruinooge, MP Winnipeg South, visited the Fort Garry Campus on May 17. The caucus is comprised of MPs who have universities in their ridings. The group toured the Richardson Centre for Functional Foods and Nutraceuticals in Smartpark, the ISIS lab in engineering and took a brief walking and driving tour before attending the CERC announcement.


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## MEMORANDUM

Date: 25 May 2010
To: Jeff LeClerc, University Secretary
From: John (Jay) Doering, Dean, Faculty of Graduate Studies
Re: Medicine's Graduate Students


During the last meeting of Senate on 19 May 2010, some conflicting information arose regarding the number of graduate students studying in units housed within the Faculty of Medicine, i.e., Biochemistry and Medical Genetics, Community Health Sciences, Human Anatomy \& Cell Science, Immunology, Medical Microbiology, Pathology, Pharmacology \& Therapeutics, Physician Assistant Education, Physiology, and Surgery. Data from the Office of Institutional Analysis, dated 1 March 2010, indicates there are 328 graduate students studying in these units and that there are 3301 graduate students in the Faculty of Graduate Studies. Therefore, graduate students studying in these units account for $9.9 \%$ of the graduate student population.

I would appreciate if you could bring this to the attention of members of Senate to clarify the record.

## 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 Kevin Coombs will be the Speaker for the Executive Committee for the June meeting of Senate.

## 2. Nominations to the Senate Committee of Nominations

The report of the University Secretary on the Senate Committee on Nominations is attached. Members of the Senate Committee of Nominations are nominated by the Senate Executive Committee and elected by Senate (See recommendation below).

## 3. Comments of the Executive Committee of Senate

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, 2013:
a) Dean Jay Doering (Senator) (Re-appointment), representing Architecture \& Engineering
b) Professor Yuewen Gong (Senator) representing Law, Pharmacy \& Environment, Earth, and Resources
c) Professor Marie Edwards (Senator) (Re-appointment), representing Nursing, Social Work \& Student Affairs

Respectfully submitted,
Dr. David Barnard, Chair
Senate Executive Committee
Terms of Reference:
http://umanitoba.ca/admin/governance/governing documents/governance/sen committees/477.htm
/mb

## Vacancies on the Senate Committee on Nominations

At the July 1977 meeting of Senate, Senate approved without debate the following area representations for the Senate Committee on Nominations. The representation was amended in July 1991 to include the Libraries, and again in June 2005 to include the Clayton H. Riddell Faculty of Environment, Earth and Resources. The membership at May 5, 2010, is as follows:

1. Agriculture \& Human Ecology Carla Taylor* to 2012
2. Architecture \& Engineering
3. Arts
4. Science
5. Law, Pharmacy \& Environment, Earth and Resources
6. Medicine \& Dentistry
7. Education \& Kinesiology and Recreation Management

Sandra Kouritzin* to 2012
8. Management \& Extended Education Malcolm Smith to 2011
9. Music, Fine Art \& Libraries Karen Jensen to 2012
10. Nursing, Social Work \& Student Affairs

Alarie Edwards* to 2010
11. Students (2)
(note: student terms end October 14)

| Atnatyos Hailu | to 2010 |  |
| :--- | :--- | :--- |
| Brian Latour | to | 2010 |

* denotes member of Senate at time of appointment

The terms for Jay Doering, David Collins and Marie Edwards, will end on May 31, 2010. Consequently, replacements are required for the following areas for the term June 1, 2010 to May 31, 2013.

1. Architecture \& Engineering
2. Law, Pharmacy \& Environment, Earth and Resources
3. Nursing, Social Work \& Student Affairs

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 the members' terms are ending, the replacements will have to be members of Senate at the time of election to the Senate Committee on Nominations.

Report of the Senate Committee on Approved Teaching Centres with Respect to CrossRegistered Courses and Instructors for 2010-2011

## Preamble

1. The terms of reference for the Senate Committee on Approved Teaching Centres (SCATC) are found on the web at: http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/494.htm2.
2. Since last reporting to Senate, the Senate Committee on Approved Teaching Centres has considered the lists of proposed courses and instructors as submitted by William and Catherine Booth College (WCBC), and Prairie Theatre Exchange (PTE) for crossregistration with the University of Manitoba in 2010-2011.

## Observations

## 1. William and Catherine Booth College

The attached list shows all cross-registered courses and proposed instructors as submitted by WCBC for the year 2010-2011. Approval has been received from appropriate departments in the Faculty of Arts.

## 2. Prairie Theatre Exchange

Attached is a list of the courses and instructors submitted by the Prairie Theatre Exchange for cross-registration at the University of Manitoba for 2010-2011. Approval has been received from the Department of English, Film, and Theatre for the courses and instructors proposed.

## Recommendations:

The Senate Committee on Approved Teaching Centres recommends THAT:
Senate approve the Approved Teaching Centre instructors and courses listed in Appendix A of this report.

Respectfully submitted,
Senate Committee on Approved Teaching Centres
/mb

## APPENDIX A: Senate Committee on Approved Teaching Centres, June 9, 2010

Cross-Registered Courses to be offered at ATCs for 2010-2011 with Proposed Instructors

| U of M Dept, School <br> or Faculty | Course <br> No. | WCBC | PTE |
| :--- | :--- | :--- | :--- |
| Faculty of Arts |  |  |  |
|  <br> Theatre | ENGL 1200 | Allyna E. Ward, Ph.D. |  |
|  | ENGL 1300 | Michael Boyce, Ph.D. |  |
|  | THTR 2170 |  | Heather Jordan <br> Stephen Sim <br> Hope Mclntyre <br> Brenda MacLean <br> Debbie Patterson <br> John B. Lowe |
| Psychology | THTR 2490 |  |  |
| Religion | RLGN 2160 | Roy Jeal, Ph.D. |  |
|  | RLGN 2170 | Roy Jeal, Ph.D. |  |
|  | RLGN 2730 | Roy Jeal, Ph.D. |  |
|  | RLGN 3780 | Roy Jeal, Ph.D. |  |
|  | RLGN 3800 | Donald Burke, Ph.D. |  |
| Sociology | SOC 1200 | Sherrie Steiner, Ph.D. |  |

## Report of the Faculty Council of Graduate Studies on Curriculum Change

## Preamble:

1. The Faculty of Graduate Studies has responsibility for all matters relating to the submission of graduate course, curriculum and program changes, and new graduate programs. Recommendations for new programs or changes are submitted by the Faculty Council of Graduate Studies for the approval of Senate.
2. The Faculty Council of Graduate Studies met on the above date to consider curriculum changes from the Department of Landscape Architecture, Faculty of Architecture.

## Observations:

1. The Department of Landscape Architecture, Faculty of Architecture, proposes curriculum changes to the M.Land.Arch. Program which include seventeen (17) course deletions, ten (10) course introductions, and a restructuring of the current program.
2. The current program was established in 1972 and the curriculum has undergone incremental changes over the years to respond to changes in the University, the discipline, the profession and the evolving societal context of landscape design.
3. The most significant change that has affected the M.Land.Arch. program is the recent introduction of the new landscape + urbanism option in the undergraduate environmental design program which supplies the main source of applicants to the M.Land.Arch. program.
4. Additionally, there has been a major societal shift towards greater environmental understanding and the need for different approaches to environmentally sustainable landscape design.
5. To date, students applying for the M.Land.Arch. without a design background have been required to take a pre-Masters program. These students have been ineligible for awards and have received no credential upon completion of the pre-masters.

The proposal calls for a lengthening of the current M.Land.Arch. program to three years which is in keeping with other 3 year first professional graduate Landscape Architecture degrees in Canada.
6. Students without a design background (e.g., a botany or geography bachelor's degree) would enter directly into the Masters program for 3 years. Students with a landscape design degree (e.g., Bachelor of Environmental Design (Landscape + Urbanism option) or a Bachelor of Landscape Architecture.) would be given advanced standing and may enter into the final year. This could allow them to complete the coursework in their graduate degree in one (1) year (52-week, fourterm intensive degree option).
7. The proposal is based on current staffing resources and would result in net sum neutral credit hours. Implementation is expected for the 2010/2011 academic year, in time for the first cohort of students entering from the new undergraduate program in Environmental Design.
8. Rationale for the proposed changes are summarized as follows:
i. Reorganization of the accredited landscape architecture curriculum content in response to changes in the Bachelor of Environmental Design program. The new undergraduate curriculum in years 1 and 2 and the increased disciplinary content in the Landscape and Urbanism 3 and Landscape and Urbanism 4 curriculum has provided opportunities to restructure the graduate curriculum.
ii. Changes in skill requirements and the introduction of new knowledge and advancements within landscape architectural education and the profession that require modification of course content, focus, and delivery.
iii. The need to integrate the existing premaster program into the graduate program so that it is competitive with the other graduate landscape architecture programs in Canada and the U.S., particularly by addressing the duration of the program and increasing funding opportunities for students enrolled in the program.

## Recommendations:

THAT Senate approve the Report of the Faculty Council of Graduate Studies on Curriculum Change [dated March 9, 2010] regarding the Master of Landscape Architecture, Faculty of Architecture.

Respectfully submitted,

Dean J. Doering, Chair<br>Graduate Studies Faculty Council

## Department of Landscape Architecture, Faculty of Architecture

Note: "( )" indicates course credit hours

## (17) Course Deletions:

LARC 6140 Principles of Site Planning ( -3 )
LARC 6152 Computer Aided Design (-3)
LARC 7230 Professional Practice ( -3 )
LARC 6120 Process and Form (-3)
LARC 7170 Landscape Ecology in Design (-3)
LARC 7260 Landscape Architecture Since 1900 (-3)
LARC 7240 Research Methods in Landscape Architecture (-3)
LARC 7220 Historic Landscape Preservation (-3)
LARC 7130 Geographic Information Systems (-3)
LARC 7270 Landscape Architecture Construction (-3)
LARC 6160 Landscape Architecture Studio 1 (-6)
LARC 6170 Landscape Architecture Studio 2 (-6)
LARC 6180 Landscape Architecture Studio 3 (-6)
LARC 7190 Landscape Architecture Studio 4 (-6)
LARC 7200 Landscape Architecture Studio 5 (-6)
LARC 7180 Landscape Architecture Studio 6 (-6)
LARC 7210 Landscape Architecture 7 (-6)

## (10) Course introductions:

LARC 7020 Field Studies (+3)
A one- or two-week field study block course at the start of winter term or during mid-term break, co-requisite with winter term studios.

LARC 7040 Design Research (+3)
The focus is on critical review of the literature, the formulation of research methods appropriate to securing, analyzing, and interpreting of research in Landscape Architecture, and the examination of approaches to design as a mode of enquiry and research.

LARC 7002 Landscape Construction and Professional Practice (+3) Introduction, investigation and fundamental exercises in landscape design and construction documentation, and construction administration for landscape construction projects.

LARC 7300 Landscape Topics (+3)
A critical examination of an individual topical study of relevance to contemporary landscape architecture. This course will lead to the completion of a practicum or thesis proposal.

LARC 7310 Landscape Design Seminar 1 (+3)
A cross-cultural overview of significant discourses with an emphasis on the influence of critical design inquiry upon specific landscape interventions.

LARC 7320 Landscape Design Seminar 2 (+3)
An examination of the means by which ideas are expressed in and through design with a focus on modes of communication, representation and engagement.

LARC 7110 Landscape Architecture Studio 1 (+9)
An introductory study of structure and order within nature and the built environment.
Instruction in the principles of design, the basic elements of graphic and spatial composition, and the vocabulary and methods of approach to landscape architectural design within a variety of contexts.

LARC 7220 Landscape Architecture Studio 2 (+9)
An exploration of analytical, conceptual, and developmental aspects of urban public places in an experimental studio setting. An emphasis is placed on design as mediation between competing demands. The studio incorporates the application of threedimensional simulation technologies in design.

LARC 7330 Landscape Architecture Studio 3 (+9)
The study of design application of highly complex problem domains of the urban, suburban, townsite, or rural landscape.

LARC 7340 Landscape Architecture Studio 4 (+9)
Comprehensive design studio involving transition between larger scale planning/design proposals for an urban/regional area and site design; includes principles of spatial modeling.

## NET CHANGE IN CREDIT HOURS: 0

## PROPOSED CURRICULUM SEQUENCE:

Note: Students entering without a design background enter at year 1. Students entering with a design background may enter with advanced standing.
YEAR 1
Fall Term
Drawing Workshop (pre-term)
LARC 6150 LA Communication
EVLU 3002 Site Planning
EVLU 3000 History of Designed Environments
LARC 7110 LA Studio 1
Winter Term
Digital Drawing Workshop (pre-term)
EVLU 3004 Ecology + Design
EVLU 3010 Landscape + Urbanism Theory
EVLU 3012 Site Morphology + Grading
EVLU 3008 L + U Studio 4

TOTAL CREDIT HOURS: 36

## YEAR 2

Fall Term
[0] EVLU 4000 Philosophy, Ethics + Aesthetics [3]
[3] EVLU 4002 Construction Materials [3]
[3] EVLU 4008 Plant Ecosystems + Design [3]
[3] LARC 7220 LA Studio 2 [9]
[9]
Winter Term
[0] EVLU 4016 History of Landscape + Urbanism [3]
[3] EVLU 4018 Principles of Urban Design
[3] LARC 7040 Design Research [3]
[3] EVLU 4012L + U Studio 6 [9]
[9]
TOTAL CREDIT HOURS: 36

## YEAR 3

Summer TermLARC 7300 Landscape Topics[3]
Fall Term
LARC 7002 Landscape Construction and ..... [3]
Professional Practice
LARC 7310 LD Seminar 1 ..... [3]
Elective ..... [3]
LARC 7330 LA Studio 3 ..... [9]
or
LARC 7340 Studio 4 ..... [9]
Winter Term
LARC 7020 Field Studies ..... [3]
LARC 7250 LA Theory ..... [3]
LARC 7320 LD Seminar 2 ..... [3]
LARC 7040 Design Research ..... [3]
(if not taken previously)
LARC 7330 LA Studio 3[9]
orLARC 7340 LA Studio 4[9]
Spring TermGRAD 7000 Thesis[0]
or
GRAD 7030 Practicum

TOTAL CREDIT HOURS in degree: 42-111
(dependent upon advanced standing)

University<br>of Manitoba<br>Office of The<br>VICE-PRESIDENT (RESEARCH)<br>207 Administration Building Winnipeg, Manitoba<br>Canada R3T 2N2<br>Telephone (204) 474-6915<br>Fax (204) 474-7568<br>www.umanitoba.ca

## MEMORANDUM

TO: Mr. Jeff Leclerc, University Secretary
FROM: Digvir Jayas, Vice-President (Research) and Chair, Senate Committee on University Research

DATE: May 28,2010
SUBJECT: Proposal to establish an Endowed Research Chair in Hepatology
Attached is the proposal to establish the Endowed Research Chair in Hepatology. The VicePresident (Academic) and Provost, and the Senate Committee on University Research (SCUR), have endorsed this proposal, in accordance with the University's policy on Chairs and Professorships.

Please include this report and recommendation on the next Senate agenda. Please feel free to contact me should you require any further information.

Thank you.
DSJ/nis
Encl.

# Office of the <br> Vice-President (Academic) \& Provost 

January 11, 2010

To: . Digvir Jayas, Vice-President (Research)
From:
$\mathrm{Re}:$ Endowed Research Chair in Hepatology

Dr. J. Dean Sandham, Dean of the Faculty of Medicine, has provided a letter of support for the proposal to establish an endowed research chair in hepatology in the Department of Internal Medicine.

The policy on Chairs and Professorships specifies that:
(1) the chair be established consistent with the academic goals and objectives of the University;
(2) the chair be fully funded from external sources, rather that University operating funds, and that the funds be sufficient to cover the salary and benefits of the incumbent and provide for an appropriate level of unrestricted research/scholarly support;
(3) the funds for the chair be provided by way of an endowment or through a schedule of annual expendable gifts for a defined period of not less than five years, or by an appropriate combination of endowment and annual expendable gifts;
(4) the chair shall be attached to a department, faculty, school, college, centre or institute of the University, and have goals consistent with the unit to which it is attached;
(5) the establishment of the chair is not tied to the appointment of a particular individual;
(6) individuals appointed to the chair normally shall have the academic qualifications commensurate with an appointment at the rank of Professor; and
(7) the initial term of the appointment of the chair shall be 3-5 years, and if renewal is permitted, such renewal shall be subject to a successful performance review and the availability of funds.

The proposed chair in hepatology satisfies all of the above requirements. The funding for the chair shall be derived from a $\$ 3$ million endowment that shall be jointly established by the Health Sciences Centre Foundation and the University of Manitoba.

I am in support of the proposal from Medicine, and request that you present it to the Senate Committee on University Research for consideration and recommendation to Senate and then to the Board of Governors.

If you have any questions or concerns, I would be pleased to meet with you. /encl.
c. Dr. J. Dean Sandham, Dean, Faculty of Medicine

Dr. Dan Roberts, Head, Department-of mernal Medicine

University of Manitoba

Faculty of Medicine


January 5, 2010

Dr. Joanne Keselman
Vice-President (Academic) \& Provo'st
208 Administration Building
Fort Garry Campus
WINNIPEG, Manitoba

Dear Dr. Keselman:

RE: Application for Establishment of an Endowed Research Chair in Hepatology

Dr. Dạn Roberts, Professor and Head, Department of Internal Medicine, and Vice-Dean (Academic) Faculty of Medicine, has submitted an application for the establishment of an Endowed Research Chair in Hepatology. As outlined in the attached documents, this is a joint Chair with the Health Sciences Centre Foundation.

The Department of Internal Medicine, Faculty of Medicine and the Health Sciences Centre Foundation have major commitments to promote excellence in hepatobiliary disease research. To that end, they have committed a total of $\$ 3$ million to create an endowment to support establishment of this Chair.
UNIVERSITY OF MANITOBA
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grIICE OF THE PRESIDENT

The Faculty of Medicine strongly supports this endeavour. The establishment of an Endowed Research Chair in Hepatology will raise the research profile of the Department and the Faculty. The recipient of this Endowed Chair will provide leadership to the Department's research enterprise and play an important mentorship role for junior faculty members. .

Yours truly,


Kémim.coulc

Dr. Kevin Coomb<br>Associate Dean (Research)

JDS/KC:min

University of Manitoba

## Faculty of Medicine

 Department of Internal Medicine
## MEMORANDUM

## DATE: December 1,2009

TO:
Dr. K. Coombs
FROM:
Dr. D. Roberts, MD, FRCPC
Head, Department of Internal Medicine


## RE:

## Endowed Chair in Hepatology

Please find attached a copy of the proposal to establish an endowed Research Chair in Hepatology in the Depattment of Internal Medicine. This is a joint chair with the Health Sciences Centre Foundation. ! have attached a copy of the proposal and other related documents for your information.

The Chair in Hepatology will provide leadership, scholarship and mentorship in hepatology at the University of Manitoba, in. addition to the promotion of basic and translational research in Hepatobiliary research.

Your suppoit and approval of this submission on behalf of the Dean would be greatly appreciated. A letter of approval along with a copy of this proposal should be directed to the Vice-President of Academic.

Please let me know if you required additional information. We look forward to hearing from you soon.

DR'gs

[^2]
# This MEMORANDUM OF UNDERSTANDING effective the 21st day of February, 2008 

## BETWEEN:

# HEALTH SCIENCES CENTRE FOUNDATION 

## and

## THE UNIVERSITY OF MANITOBA

Notwithstanding any provision of this Memorandum of Understanding, the Health Sciences Centre Foundation and The University of Manitoba shall, at all times, operate in accordance with academic processes approved by the University Senate, and the academic freedom of its faculty members shall be maintained to the fullest extent.

## 1. PURPOSE

The purpose of this Memorandum of Understanding (MOU) between Health Sciences Centre Foundation and The University of Manitoba (hereinafter referred to as "Partners"), is to raise a minimum of $\$ 3,000,000$ to establish an endowed fund to support a Research Chair in Hepatology that will be a joint initiative between the Partners.

This MOU delineates the goal of this initiative, the financial contributions of each partner, gaidelines for each partner, the review and approval process to establish the Chair, terms of reference for the Chair and the ongoing monitoring of progress.

The role of the Chair will be to contribute significantly to the body of scholarship on Hepatology. The Partners will negotiate in good faith as to the duties of the Chair and the terms upon which the Chair is to be employed or otherwise engaged:

## 2. THE PARTNERS

A. The Health Sciences Centre Foundation promotes health care excellence by funding medical research and clinical projects to the benefit of the diverse communities served by the Health Sciences Centre.
B. The University of Manitoba is the province's premier post-secondary educational institution and its only research-intensive university. It is Western Canada's first university and was founded in 1877. The university has an errolment of approximately 24,000 undergraduate students and 3,000 graduate stadents. The university offers 82 degrees, 51 :at the undergraduate level. Most academic units offer graduate studies programs leading to master's or doctoral degrees.

## 3. FUNDING OF RESEARCH CHAIR IN HEPATOLOGY

The two partners will raise a minimum of $\$ 3,000,000$ to be held in their own organizations' endowment fund to fund a Research Chair in Hepatology.

The Health Sciences Centre Foundation currently has $\$ 1, T 00,000$ in an endowment fund that will be directed to establishing this Research Chairin hepatology.

The spending allocation from funds held by each Partner shall be used for the purposes authorized by this MOU. The investment, management and expenditure of all funds held by the University of Manitoba shall be in accordance with the University Investment Tnust (current policy attached as Addendum $A$ ); as amended from time to time:
a) The principal of the Fund held by The University of Manitoba shall be retained and administered by the University in accordance with the University Investment Trust.
b) The spending allocation shall be used for the purposes described in Article 2.
c) All appointments to the Chair will be conducted in accordance with the University policies on Academic Appointments (attached as Addendum B) and the Establishment of Chairs (attached as Addendum C), as amended from time to time.

## 4. PROSPECT CLEARANCE

Each Partner will agree on prospects to be approached by each Partner. Names of prospects are to be submitted to each Partner with an agreement on which partner will approach.

## 5. APPROVAL PROCESS FOR ENDOWED CHAIRS

Subject to the University's policy on establishing Chairs-and-Professorships a format proposal for an endowed Chair will be made by the appropriate Unit Head with approval by the Dean of the Facilty of Medicine and the Vice-President (Academic) in consultation with the Vice-President (Research): Endowed Chairs must be approved by the University Senate and, following recommendation by the Senate, the Board of Governors of the University.

The Senate Committee on University Research will make a recommendation to the Senate on the establishment of a Research Chair in Hepatology.
6. NAMING OF CHAIR

Should the Partiers, upon mutual agreement, wish to honour a donor, or at the request of a donor, the Chair may be formally named in accordance with University policy on Naming. of Chairs and Professorships (attached :as Addendum. C). The incumbent will acknowledge both Partners and, if applicable, the Donor(s) after which the Chair is named, in all publications, lectures, and any other activities supported throigh the Fund.

## 7. ACCOUNTABILITY

Each Partner will report annually on the status of their Fund to the other Partmer.
The holder of the Chair will provide an annual report of his/her teaching and research activities to the Dean of the Faculty of Medicine and the Head of the Department of Internal Medicine, where the Chair is housed. The Dean of the Faculty of Medicine will provide a copy to each Partuer for information.

## 8. CHANGE OF CTRCUMSTANCE

If circumstances change so that the entire amount of the funds required to support an. endowment fund for the Chair are not received by the Partners, the Partners will consult as to options available at that time.

The focus of the academic priorities may shift over time, and it may become impossible, inadvisable or impractical to apply the spending allocation from the endowed Fumd for the purposes set out above. If the University is of the opinion that a revised purpose is appropriate, the University shall exercise its discretion, in consultation with the Dean of Medicine, the Healit Sciences Cenire Foundation and, if applicable, the Donor(s) where possible, and use the spending allocation from the endowed Fund to the bestadvantage of the University for other purposes consonant with the spirit and intent of this agreement:

## 9. OBLIGATIONS OFTHEPARTNERS

In signing this MOU, the Parmers assume full responsibility for the administration of the ${ }^{-}$ fuinds held for the Research Chair within their organization.

## 10. CONFLDENTIALITY

The confidential information of each Partner is the exclusive property of that Paitner. The Partners agree that they have not and shall not acquire any rights title or interest in the confidential information of the other Parties. The Partners agree that any Partner. may at any time, upon written notification, request the return of confidential information.

Except as may be reasonably required for the purposes of performing this MOU, or as specified below, no Parmer shall, without the prior consent of the other Partner, disclose
in any manner whatsoever in whole or part confidential information of that other Partner to any other party, and shall take reasonable precautions to prevent its employees or agents from using or disclosing such confidential information.


HEALTH SCIENCES CENTRE FOUNDATION


THE UNIVERSITY OF MANITOBA


## EXECUTIVE SUMMARY:

In accordance with the procedures and mechanisms for establishing Chairs at the University of Manitoba, the following is presented:

## TYPE OF APPOINTMENT: Chair

NAME OF CHAIR: Endowed Research Chair in Hepatology

## PURPOSE AND OBJECTIVES OF CHAIR:

The Chair in Hepatology is a joint initiative between the University of Manitoba and the Health Sciences Centre Foundation. The Chair will provide leadership, scholarship, and mentorship in Hepatology. The specific objectives of the Chair will include:

- The promotion of basic and translational research in hepatobiliary disorders
o Enhance the competitiveness of the University of Manitoba at national and intemational peer reviewed fimding agencies sLich as CIHR, NIH, and Canadian Liver Foundation in the ärea of hepatobiliary disorders research:
o The establishment and sustenance of critical intramural and extramural links and collaboration that serve to promote research in liver disorders at the University of Manitoba
- Research in the area of hepatobiliary disorders will promote health care excellence and benefit the diverse communities. served by the Health Sciences Centre.
- The provision of mentorship and opportunities for young investigators embarking on careers focused on research and hepatobiliary disorders.
- The pursuit of research topics that will lead to cures or improved health for individuals with hepatobiliary problems, and to ensure that high -quality and timely care is available for Manitobans.


## RELATIONSHIP TO THE PROPOSNG UNIT <br> (Section of Hepatology, Department of Internal Medicine, Faculty of Medicine):

The Faculty of Medicine and the Department of Internal Medicine at the University of Manitoba the Health Sciences Centre Foundation have a major acidemic commitment to achieving the highest level of excellence in hepatobiliary disease research. Moreover, there exists within the Faculty of Medicine a number of excellent opportunities for state-of-the-art collaborative research between basic and clinical investigators focused on viral and immune mediated diseases and liver cancer. The proposed Chair would serve to
enhance research activity in hepatobiliary diseases and, in doing so, the overall research profile of the Department of Internal Medicine and Faulty of Medicine.
o By promoting basic, clinical and epidemiological research in Hepatology; the Section of Hepatology will meet its academic objectives of achieving excellence. in hepatobiliary disease research.

- The promotion of research excellence in Hepatology is highly congruent with the academic mission of the Department of Intemal Medicine and Faculty of Medicine at the University of Manitoba and the Health Sciences Centre Foundation.

The Chair will support an individual Clinician-Scientist by providing salary support and operating funds to pursue independent research in hepatobiliary diseases. This support ' will allow the recipient to maximize his/her research activity and effectiveness, as well as lead research activity in the Faculty in this strategically important area. Excellence of the candidate will be the first priority.

## THE METHOD BY WHICH THE CHAIR WLLL BE FUNDED;

Interest accrued for the initial endowment of $\$ 3,000,000 \div$

## FUNDING METHOD:

The Health Sciences Centre Foundation currently holds $\$ 1,000,000$ in an endowment fund that will be directed to establishing the Research Chair in Hepatology. The Health Sciences Centre Research Foundation has obtained and additional \$1,000;000 in funding. The Department of Internal Medicine has committed to fund a further $\$ 1,000,000$. This brings the current total commitment to $\$ 3,000,000$. Further fund raising will continue by the:University of Manitoba and the Health Sciences Centre Foundation to seek the balance of the money required through both private and industry support. It is anticipated that funding of the Chair would be from the interest accrued on this endowment.

The revenue generated from this fund will suipport a portion of the salary for the appointee as well as an appropriate level of unrestricted research support for the Chair in the form of operating funds.-In addition, opportumities to leverage these funds will be explored through programs offered by the CIFR.

## GENERAL AND SPECTFIC REQUIREMENTS FOR THE CHAIR

In accordance with the policy and procedures for establishing chairs at the University of Manitoba, individuals appointed to the Endowed Chair in Hepatology will have the following qualifications:

- Canadian citizen or permanent resident.
- Intemal Medicine specialist (FRCPC) with expertise in Hepatology
- Holding a current academic appointment at the rank of Professor.
- History of excellence in research as evidenced by a strong publication record in high impact journals and acquisition of national or international peer reviewed grants and contracts.
- History of mentoring junior colleagues and investigators.
- History of effective and productive collaboration with intramural and extramural investigators and institutions.


## TERM OF APPOINTMENT:

o The initial term of the appointment will be five years, biennial and final year progress report

- Internal mídterm evaluation
- The renewal of the appointment for an additional term(s) will be subject to a successful review of the incumbent's performance within the context of the Faculty of Medicine's research strategy, such a review to be carried out during the fourth year of the term.

A successfil performance review will provide evidence of the following:

- Personal research productivity in the form of external grants, presentations, and peer-reviewed publications. It is expected that funding from one or more national agencies would be expected along with additonal funding from local sources.
- Evidence of mentoring including having one or more full-time research trainees or supervison of clinical fellows in their research year.
- Evidence of publication in the range of 3-5 publications/year with 1 or more in a high impact journal.
- Evidence of linkages, collaboration and multi-disciplinary research within the University and between the University and other research institutions:


## PREAMBLE:

The Department of Internal Medicine at the University of Manitoba has become a major international influence in Hepatology research. A computerized database of patients with hepatobiliary-disease; established-in-1987. is-the-first-and one of the largest-in-North America. Its scientists have been recognized as world leaders in researching and treating. viral hepatitis, cirrhosis and liver cancer. Globally, the University of Manitoba leads all other centres in describing the impact of liver disease in Aboriginal Populations.

Research from the University of Manitoba, Section of Hepatology has shown that although Aboriginal people are more often exposed to the viruses that cause liver disease (Hepatitis A,B and C) they have an inherent ability to clear the virus and prevent long: term infections, more so than non-Aboriginal people. Laboratory studies to determine why that is the case, have revealed that the immune response of Aboriginal people to hepatitis viruses is stronger and more robust. The latter finding may also explain why Aboriginal people are more likely to develop immune-mediated diseases of the liver (additional findings from researchers in the Section). Once established, these viruses and
immune-mediated diseases of the liver will often progress to cirrhosis and liver cancer. Researchers in the Section have been successful in identifying the mechanisms whereby cirrhosis develops and are actively pursuing a yaccine that will prevent further scar tissue formation. Finally, Section researchers have identified that liver cancers have a different electrical charge than adjacent non-cancerous liver (more positively charged). Quite exciting are results of recent laboratory experiments in which changing the electrical charge from being positive to negative results in the cancer cells returning to a healthy, non-cancerous state.

Despite the above success, the Department lacks funding to recruit and support additional Hepatologists and scientists, who are needed to help continue the growth of the research program. As more researchers treat patients in clinics and hospitals, fewer doctors have the time to conduct research. To address these challenges, the Department intends to raise $\$ 3$ Million for a research chair in Hepatology, which will support the present staff and permit the hiring of two additional researchers. This initiative will also help the Department build on its achievements and secure its standing as a premier centre of Hepatology in North America.

The Section of Hepatology in the Department of Internal Medicine is committed to nurturing a staff of superb clinician and research scientists who will give Manitobans state-of-the-art care and establish leading research programs in hepatobiliary disorders including viral hepatitis, non-alcoholic steatohepatitis; autoimmone liver disease and cirthosis and liver cancer.

The Section of Hepatology has three fill-time clinician-scientists, and 17 research and support staff. The research group includes collaborators from the National Microbiology Laboratory (NML), Institute for Biodiagnostics, National Research Council, the Public Health Agency of Canada, Health Canada, the Cadham Provincial Laboratory and CäncerCare Manitoba. Its staff provides direct care to patients at the two University hospitals. The only Canadian postgraduate fellowship program. in Hepatology was launched in 1994. To date five Hepatologists have been trained.

The work being performed by the 'Section is helping to discover what causes hepatobiliary diseases and how to improve the lives of sufferers. For example, working jointly with National Research Council Institute for Biodiagnostics in Winnipeg, researchers will explore new methods of diagnosing liver and bile duct cancers. These will include applying magnetic resonance spectroscopy to patients with those liver disorders that place them at increased risk of developing bile duct cancer.

In addition:

- Dr. Gerald Minuk, Professor, has received a 5 year grant from Health Canada as a part of the International Polar Year (IPY) wherein his research team will. determine whether mutations to the hepatitis B virus are responsible for the development of cirrhosis and liver cancer in the Canadian Inuit population. The same study will also document whether individuals with occult hepatitis $\mathbf{B}$ infections are at.increased risk of developing these complications. Most recently,

Dr. Minuk has received separate grants'from Health Canada, PHAC and the Canadian Liver Foundation to determine. whether blue-green algae contamination of the country's drinking water is responsible in part for the increase in liver cancer rates nationally and the mechanism whereby those toxins could initiate carcinogenesis.

- Dr. Kelly Kaita, Associate Professor, is one of the country's foremost clinical trials investigators, having been at the forefront of identifying and applying new antiviral agents to Canadians with chronic hepatitis B and C infections.
- Dr. Stephen Wong, Assistant Professor, has been actively studying the mechanism whereby fatty infiltration of the liver causes liver disease and identifying unique therapeutic approaches to resolving the disorder.
- Dr. Julia Rempel, Assistant Professor, is responsible for having documented the immune response of Aboriginal individuals to the hepatitis C virus. Her work is particularly important with respect to developing a future vaccine for this virus.
- Dr. Julia Uhanova, Lecturer, has amalgamated six distinct databases to create the largest and most extensive viral hepatitis database on the continent. Her work will serve to document the prevalence of viral hepatitis in various ethnic populations, the natural history of the disease, effects of antiviral therapy and costs to the health care system.
- Dr. Yuewen Gong, Professor, has discemed the molecular pathways in the development of cirrhosis and identified target proteins for which effective vaccines are being developed.
- In the near future, the Section hopes to identify and recruit at transplant Hepatologist who will not only be involved in the management of pre- and posttransplant patients but also, develop an active research program around liver transplantation and related topics.
- Despite the above accomplishments, the Section presently lacks funds to support its research and clinical programs. The challenges are to recnit and retain top qualified Hepatologists and to maintain the quality of the program against the pressures of increased clinical demand.

In the past 10 years, the Section of Hepatology at the University of Manitoba has attracted more than $\$ 10$ million from granting agencies and contract research with industry. Presently, twelve research staff are employed from those grants.

Research findings from the Section have appeared in the New England Journal of Medicine, Lancet, Annals of Internal Medicine, Hepatology, Gastroenterology and other influential academic journals, as well as the international media: Although the accomplishments are significant, so are the challenges. Without dedicated funds for research, the program will suffer and risk loosing its :gifted scientists. A Chair in Hepatology that funds experienced researchers and new talent, will help maintain momentum and better serve Manitobans who rightly expect excellence from their health care system:

## OTHER PROVISIONS:

1) The selection and appointment of an individual to the Research Chair in Hepatology shall be conducted in accordance with section 2.2 of University Policy on Chairs and Professorships.
2) The duties and responsibilities of the individual appointed to the proposed Chair will be in accordance with section 2.3 of University on Chairs and Professorships
3). The Chair holder will have an appointment in the Department of Internal Medicine and some restricted clinical activity to ensure a clinical profile. Cross-appointment to an appropriate basic science department may also be considered. The Chair holder will participate in an appropriate amount of teaching activity, including undergraduate and post-graduate medical trainees and graduate students, where appropriate.
3) The role of the Chair will be to contribute significantly to the body of research and scholarship in the Department of Internal Medicine, Accordingly, the appointment of the Chair will be made by the Department of Internal Medicine and shall be conducted in accordance with the University policy in Academic Appointments and the guidelines or the establishment of Chairs.
4) It is understood that the Chair would be structured with a five year maximum term with an option of renewal subject to satisfactory performance of the incumbent, but also with the understanding that the research focus could be changed at such intervals according to the changing needs of the Department of Internal Medicine as determined by the Head, Department of Internal Medicine and subject to approval by the University of Manitoba, and the Health Sciences Centre Foundation.

## REPORT OF THE SENATE COMMITTEE ON AWARDS - PART B

## Preamble

Terms of reference for the Senate Committee on Awards 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 the policy on the NonAcceptance of Discriminatory Awards, such offers shall be submitted to Senate for approval. (Senate, October 7, 2009)

## Observations

At its meeting of May 10, 2010 the Senate Committee on Awards reviewed one amended offer that appears to be discriminatory according to the policy on the Non-Acceptance of Discriminatory Awards.

## Recommendations

The Senate Committee on Awards recommends that Senate and the Board of Governors approve one amended offer, as set out in Appendix A of the Report of the Senate Committee on Awards - Part B (dated May 10, 2010).

Respectfully submitted,
Dr. Philip Hultin
Chair, Senate Committee on Awards

## Appendix A

## MEETING OF THE SENATE COMMITTEE ON AWARDS

May 10, 2010

## 2. AMENDED OFFERS

## NFL / Budweiser Recreation Services Aboriginal Student Development Award

The following amendments have been made to criterion (1) of the terms of reference for the NFL / Budweiser Recreation Services Aboriginal Student Development Award.

- The required course load has been changed from: at least $80 \%$ of a full course load to: at least $60 \%$ of a full course load.
- The eligible programs have been expanded from: Recreation Management and Community Development to: any undergraduate degree program offered by the Faculty of Kinesiology and Recreation Management.

University ar Manitoba

## Faculty of Kinesiology

 and Recreation ManagementMarch 10, 2010

102 Frank Kennedy Centre Winnipeg, Manitoba Canada R3T 2N2


To: Dr. Phil Hultin, Chair, Senate Committee on Awards

From: Dr. Jane Watkinson, Dean


RE: Letter of Support for changes to NFL/Budweiser Recreation Services Aboriginal Student Development Award

Please accept this letter of support from the Faculty of Kinesiology and Recreation Management, who at the October 27, 2009 meeting of the Undergraduate Awards Committee passed a motion to make changes to the NFL/Budweiser Recreation Services Aboriginal Student Development Award.

The requested changes are intended to expand the number of undergraduate students in our Faculty who would be eligible to receive the award. Currently, the award is available to Aboriginal undergraduate students in the Bachelor of Recreation Management and Community Development only. As can be seen from the table below, figures from the Office of Institutional Statistics show the percentage of Aboriginal students in all of the Faculty's academic programs over the past five years has ranged from 1.0 to $2.0 \%$. Coupled with the other award criteria, the number of eligible students has been so low that the award was not even given out last year.

Your support of this request would be greatly appreciated as we work to enhance our Aboriginal student numbers and opportunities for financial awards and recognition of their contributions to our field and our Faculty.

Number of Aboriginal Students in the Faculty of Kinesiology \& Recreation Management as a Percent of University of Manitoba Students 2005-2009

| 2005 | 2006 | 2007 | 2008 |  | 2009 |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| N | $\%$ | N | $\%$ | N | $\%$ | N | $\%$ | N | $\%$ |
| 17 | 1.0 | 21 | 1.3 | 33 | 2.0 | 24 | 1.4 | 34 | 1.8 |

45 Curry Place
Winnipeg, MB R3T 2N2

Phone: 204-474-8850
Fax: 204-275-3142
E-mail: asc@umanitoba.ca

March 24, 2010
Dr. Phil Hultin
Chair, Senate Committee on Awards
C/o Ms. Shannon Coyston
Awards Establishment Coordinator
422 University Centre
Dear Dr. Hultin \& Senate Committee;
Please accept this letter as formal support for the revised terms being proposed for the NFL/Budweiser Recreation Services Aboriginal Student Development Award. This award is designed to assist Aboriginal students studying in the Faculty of Kinesiology and Recreation Management.

The number of Aboriginal students attending the University of Manitoba continues to increase and, I believe, is partially due to the financial assistance made available through initiatives such as this. The NFL/ Budweiser Award is an example of a Faculty wanting to assist students pursuing an education in the Kinesiology and Recreation Management program.

The number of Aboriginal students reported in the Faculty of Kinesiology and Recreation Management has increased over the last 5 years but still reveals an under-representation of Aboriginal student participation. In 2003 when the award was first established there were only 12 self-identified Aboriginal students, or $1.3 \%$ of the Faculty undergraduate population. In 2009 the Office of Institutional Analysis has reported 34 self-declared Aboriginal students, or $1.8 \%$ of the Faculty population. Aboriginal Peoples represent closer to $12 \%$ of the Manitoba population and we need to continue to support initiatives that assist us in reaching a more equitable representation.

Offering a scholarship, such as the one being proposed by the Faculty is a great idea and one 1 would like to support. Kinesiology and Recreation Management is of growing interest in the Aboriginal communities and widely supported by our communities and our leaders.

I trust that the Senate committee will approve this scholarship and others like it, in the hopes of increasing the recruitment and retention of Aboriginal students in the Faculty of Kinesiology and Recreation Management.

In education, miiwetch!


University
of MANITOBA

[^3]
## Report of the Senate Committee on Instruction and Evaluation RE: Revisions to the Criteria for Degree with Distinction in the Faculty of Kinesiology and Recreation Management

## Preamble:

1. The terms of reference for the Senate Committee on Instruction and Evaluation (SCIE) are found on the web at: http://umanitoba.ca/admin/governance/governing documents/governance/sen committees/502.htm
2. The Committee met on the above date to consider a proposal from the Faculty of Kinesiology and Recreation Management to modify the criterion for calculating Degree with Distinction.

## Observations:

1. To date, the cumulative GPA calculation, which includes all courses taken by the student, has been used to determine Degree with Distinction.
2. The Faculty proposes that Degree with Distinction be calculated on the basis of degree GPA which includes only those courses that count towards the awarding of the degree.

## Recommendations

The Senate Committee on Instruction and Evaluation recommends:

THAT Senate approve the modification to the Degree with Distinction criterion in the Faculty of Kinesiology and Recreation Management to use degree GPA rather than cumulative GPA.

Respectfully submitted,
Dr. Karen Grant, Chair
Senate Committee on Instruction and Evaluation
/mb

## Report of the Faculty Council of Graduate Studies on Program and Curriculum Changes

## Preamble:

1. The Faculty of Graduate Studies has responsibility for all matters relating to the submission of graduate course, curriculum and program changes, and new graduate programs. Recommendations for new programs or changes are submitted by the Faculty Council of Graduate Studies for the approval of Senate.
2. The Faculty Council of Graduate Studies voted via e-mail on the above date to consider the following proposals from the Department of Statistics:

## The Department of Statistics, Faculty of Science:

i) Change to Course-based Comprehensive Route
ii) (2) Course Introductions

## Observations:

i) The Dept. of Statistics, Faculty of Science, proposes that its current Coursebased Comprehensive route be replaced by a Course-based route that does not require comprehensive examinations but does include a research project component.

The other Master's degree routes in the Dept. of Statistics currently include a Thesis option and Practicum option.

The Course-based option has historically been quite popular with Master's students; however, recently, the department has had very few students choosing this option (only one is currently in this stream). One possible reason for this is that of the six graduate degree granting universities in Canada with a Dept. of Statistics, the University of Manitoba is the only one that requires comprehensive examinations in the course-based stream.
Table 1 (Attach. 1) shows the options available at the University of Manitoba and at the other five Depts. of Statistics as well as some other Canadian universities with a combined Mathematics and Statistics department. A number of departments within the University of Manitoba also offer similar Master's programs, for example, most of the M.Eng. degrees.
ii) The Dept. of Statistics, Faculty of Sciences proposes the introduction of two courses, STAT 7310 Research Tools for Statistics (0), STAT 7320
Research Project in Statistics (3), which facilitate the program change noted in \#1 to remove the comprehensive examinations and replace them with the research project.

## STAT 7310 Research Tools for Statistics

This course provides instruction in the use of a number of tools required for graduate level research in statistics. Topics include instruction in various software such as LaTex, R, SAS, etc., as well as Library usage, presentation and communication skills. Course graded pass/fail.

## STAT 7320 Research Project in Statistics

This course will provide the student with practical experience in doing research in the statistical sciences. Students will be matched with a faculty advisor and carry out a research project. Deliverables include a final research report and a presentation to the department. Course graded pass/fail.

NET CHANGE IN CREDIT HOURS:

## Recommendations:

THAT Senate approve the Report of the Faculty Council of Graduate Studies on Program and Curriculum Changes [dated May 12, 2010] regarding the Department of Statistics, Faculty of Science.


Table 1. Comparison of Master's Programs at 6 Canadian graduate universities with Departments of Statistics.

| University | Department | Thesis Option | Course-Based Option | Credit <br> Hours | Project <br> Required | Comp. <br> Exams |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Manitoba | Statistics | Yes | Yes | 24. | No: | Yes |
| UT | Statistics | No | Yes | 24 | Optional | No |
| Waterloo | Statistics and Actuarial Scienices | Yes | Yes | 24 | Yes | No |
| UWO | Statistical and Actuarial Sciences | No | Yes | 24 | Yes | No |
| SFU | Statistics and Actuarial Sciences. | No | Yes | 30 | Yes | No |
| UBC | Statistics | Yes | Yes | 30 | Yes | No |
| Universities with combined Mathematics and Statistics Departments |  |  |  |  |  |  |
| Montreal | Mathematics and Statistics | Yes | Yes | 24 | Yes | No |
| McGill | Mathematics and Statistics | Yes | Yes | 24 | Yes | No |
| Alberta | Mathematical and Statistical Sciences | Yes | Yes | 18 | Yes | No |
| Saskatchewan | Mathematics and Statistics | Yes | Yes' | 30 | No | No |
| McMaster | Mathematics and Statistics | Yes | Yes | 30 | Yes | No |

Proposal from the Senate Committee on Admissions concerning a change in pre-requisites for admission to the Respiratory Therapy program in the School of Medical Rehabilitation to include Statistics 1000, Basic Statistical Analysis 1 ( 3 credit hours), in the list of pre-requisite courses

## Preamble:

1. The terms of reference for this committee can be found at: http://umanitoba.ca/admin/ goverance/governing_documents/governance/sen-committees/490.htm
2. At the January 21, 2010 meeting of the Department of Respiratory Therapy Advisory Council, a motion was passed to include Statistics 1000, Basic Statistical Analysis 1 (3 credit hours) in the list of prerequisite courses for admission to the Respiratory Therapy undergraduate program. Currently, REHB 2460 Statistics ( 3 credit hours) is included in the list of required courses for Year 2 of the Respiratory Therapy Program. It is proposed that course REHB 2460 be removed from the list of required courses in the Respiratory Therapy program in favor of adding an Introductory Statistics course to the list of pre-requisites.
3. This proposed change was approved by the School of Medical Rehabilitation council Executive on March 22, 2010. It is anticipated that the change would affect students being admitted in 2011.

## Observations:

Existing Pre-requisites

| Core Courses | University of Manitoba | University of <br> Winnipeg | Brandon <br> University |
| :--- | :--- | :--- | :--- |
| Introductory <br> Biology | BIOL 1020 and 1030 <br> BIOL 1000 and $1010^{*}$ | $1115-3$ and <br> $1116-3 * * *$ | 94.162 and <br> $94.163^{* * * *}$ |
| Introduction to <br> Psychology | PSYC 1200** | $1000-6$ | $82-160$ and 82- |
| Introduction to <br> Sociology | Soc 1200** | $1101-6$ | $90-154$ and <br> $90-155^{* * * * *}$ |
|  |  |  |  |
| Other Courses |  |  |  |
| Written English <br> Requirement | 3 credit hour course which meets the <br> University requirement for written <br> English $* * * * * *$ |  |  |

The following combination will also meet our requirements:

* The former Biology 71.123, 71.125, 71.100 \& 71.101
** The former Psychology 17.120 and Sociology 77.120
*** Biology 1111-1 or 1102-1
$* * *$ Biology 14.162 and 14.163 , or 94.160 and 94.161 , or 14.155 and 14.156
***** Sociology 90.130
******A list of acceptable courses may be found in the university General Calendar

[^4]
## Proposed Pre-requisites:

| Core Courses | University of Manitoba | University of <br> Winnipeg | Brandon <br> University |
| :--- | :--- | :--- | :--- |
| Introductory <br> Biology | BIOL 1020 and 1030 <br> BIOL 1000 and 1010* | $1115-3$ and <br> $1116-3^{* * *}$ | 94.162 and <br> $94.163^{* * * *}$ |
| Introduction to <br> Psychology | PSYC 1200** | $1000-6$ | $82-160$ and 82- <br> 161 |
| Introduction to <br> Sociology | SOC 1200** | $1101-6$ | $90-154$ and <br> $90-155^{* * * * *}$ |
| Basic Statistical <br> Analysis | STAT 1000 | TBA | TBA |
| Other Courses |  |  |  |
| Written English <br> Requirement | 3 credit hour course which meets the <br> University requirement for written <br> English |  |  |

The following combination will also meet our requirements:

* The former Biology 71.123, 71.125, 71.100 \& 71.101
** The former Psychology 17.120 and Sociology 77.120
*** Biology 1111-1 or 1102-1
**** Biology 14.162 and 14.163 , or 94.160 and 94.161 , or 14.155 and 14.156
***** Sociology 90.130
****** A list of acceptable courses may be found in the university General Calendar

1. It is felt that the addition of Statistics as a program pre-requisite would strengthen and reinforce the required mathematical skill level needed, and support the subsequent study of other courses such as REHB 2450 Research Methodology in Medical Rehabilitation. It would also serve to provide a background in statistics as it relates to the understanding of medical research and literature, relied on heavily in both the educational program and clinical practice.
2. The addition of statistics as a pre-requisite would lighten the academic load in second year respiratory therapy from 36 credits to 33 credits. This is considered to be a more manageable course load in a year which is still predominantly didactic in format.
3. Most registrants into the respiratory therapy program in recent years have been able to attain a transfer credit for the required Statistics course in Year 2, from a list of pre-approved courses. Indeed, over the last three years only three or four students each year have registered for REHB 2460 for the regular respiratory therapy program.

## Recommendation:

The Senate Committee on Admissions recommends that Senate approves the request for a change in prerequisites for admission to the Respiratory Therapy program in the School of Medical Rehabilitation to include Statistics 1000, Basic Statistical Analysis 1 (3 credit hours), in the list of pre-requisite courses, effective for the 2011 intake.

Respectfully submitted,
Dr. D.R. Morphy, Chair, Senate Committee on Admissions

## Report of the Faculty Council of Graduate Studies on New Programs

## Preamble:

1. The Faculty of Graduate Studies has responsibility for all matters relating to the submission of graduate course, curriculum and program changes, and new graduate programs. Recommendations for new programs or changes are submitted by the Faculty Council of Graduate Studies for the approval of Senate.
2. The Faculty Council of Graduate Studies met on the above date to consider a proposal between the Faculties of Engineering and Medicine.

## Observations:

1. The Faculties of Engineering and Medicine propose an M.Sc. and Ph.D. in Biomedical Engineering. Please review the:

- Program Proposal (Attach. A)
- External Reviewers' Report (Attach. B)
- Departmental Response (Attach. C)

2. The proposal includes two course introductions: BME 7010 Biomedical Engineering for Engineering Students (6) and BME 7020 Biomedical Engineering for Life Science Students (6).

## Recommendations:

The Faculty Council of Graduate Studies endorses the proposed M.Sc. and Ph.D. in Biomedical Engineering and recommends that it be forwarded to Senate for approval.


[^5]
## Course Introductions:

BME 7010 Biomedical Engineering for Engineering Students Cr.Hrs. 6
The goal of this course is to introduce human biological systems and human physiology. The emphasis of this course will be both theoretical and practical, with topics being divided into modular units consisting of lectures and labs. Each unit will provide lectures detailing the basic theoretical background of the topic area, followed by practical work in the labs. This course is designed for engineers and thus, its core focus is on human biological systems, human physiology and kinesiology. This course is highly interdisciplinary, with the units being comprised of material from multiple health related faculties and departments. Prerequisites: CHEM 1300, BIOL 1020.

BME 7020 Biomedical Engineering for Life Science Students Cr.Hrs. 6 $+6$
The goal of this course is to introduce engineering analysis techniques for application to human biological systems, in order to analyze biomedical data and solve biomedical problems. The emphasis of this course will be both theoretical and practical, with topics being divided into modular units consisting of lectures and labs. Each unit will provide lectures detailing the basic theoretical background of the topic area followed by practical work in the labs. This course is designed for students in the life sciences and thus, its core focus is on basic electronics instrumentation and signal and image analysis techniques, and their application to human biological systems. This course is highly interdisciplinary, with the units being comprised of material from multiple health related faculties and departments. Prerequisites: MATH 1210, MATH 1510, PHYS 1050, COMP 1010.

NET CHANGE IN CREDIT HOURS: +12

## Report of the Senate Planning and Priorities Committee on the proposal to introduce a Master of Science (MSc) and Doctoral (PhD) Program in Biomedical Engineering in the Faculty of Engineering

## Preamble

1. The terms of reference of the Senate Planning and Priorities Committee (SPPC) are found on the website at:
http://www.umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/508.htm, wherein SPPC is charged with making recommendations to Senate regarding proposed academic programs.
2. The Programs and Planning Committee of the Faculty of Graduate Studies (FGS) has the responsibility of reviewing new graduate programs and makes recommendations to FGS Council.
3. The FGS recommends that Senate approve a new Master of Science (MSc) and Doctoral (PhD) degree program in Biomedical Engineering (BME) in the Faculty of Engineering.

## Observations

1. The committee noted that this proposal has emerged out of five years of collaborative planning by the Faculties of Engineering and Medicine. The Faculties are proposing the introduction of a graduate level program in BME in the Faculty of Engineering. The proposal has emerged from consultations and needs assessment with the BME community in Manitoba, Canada and abroad.
2. The Faculty of Engineering has indicated that no new funds would be required to implement this proposed program. Specifically, the committee noted that the Faculty of Engineering has indicated that BME program would require four new academic staff at the rank of assistant professor. The Faculty has indicated that it has already hired two staff whose duties will include teaching in the program and has indicated that the Faculty of Medicine will provide the two other academic positions. In addition, the committee noted that an additional 1.5 FTE administrative and technical support staff as well as an additional $\$ 17,000$ for supplies would be required to the implement the program. The Faculty has indicated that it will provide these additional resources to meet these support staff and supply needs.
3. The committee noted that, after receiving some clarification from the Faculty of Engineering, the students from this BME program would be treated the same as all other graduate students at the University of Manitoba, competing for same scholarship funding until such time as alternate scholarship funding can be raised specifically for BME graduate students.
4. The committee noted that the proposal provided documentation which indicated that the University of Manitoba Libraries staff has reviewed the library resource needs for the proposed program. The report of the Director of Libraries indicates that the Libraries' journal collection can support the proposed graduate program in BME. However, the
monograph collection would need to be augmented with the addition of one-time funds of $\$ 5,000$ to bring the collection up to the desired level and continuing funds of $\$ 5,000$ to maintain this collection. The committee has been assured by the Faculty of Engineering that these costs will be borne by the Faculty of Engineering.
5. The committee noted that the Faculty of Engineering indicated that it could accommodate the additional equipment, student, instructional and office space requirements for the BME and there would be no additional funding necessary for space construction or renovation.

## Recommendation

The SPPC recommends THAT:
Senate approve and recommend to the Board of Governors that it approve the introduction of a new MSc and PhD Program in Biomedical Engineering (BME) in the Faculty of Engineering. The Senate Committee on Planning and Priorities recommends that the Vice-President (Academic) not implement the program until she is satisfied that there would be sufficient space and funding to support the ongoing operation of the program.

Respectfully submitted,

James Blatz, Chair<br>Senate Planning and Priorities Committee



University of MANitoba

Proposal (Revised version, R2):
Biomedical Engineering Graduate Program

## Prepared by:

Zahra Moussavi (Faculty of Engineering) in consultation with:<br>Joe LoVetri (Faculty of Engineering)<br>Ed Kroeger (Faculty of Medicine)<br>Stephen Pistorious (Faculty of Science)<br>Juliette Cooper (Faculty of Medicine)<br>Ed Shwedyk (Faculty of Engineering)

April 20, 2009
Last updated on June 15, 2010

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## A. PROGRAM DESCRIPTION

## 1. Rationale, objectives and features

I. Clearly state the rationale for the program.

Biomedical engineering (BME) is a rapidly growing area of research focus for many faculty members and their graduate students in a number of faculties at the University of Manitoba. Currently, there are many graduate students whose work involves the area of BME research but in the absence of a formal BME program, their degree is granted under one of the current existing UM programs (and thus not receiving the benefit of being appropriately recognized as biomedical engineering). In the absence of a specific BME program, not only is the work of these students not sufficiently recognized, but also, the existing complementary expertise in various relevant faculties is not made available to these students in a coordinated coherent manner. Additional benefits to the formation of a formal BME program include cooperative resource allocation, increased opportunities for research collaboration and research grant funding, providing a forum for the interaction of researchers with complementary BME research interests and strengthening of the stature of the University of Manitoba in a translationally strategic area of research activity.

As the needs for biomedical engineers is increasing rapidly, we need to rigorously educate our graduate students with a strong foundation in engineering, physics, chemistry, mathematics and biology to develop a core competency in a specific specialized area of the multifarious fields of biomedical engineering. Particular focus will be given to in-depth education in the bioengineering concepts related to physiological processes. The principal means of accomplishing these goals is through a comprehensive interdisciplinary curriculum, which begins with a critical understanding of biomedical engineering principles building towards state-of-the-art biomedical engineering research and development. In this domain, the program will build on the strong academic foundations of research expertise in several cooperating faculties.

BME research is extremely attractive to students who apply for a graduate program in the Faculty of Engineering and will expand opportunities for interaction with their peers in Medicine, Dentistry, Science, Animal Science and Pharmacy, to name just a few. Demand for BME graduate studies is high from engineering students but there is also an opportunity to recruit students from the life sciences, medicine. A formal graduate BME program provides an opportunity for strategic promotion of this area of research training to students both locally and national/internationally, and expand our current offerings in medical devices and clinical technologies through emerging interests in the clinical sector and hospitals.

## II. Clearly state the objectives of the program.

The principal objectives of the proposed BME Program, consistent with the needs of students and the international expectations of BME graduates, are:
(1) to provide a strong post-graduate curriculum, research training opportunities and educational infrastructure leading to M.Sc. and Ph.D. degrees in BME;
(2) to enrich the educational experience of students by fostering the collaboration of researchers in interdisciplinary BME research, course development, and joint supervision of students;
(3) to attract excellent students from around the world to the BME program.

## III. Indicate how the program fits within the research/academic priorities of the unit and faculty/school.

The Faculty of Engineering has made biomedical engineering one of its highest priorities for future research and training of graduate students. This is exemplified by the recent hiring of Dr. Arkady Major and Dr. S. Sherif in biomedical engineering area in the Department of Electrical and Computer Engineering (ECE). The department of Biosystems Engineering has also recently hired Dr. Jason Morrison, who has expertise in biomedical image processing. The Faculty of Medicine similarly, has made important contributions (including the development of patented technologies for medical diagnosis, treatment and the assistance of physically challenged individuals, analysis of lung sounds/digital stethoscope, gamma knife research and a variety of research collaborations with the NRC Institute for BioDiagnostics) and recognizes the potential for enhanced research opportunities in collaboration with Engineering and the WRHA through this initiative. The Faculty of Science has a strong (accredited) Medical Physics program at the Graduate level and is introducing a Medical Physics stream at the Undergraduate level. One of the courses within this program includes PHYS 3220 which covers topics of interest to both Medical Physicists and Biomedical Engineers and which a number of Engineers have taken in the past. In the past there has been significant collaborative research carried out by Medical Physicists and Biomedical Engineers. The creation of a BME program will facilitate and provide opportunities for graduate students from the faculties of Science and Engineering to collaborate on projects of mutual interest. This is essential if we are to make the best of the strengths of these diverse but collaborative disciplines.

As of Nov. 07, the University of Manitoba has allocated a Tier II CRC chair position for an international leader in biomedical engineering. This is a joint position between the two faculties of Engineering and Medicine. A candidate has been selected and the CRC application will be submitted to NSERC in fall 2008.

Prior to that, in 2007, the university also allocated a Tier I CIHR CRC for an international leader in gene expression in cancer cell progression, a Tier II CIHR CRC in the area of functional genomics/stem cell biology, and recruited two Tier II CIHR CRCs whose research is focused on neuro-oncology and on new cancer therapy development.

The above examples are clear indications of the University of Manitoba's commitment to biomedical engineering as one of its strategic priority areas.

## IV. Highlight novel or innovative features of the program.

The main innovative feature of this program is not its concept nor its content -there are many other similar programs in North America- but its functional design; the proposed program will be created not by the creation of a new faculty or department, but by the goodwill, combined strength, coordinated efforts and joint administration of the Faculties of Engineering, Science and Medicine. Another innovative feature of the proposed program is its admission's flexibility: the program will recruit students from a wide variety of backgrounds, and tailor each student's program by taking their particular background into account. This will result in a flexible, student-centered BME program that meets the degree objectives and accountability criteria of the institution.

## 2. Context

## I. Indicate the extent to which the program responds to current or future needs of Manitoba and/or Canada.

Canada spends more than $\$ 100$ billion on health care each year-more than $\$ 3,300$ per capita -with almost three quarters coming from public funds. In Manitoba the direct cost of health care each year surpasses $\$ 3$ billion. Support of this massive health care enterprise requires an active biotechnology sector that includes related industries as well as government and university research institutions. Manitoba has a good share of the Canadian biotechnology sector: the 2005 Manitoba Life Sciences Industry Directory lists 42 companies and 32 research institutes. A healthy supply of graduates from the new Biomedical Engineering Program will benefit the health care enterprise across the board, with students filling positions at any of the many research institutes, industries, and clinical institutions in Manitoba and across Canada. The development of a strong health/biotechnology sector represents an important priority for the Government of Manitoba.
II. What is (are) the particular strength(s) of the program? e.g. this program will be known for its strength in areas $A, B$ and $C$ in the discipline.

The Faculty of Engineering has approximately 84 faculty members who are organized into four departments: Biosystems (10), Electrical and Computer (30), Mechanical and Manufacturing (26), and Civil Engineering (18). There are also more than 300 graduate students and more than 30 technical staff in the Faculty. Several groups in the Faculty of Engineering are involved in biomedical engineering research, which is focused on several strategic areas. Faculty members engage in collaborative biomedical research with colleagues from several of local medical laboratories as well as with researchers from around the world. The biomedical application areas that engineering faculty members are currently working in and in which there is considerable strength are:

1. Biological Signal Processing
2. Biomechanics: Human Dynamics, Orthopedic mechanics, Rehabilitation
3. Biomedical Image Processing and Reconstruction;
4. Gait Analysis and Rehabilitation;
5. Telemedicine;
6. Robotics and Teleoperation;
7. Computational Neurosystems and Motor Learning;
8. Biophotonics;
9. Electrical biosensors, medical instrumentation, nano-technology;
10. Biochemical biosensors

Due to the multidisciplinary nature of BME, the above areas of research include members from the faculties of Engineering, Medicine and Science working together on specific research projects.

The relevance of other expertise to BME research in the Faculties of Medicine and Science is obvious, and the effective application of such expertise requires a vehicle such as the proposed BME program. The Faculty of Engineering also requires the complexity of relevant actual medical models for the application of their technologies as well as to enhance the BME educational component. The
development of a BME program is relevant to the Faculty of Science because of the mutually beneficial collaboration which can take place in areas of Biomedical Imaging, Treatment Optimization and Modeling. The clinical medical physicist often encounters clinical problems which the biomedical engineer who has access to a variety of laboratory resources could help resolve.

## III. What will outsiders know the program for in terms of areas of concentration or specialization?

We will advertise our strengths that we already possess in the research areas listed above, and by fostering new collaborations amongst the diverse faculty members involved in the program we will enhance our strengths and forge new research area. Areas of unique complementary strength include but are not limited to diagnostic biomedical signal processing, medical rehabilitation, haptic devices design, and medical imaging.

## IV. Indicate the extent to which the program extends or uses existing programs at The University of Manitoba as a foundation.

As previously stated, creation of the new Biomedical Engineering Program is not in itself the creation of new research programs or an expensive administrative unit. Many biomedical engineering research groups already exist at the University of Manitoba. Rather, the new program will be a formalization and systematic extension, including course development, of what is already happening on an ad hoc basis. This will give the students already involved in biomedical engineering research the enrichment of a broader formalized program and the formal recognition that their training deserves. It will also enable faculty members to collaborate more effectively, advertise these training opportunities appropriately.

## V. Indicate the extent to which the program enhances co-operation among Manitoba's universities.

By allowing and promoting adjunct appointments of faculty members from other Manitoban universities as appropriate, to the new Biomedical Engineering Program, we will thereby enhance the co-operation between Manitoba's universities such as University of Brandon, Biomedical research group in Science faculty and University of Winnipeg.
VI. Indicate the extent to which the program is likely to enhance the national/international reputation of The University of Manitoba.

The creation of a new Biomedical Engineering program that with the leadership involvement of the three largest relevant faculties, Engineering, Science and Medicine, for the benefit of the Institution broadly, will strengthen intra-institutional research connections, enable new research funding for collaborative research, and increase exposure to the research that our existing biomedical researchers are performing. It will lead to a more attractive environment for visiting international researchers (e.g., those who are on sabbaticals) as well as for student exchanges.

Viewed more broadly, the University of Manitoba will be enriched by the new graduate BME program in two ways: it will expand research and research funding. A multidisciplinary program such as the
proposed BME program inherently draws on several disciplines; hence expansion in BME research will also enhance the research of others in the participating departments and schools.

Furthermore, the total amount of money for health-care related projects and research is the highest in North America compared amongst engineering fields. The new BME program will allow existing and new faculty members to tap into these other sources such as Canadian Institutes for Health Research (CIHR), which typically has a funding budget of over $\$ 800$ million per year. This new option will enhance cross-university cooperation, and help create bridges between researchers in different departments. This enhanced research environment will positively affect the national and international reputation of the University of Manitoba.

## VII. Indicate where similar programs are offered in Canada and North America. (Tabular format).

In Canada there are many undergraduate and post-graduate BME programs. The following is a representative list:

## - McMaster University

New programs being initiated as part of the new McMaster School of Biomedical Engineering.

## - Dalhousie University

Department of Biomedical Engineering Dalhousie University offers both Master of Applied Science (M.A.SC.) and Ph.D. degrees in Biomedical Engineering. Qualified students will be accepted into the programs from undergraduate engineering programs, from honours mathematics and physical or biological science programs, as well as from clinical professional programs (M.D., D.D.S., D.V.M.). M.A.Sc. to Ph.D. transfer is available. Degrees Offered: M.A.Sc. - Biomedical Engineering; Ph.D. - Biomedical Engineering Research Areas: Biomaterials; Tissue Engineering; Biomechanics; Human Dynamics; Rehabilitation Engineering; Physiological Modelling; Medical Imaging; Drug Design; Hearing; Cell Mechanics; Cardio-pulmonary function; Dental Materials and Mechanics; Robotics

## - McGill University

The Department of Biomedical Engineering provides instruction and opportunities for interdisciplinary research in the application of engineering, mathematics, and the physical sciences to problems in medicine and the life sciences through M.Eng. and Ph.D. degree programs. Currently active areas include: neuromuscular and postural control, muscle mechanics, the vestibular system, oculomotor control, the auditory system, joint prosthetics, biomaterials, artificial cells and organs and medical imaging. Staff members are also active in more applied research related to the development of quantitative analysis tools and instruments for biomedical research. Areas of activity there include signal analysis, system identification, modeling, simulation and parameter estimation, image processing, pattern recognition, ultrasound and bio-robotics. Degrees Offered: M.Eng.- Biomedical Engineering; Ph.D.- Biomedical Engineering. Research Areas: Aerospace Medicine; Artificial Cells and Organs Engineering; Auditory Mechanics; Biomaterials; Biomedical Modeling Computer Applications and Instrumentation; Computers in Medical Education; Medical Imaging; Neuromuscular Control; Oculomotor and Vestibular Control; Orthopedic Biomechanics; Systems and Signal Analysis

- University of Alberta

Department of Biomedical Engineering. Degrees Offered: M.Sc.; Ph.D.

- University of Alberta/University of Calgary

The Biomedical Engineering Graduate Program is a coordinated graduate program in Biomedical Engineering for the Province of Alberta, offered jointly by the University of Calgary and the University of Alberta. This program establishes a Western Canadian centre of excellence in biomedical engineering graduate education and research by coordinating and consolidating the complementary research and teaching programs at these two universities. The unique design of this program has $U$ of $C$ and $U$ of $A$ sharing resources through core and elective courses taught over a high-speed video link, ensuring that students draw upon the expertise of researchers and instructors at both universities. Degrees Offered: M.Sc.; Ph.D. Research Areas: Bioinstrumentation and imaging; Clinical engineering; Rehabilitation engineering; Biomechanics and finite element modeling; Biomaterials; Systems physiology; Aerosols.

- University of Saskatchewan

College of Graduate Studies and Research, Biomedical Engineering Division. Degrees Offered: M.Eng.- Biomedical Engineering; M.Sc.- Biomedical Engineering; Ph.D.- Biomedical Engineering

- University of Toronto

Institute of Biomaterials and Biomedical Engineering. Program has been designed to accommodate students and researchers with varying interests, within the field of Biomedical Engineering. Students with backgrounds in physics, biology, medicine, engineering, or biotechnology are invited to apply. Degrees Offered: M.Sc., M.Eng. and Ph.D.

- University of Waterloo

Biotechnology \& Health Engineering Centre

- University of Western Ontario

Dept. of Mechanical and Materials Engineering and Dept. of Biomedical Engineering in the Faculty of Engineering Science and the Dept. of Medical Biophysics in the Faculty of Medicine. Research Areas: metered dosage inhalators; respiratory drug delivery; prosthetics; Application of first-and-second-moment turbulence closures for the prediction of complex engineering and biomedical flows. Degrees Offered: M.Sc. Ph.D.

## 3. Specifics

I. Indicate the credential (degree or diploma) to be granted a student on successful completion of the program.
M.Sc. and/or Ph.D. of Biomedical Engineering

Where a new credential is being proposed, provide:
a) Rationale for the name

NA
b) An indication of whether the credential is offered under the same name, similar or different names elsewhere (and if different, state why a new name is chosen)

NA
c) A list of those (individuals, groups, universities, organizations etc.) consulted in arriving at the new name

NA
d) An indication of whether accreditation for the new degree is required by an external body

There is no external accreditation required from the Canadian Engineering Accreditation Board for post-graduate engineering degrees.

## II. Describe the program under the following headings:

a) Admission requirements

Minimum admission requirements for the M.Sc. Degree Program in Biomedical Engineering: any 4year undergraduate degree from the Faculties of Engineering, Medicine or Science with a minimum CGPA of 3.0 in the courses making up the latter half of that degree program, or the Medical Doctoral degree from the Faculty of Medicine.

Minimum admission requirements for the Ph.D. degree program in Biomedical Engineering: any M.Sc. degree from the Faculties of Engineering, Medicine or Science with a minimum commutative grade point average (CGPA) of 3.0 in the last 60 credit hour courses of their program. Students with a Medical Doctoral (MD) Degree However may be admitted directly to a 3 -year full tuition Ph.D. program with the condition of passing a minimum of 24 credit hour courses. Students with an M.Sc. degree from disciplines other than Biomedical Engineering may be required to take extra courses being defined by the Admission Committee of the BME program. In exceptional cases, a student may seek approval from the Biomedical Engineering Curriculum Committee to transfer into the Ph.D. degree program from the M.Sc. degree program after demonstrating appropriate research aptitude and successful completion of all course requirements for the M.Sc. degree program.

It should be noted that the MSc or PhD in BME would not make the students eligible, on its own without a B.Sc. in engineering, to gain registration as Professional Engineers.

## b) Course requirements

## BME M.Sc. Program

Minimum Number of Required Credit Hours: 21 including the 6 credit hour course "BME for Engineers" or "BME for Life Science Students", and attendance and participation in the 0 credit hour biweekly BME seminar. Three courses can be taken at the 4000 level courses and the rest must be taken from 7000 or higher level courses.

BME Ph.D. Program
Minimum Number of Required Credit Hours: 18 including the 6 credit hour course "BME for Engineers" or "BME for Life Science Students" (unless the student is an M.Sc. graduate of this program, which in that case the minimum credit hours will be 12), and attendance and participation
in the 0 credit hour biweekly BME seminar. Two courses can be taken at the 4000 level courses and the rest must be taken from the 7000 or higher level courses.

## c) Graduate Program Supervision

Each student will have a graduate program adviser and a co-adviser assigned throughout the course of his or her studies as well as an Advisory Committee, whose members are designated by the BME Admission Committee by consultation with the student and his/her graduate program advisor. It will be the job of the adviser to guide the student through a research program that leads to the submission of a thesis.

## d) Thesis, practicum or comprehensive procedures and regulations

M.Sc. Thesis: Every student must write a thesis on his/her major research and follow the standard thesis defense process. The defense committee members will be defined by the BME Admission Committee by consultation with the student's graduate program advisers. The thesis defense is open to all faculty members and students.

Ph.D. Research Proposal: Students will be required to submit a concise research proposal (approximately 10 pages), in which the student identifies the areas of proposed study, and presents the pilot studies or literature review that he/she has done related to the proposal. This research proposal will be examined by the Advisory Committee, whose members are designated by the BME Admission Committee by consultation with the student's graduate program advisor. The Ph.D. research proposal must be submitted within the 12 months after enrollment in the program. If the research proposal is not approved by the Advisory Committee, the student will have a second chance to revise his/her research proposal and submit again within two months after the first trial. If the research proposal is not approved again, the student cannot proceed in the program.

Ph.D. Candidacy Exam: The student will be required to submit a candidacy paper (approximately 50 pages) written in the area of his/her approved thesis research proposal. The candidate will present an oral defense of his/her candidacy paper to the Advisory Committee. If a student passes the examination and has completed all other requirements for the Ph.D. degree, with the exception of the thesis and its defense, the student will be considered to have formally advanced to candidacy for the degree. If the student does not pass, he/she must redefend the initial candidacy paper or prepare, submit, and defend a new paper, as the Advisory Committee deems appropriate. Successful completion (pass/fail) of all of the prescribed elements is required within a period of time 9 months after thesis research approval and 9 months prior to graduation but no later than 5 years after enrollment in the program. If a student does not pass the Ph.D. Candidacy exam within the limits outlined above, his/her program will be terminated in the Ph.D. program. In such circumstances, the Advisory Committee may recommend that the student be offered a transfer into the M.Sc. program, with sufficient and stated time limits to allow the student to reasonably complete the requirements for that degree. The candidacy oral presentation is open to all faculty members and students.
Ph.D. Thesis: Every student must write a thesis on his/her major research and follow the graduate study standard thesis defense process. The Defense Committee members will be the same as those who evaluated the student's candidacy (student's Advisory Committee) plus an
additional member who is from outside the university. Thesis defense is open to all faculty members and students.

## e) Ability to transfer courses into the program

At the discretion of the BME Curriculum Committee, and on the recommendation of a student's Advisory Committee, the student may transfer courses into the BME Program. A maximum of 9 credit hours of courses are allowed to be transferred into a student's degree program.

## f) Other procedures and regulations specific to the program, but not covered above Supplemental Regulations

## Mandatory Courses

Two full courses (each 6 credit hours) are designed uniquely for the BME program to serve as bridging (introductory) courses for all the students who enroll in the program from the two main streams: Engineering or life science, either at the M.Sc. or Ph.D. levels. One will be "BME for Engineers" and the other "BME for Life Science Students".

Taking one of these two courses is mandatory. However, if a student enrolled in the Ph.D. program already has the BME M.Sc. granted from this program, they do not have to repeat either of these two courses. For students who are admitted into the BME program from other disciplines or other universities, the Curriculum Committee will assign one of these two courses as appropriate.

The two mandatory "BME for Engineers" and "BME for Life Science Students" courses (which are lecture and lab based courses) will provide fundamental cross-cutting knowledge necessary for a BME program. These courses will be designed on a modular basis with lectures on anatomy, biochemistry, kinesiology, biomedical instrumentation and measurement, biological signal analysis, and biomechanics, all with corresponding labs. While the two courses have many BME concepts in common, and if they are offered at the same semester they may share some modules, however, the "BME for Engineers" course will provide more background on human biology related topics, and the "BME for Life Science Students" course will provide more background on electronics, instrumentation and signal analysis related topics. In order not to impose extra work load on the various departments' faculty members who would provide the lectures and labs for these two courses, some basic background modules will be designed such that they fit in some sections of the existing courses, i.e. the students who take any of the two BME courses, may attend a section of one of the current regular anatomy courses for the anatomy module.

Students who enroll in the BME M.Sc. program from other disciplines may be required to take additional courses that will be defined by the BME Curriculum Committee. Students who wish to enroll in the Ph.D. program from other disciplines without an M.Sc. in Biomedical Engineering either from this program or from similar programs in other universities will be required to take an individually customized Pre-Ph.D. set of courses as an occasional student (OS) student, and upon successful completion of those courses they can apply to the Ph.D. program.

## BME Seminar

The seminar course will convene regularly throughout the term (defined by the Curriculum Committee). These seminars will require student participation (assessed) in various topics in BME. Every student is required to present at least once per year and the presentation should be based on
the research methods being taught in the mandatory introductory courses. Feedback will be provided to the student who is presenting by the attending faculty members and other students.

## Colloquium

In addition to the seminar course, each year students will be required to make a presentation during a one day colloquium for the BME program.

## BME Program Initiative Organization Chart

A committee chaired by the Dean of the Faculty of Engineering, and whose other two members will be the Dean's (or their appointees) of the Faculties of Science, and Medicine, will appoint a director from the Engineering Faculty for the BME program. The director will report directly to the Dean of Engineering. The Director will choose two associate directors from the other two faculties (other than his or her own faculty) who will be responsible for the management of the BME program. As with all graduate programs, the BME graduate program will abide by all the rules and regulations established and implemented by the Faculty of Graduate Studies for its graduate programs.

1. BME Program Director is directly responsible for the entire program, forms the committees, and assigns the committee members for the committees listed below. It will also be the responsibility of the director to assign instructors for courses falling exclusively under the BME program. This is a 3 -year term position (renewable).
2. Committees of the BME Program
i. Admissions Committee consists of 5 members: 2 from Engineering, 2 from Medicine and 1 from Science each having 3 year staggered terms. They will meet 3 times per year and their duties are: evaluating applicants and admitting students into the program, annual student progression evaluation, assigning the examination and advisory committees for students, identifying anomalies and making recommendation to the Faculty of Graduate Studies for disciplinary actions when necessary. They report to the director of the BME program.
ii. Curriculum Committee consists of 5 members: 2 from Engineering, 2 from Medicine and 1 from Science each having 3 year staggered terms. They will meet twice per year. Their duties are: organizing the two mandatory BME courses, evaluating and approving offered courses, approving students' programs and setting the individually customized Pre-Ph.D. program by consultation with the students' graduate adviser, when required. They will report to the director of the BME program.
iii. Awards Committee consists of 3 faculty members: one from each of the Engineering, Medicine and Science Faculties. They will meet twice a year having 3 year staggered terms. Their duties are: evaluating and recommending outstanding students among the applicants for various available awards.
iv. Membership Committee consists of 3 faculty members from each of the Engineering, Medicine and Science Faculties. They will meet twice a year having 3 year staggered terms. Their duties are: evaluating and recommending BME membership of the faculty members as well as qualified applicants from industry and regional research labs to be faculty (or adjunct) members of the

BME program. The criteria to be a faculty (or adjunct) member of the BME program are: a) to be doing research in a BME related field, b) be teaching a course at least biennially in the BME program, and preferably c) be currently supervising or have recently supervised a student in the BME program. Adjunct faculty members, those from industry and regional research labs, will only be allowed to co-supervise a student in conjunction with a full member of the BME program. Individual membership application recommendations of the committee will have to be approved by the director of the BME program.
v. Faculty Members of the BME Program \{consist of all members of the BME program\}. They will report to the head of their home department. However, for their duties associated with the BME program, they will report to the director of the BME program. The director of the BME program will make recommendations to the faculty member's head on workload compensation for duties associated with the BME program.

## 4. Projections and Implementations

I. Provide a sample program listing for a typical student in the program and a timeline for completion of their studies leading to the credential proposed.

A typical Program for a M.Sc. student

| Year | Fall Semester | Winter/Spring Semester | Summer |
| :---: | :---: | :---: | :---: |
| Year 1 | Courses: | Courses: | Working on Thesis project <br> Data collection if necessary |
|  | 1- BME for Engineers/Life Science Students I (3) | 1- BME for Engineers/Life Science Students II (3) |  |
|  | 2- Any two courses approved by the student's advisory committee (6) | 2-Any two courses approved by the student's advisory committee (6) |  |
|  | 3- BME Seminar (0) | 3- BME Seminar (0) |  |
|  | Thesis: literature review | Thesis: literature review/pilot studies |  |
| Year 2 | One relevant course approved by the student's advisory committee (3) <br> BME Seminar (0) | BME Seminar (0) | Writing the thesis <br> Thesis Defense |
|  |  | Thesis: working on project |  |
|  | Thesis: working on project |  |  |

A typical Program for a Ph.D. student

| Year | Fall Semester | Winter/Spring Semester | Summer |
| :---: | :---: | :---: | :---: |
| Year 1 | Courses: <br> 1- BME for Engineers/Life Science Students 1 (3) <br> 2-Any two courses approved by the student's advisory committee (6) <br> 3-BME Seminar (0) $\qquad$ <br> Thesis: literature review | Courses: <br> 1- BME for Engineers/Life Science Students II (3) <br> 2-Any two courses approved by the student's advisory committee (6) <br> 3- BME Seminar (0) <br> Thesis: literature review/pilot studies | Working on research proposal <br> Data collection if necessary <br> Submitting the research proposal by the end of summer |
| Year 2 | BME Seminar (0) $\qquad$ <br> Thesis: working on the project | BME Seminar (0) <br> Thesis: working on the project <br> Preparing for Candidacy exam | Working on the thesis project <br> Data collection if necessary <br> Submitting the Candidacy paper <br> Candidacy Exam |
| Year 3 | BME Seminar (0) <br> Thesis: working on the project | BME Seminar (0) <br> Thesis: working on the project | Working on the thesis project |
| Year 4 | Thesis: working on project | Thesis: Write UP | Ph.D. Defense |

II. Estimate the enrolment for the first 5 years of the program and provide the evidence on which the projection is based.

It is expected that the intake of students will come from various areas of Engineering, Medicine, and the Natural Sciences. Within the first year, we expect a total of 20 students ( $10 \mathrm{M} . \mathrm{Sc}$. and $10 \mathrm{Ph} . \mathrm{D}$.$) to$ enroll in the program. This number includes only the new students who will enroll in the program. Current students working in BME (potentially as many as 50) will have the option to be transferred to the new program with the transfer protocol (make-up courses, thesis proposals, etc.) being handled on an individual basis. The following table shows the estimated student enrollment and graduation over the first 5 years of the program. The numbers have been estimated based on the following assumptions:

- The average duration for graduating from M.Sc. and Ph.D. programs are of 2.5 and 4.5 years, respectively.
- Every year the number of M.Sc. and Ph.D. enrollments have increments of 2 and 1, respectively.
- The numbers are estimated at the beginning of each year.

| Year | Ph.D. intake | M.Sc. intake | Total Cumulative intake | M.Sc. <br> Graduate | Ph.D. <br> Graduate | Total enrolled in program |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| 2010 | 11 | 12 | 43 | 0 | 0 | 43 |
|  |  |  |  |  |  |  |
| 2012 | 13 | 16 | 98 | -11 | 0 | 83 |
|  |  |  |  |  |  |  |

III. State whether there is an intent to provide some aspects of the program through distance education and if so, how this will be effected.

Since most of Biomedical Engineering courses require lab experiments, we do not intend to offer the program through distance education.
IV. Provide a schedule for implementation.

We anticipate accepting students into both the M.Sc. and Ph.D. Biomedical Engineering Programs by September 2009.

## B. HUMAN RESOURCES

1. Faculty

List all faculty members associated with the program (include adjuncts).
I. For research-based programs (i.e. thesis) indicate their expected association as:
a) Thesis advisors
b) Thesis committee members

For both parts (a) and (b), the list include: (the abbreviated C.V.s are attached.)




| Abhijit G. Banerjee | Assist. <br> Diagnostic \& Surgical Sci. | NanoBiosensor | $20 \%$ |
| :--- | :--- | :--- | :--- | :--- |

Hung kong

Pourang Irani
Assist. Prof. / Computer Human-Computer ..... 50\%
Science Interaction
c) Course teachers

All the people listed above in parts (a) and (b) plus the following individuals:
Dr. Eric Bohm, Dept. Surgery
Dr. Andrew Goertzen, Radiology Dept.
Dr. Stephen Portet, Math. Dept.
Dr. Julien Arino, Math. Dept.
Dr. Frank Labella, Pharmacology Dept.

Provide an abbreviated* c.v. for thesis advisors and student program advisors. For others, provide only a list (by year) of graduate courses taught over the last 5 years or a rationale for the individual's inclusion in their respective category.

The C.V.s of the professors listed in a-b-c parts including the required information are attached (4 pending).

Indicate the extent of participation of thesis advisors listed in l.a) above in other programs and anticipated participation in the proposed program (using relative measures, e.g. 80/20 split program A/program B).

The relative anticipated participations of the individuals in list a-b are written in front of their names above.

Describe the impact of the proposed program on teaching loads.
The BME courses or sections of the two BME modular courses that are among the existing courses in each department will not impact the teaching loads. However, the core faculty members of the BME program who also teach a new BME course will have the equivalent teaching relief from their home departments. This has been reflected on the budget and contribution from each faculty.

## 2. Support Staff

Indicate the role or participation, if any, of clerical or technical support staff in the delivery or administration of the program.

A dedicated full-time administrative assistant will be required for the BME program. Another parttime administrative assistant will also be required to design and maintain the BME program Web Page and its online requests.

## 3. Other

Indicate the participation in the program, if any, of individuals or groups external to the University of Manitoba and provide a rationale for their participation. List the credentials for each individual/group supporting their involvement.

Adjunct Members


## C. PHYSICAL RESOURCES

1. Space

Describe the physical space in which the students will carry out this program of study and in which this program will be administered. (Classrooms for existing courses are assumed in place and no comment is required, but may be included if desired.)

## A 'resource implication' statement is required from the Director of Student Records.

Because the BME students are enrolled mostly in existing graduate courses (only a few new courses will be required to be developed), no additional classrooms are required. However, there are some operating costs for lab maintenance considered in the budget.

## I. Students

Student offices, study carrels, study/reading rooms, rooms with computer connections (if not included in other space), laboratory space, other research or study space as may be appropriate for the program.

While it is expected that the proposed BME program attracts more students to our university in general, however, it may draw a major percentage of its students from the pool of applicants to the graduate program of our university. Hence in total, we predict a maximum of $20 \%$ increase to the number of graduate students at the three involved faculties. Engineering Faculty has recently considered such growth and has gone through renovation providing more space for upcoming students and laboratory.

## II. Administrative

## General office, graduate chair office (if applicable).

Since the program is Biomedical Engineering, its home administrating issues will be done at the base of Engineering Faculty and a space in an office at the Engineering Building (TBA) will be dedicated as the general office for BME program.

## 2. Equipment

The proposed BME program will basically use the existing laboratories across the three faculties. Therefore, there is no particular equipment required. However, due to the increase usage of labs for the BME program and also an increase number of students using the labs, a budget has been considered for miscellaneous items used in the labs.

## I. Teaching

Instructional equipment needed in delivery of courses/workshops/seminars in the program (projectors, video, computers, etc.)

There is no extra instructional equipment required for teaching courses in BME program. However, there is a budget considered for workshops/seminars/colloquium delivery.

## II. Research

Major research equipment accessible to graduate students in the program, plans to retire/upgrade equipment or to obtain new equipment over the next 5 years.

A 'resource implication' statement is required from the Director of Information Services Technology.

Since the BME program is built upon the existing research potentials in the university, there is no extra major research equipment required.

## 3. Computer

Facilities available to graduate students in the program (laptops, PC's, mainframe, scanners, printers, etc.), and anticipated usage of open areas, facilities reserved for students in the program, availability of a University account for use with email, internet access, etc.

Due to an estimated increase in the number of recruited graduate students, a budget for lab supply including new computers has been considered. The IST statement is also attached.

## 4. Library

a) Describe existing resources available for use in the program

Because the BME students are enrolled mostly in existing graduate courses the available library resources will be used.
b) Describe new resources required

Your unit should comment on the Library statement and any new resources that are required for the program.

For the two mandatory bridging courses of the BME program there is a need for some simulation software and new books that a budget has been considered for. The library statement is attached.

## D. FINANCIAL RESOURCES

## 1. Delivery Costs

List and describe immediate and projected additional costs involved in running the program.
I. Costs associated with Human Resources implications under the headings B. 1, 2 \& 3

## Salaries

Four new BME position at level of assistant professor, each with an estimated \$90k/year. Faculty of Engineering has already contributed by filling two positions in BME. One position is supposed to be contributed by Faculty of Medicine and one position by COPSE.

One new Investigator Award position (NIAP/CIHR), \$60k/year to be contributed by faculty of Medicine.

CRC Chair position, $\$ 100 \mathrm{k} /$ year, contributed by CRC.
1.5 Administrative Assistant, $\$ 37 \mathrm{k} /$ year for one full-time employee plus $18.5 \mathrm{k} /$ year for one parttime employee contributed by COPSE

Offload (hiring sessional instructors for compensate the teaching loads of BME members), \$20k/year contributed by COPSE
II. Costs associated with Physical Resources implications under the above headings B. 1, 2 \& 3

Office supplies, $\$ 5 \mathrm{k} /$ year
Seminar/colloquium, $\$ 3 \mathrm{k} /$ year

Library items, $\$ 3.5 \mathrm{k} / \mathrm{year}$
Lab supplies, \$20k/year

## III. Costs associated with research not covered above.

Although it is not necessary for delivering the program, however it would be advantageous to offer two scholarships to the top students at each M.Sc. and Ph.D. levels.

Awards/scholarship (2 M.Sc.), \$28k/year
Awards/scholarship (2 Ph.D.), \$34k/year
Matching Awards/scholarship ( 6 undergraduate summer students), \$15k/year. The award will be matched by the BME faculty supervisor, similar to the NSERC summer scholarship program.

For the categories above indicate which costs are to be covered by internal (to unit) reallocation of existing budget(s) and which costs represent need for new funds.

The costs that are being covered by internal units:
Salaries of three professors and one investigator have been budgeted by the Faculties of Engineering and Medicine.

CRC Chair salary
$2 / 3$ of seminar/colloquium budget is covered by Engineering and Medicine Faculties.
$1 / 2$ of lab supplies budget is covered by Engineering and Medicine faculties.

## The costs that are in need of new funds by COPSE:

One Professor Salary
One Administrative Assistant salary
Sessional Instructors Salary
Tech and lab maintenance
Library supplies
$1 / 3$ of seminar/colloquium budget
$1 / 2$ of lab supplies
Awards/scholarships
For details, please see the attached budget sheet.

## 2. Student Support

Indicate how and to what extent support of students is anticipated and indicate what commitment is made for student recruitment.

The requested dedicated scholarships for graduate BME students will definitely provides a means to increase the recruitment. Furthermore, the summer student projects which are requested to be supported partially by COPSE with a matching fund of the BME faculty members will provide a very efficient way to attract excellent local students to the BME program for their graduate education.

## 3. Identification of new financial resources

Indicate any new sources of funds that are anticipated for supporting the program.
TRLabs strongly supports the proposed BME program by providing M.Sc. and Ph.D. scholarships, office space and computers to BME graduate students assigned to TRLabs approved research projects. (Letter of support is attached.) NRC Institute for biodiagnostics is another strong supporter of the program. Several of their members will be adjuncts to this program; hence providing research support such as using the available facility at NRC as well as partial financial support for BME graduate students who are assigned to NRC approved research projects. CMC microsystems is also another supporter of the BME program and will continue its support by providing equipment and scholarship for the graduate students assigned to CMC approved research projects.

## 4. Balance sheet

Provide a financial statement summarizing the expected costs and the revenue anticipated. Present a financial plan that includes all costs from start-up to achievement of a "steady-state" operation of the program. Include such items as capital start-up needs and phasing in of FTE growth.

Please see the attached document.

## E. Supporting documents

Provide letters of support from departments/faculties/units and outside groups/agencies/organizations as appropriate.

Letter of support from Dean of Engineering (Attached)
Letter of support from Dean of Medicine
Letter of support from NRC-IBD
Letter of support from TRLabs (Attached)
Library Statement (Attached)
Computer Services Statement (Attached)
Register's office letter (Attached)
Mandatory Course Outlines (Attached)

|  | Cost |  |  | Contribution |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Salary Cost | Operating Cost | COPSE | Engineering | Medicine | CRC |
| Admin Assist (1 full-time and 1 half-time) | \% $\$ 55,500$ |  | \$55,500 |  |  |  |
| Professor \#1 (TBD) | $\therefore \$ 90,000$ |  | \$90,000 |  |  |  |
| Professor \#2 (July. 1st, 2007: Dr. A. Major) | $\bigcirc \$ 90,000$ |  |  | \$90,000 |  |  |
| Professor \#3 (August 1, 2008, Dr. S. Sharif) | $\therefore \$ 90,000$ | $\cdots$ |  | \$90,000 |  |  |
| Prof \#4 (Medicine - Dr. T. Szturm) | $\bigcirc \$ 90,000$ | . |  |  | \$90,000 |  |
| New Investigator Award Position - (NIAP/CIHR to be applied) | \$60;000 | $\because$ | . |  | : \$60,000 |  |
| CRC Chair (Joint Medicine/Engineering - Pos. \#06810, TBD: | $\therefore$ \$100,000 |  |  |  |  | \$100,000 |
| Offload (hirring sessional instructor) | + 220,000 |  | \$20,000 |  |  |  |
| Technician (setting and maintaining labs) |  | \$45;000 | \$45,000 |  |  |  |
| Awards/Scholarship (2 M.Sc) |  | \$28,000 | \$28,000 |  |  |  |
| Awards/Scholarship (2 Ph.D.) |  | \$34,000 | \$ 34,000 |  |  |  |
| Awards/Scholarship (6 undergrduate summer students/year) |  | \$15,000 | \$ 15,000 | : |  |  |
| Office Supplies | : | \$5;000 | \$5,000 |  |  |  |
| Seminar/colloquium |  | \$3,000 | \$1,000 | \$1,000 | \$1,000 |  |
| Library |  | \$3,500 | \$3,500 |  |  |  |
| Lab Supplies | $\cdots$ | \$20,000 | \$10,000 | \$5,000 | $\cdots$ : 5,000 |  |
| Sum | \$595,500 | \$153,500 | \$307,000 | " \$ 186,000 | \$156,000 | \$100,000 |
| Total Cost | \$740,000. | $\therefore$ |  |  |  |  |
| Revenue: Tuition (See details on sheet 2) | \$182,000 |  |  |  |  |  |

## University <br> of Manitoba

MAR 222010

# Faculty of Engineering Office of the Dean 

Faculty of Engineering
E2-290 EITC
Winnipeg, Manitoba
Canada, R3T 5V6
Telephone (204) 474-9807
Fax (204) 275-3773
dean_engineering@umanitoba.ca

Dear Members of the Senate Planning and Priorities Committee,
I'm writing to respond to the committee's concerns regarding the proposal to introduce a graduate level Biomedical Engineering (BME) Program at the University of Manitoba which would lead to MSc and PhD degrees. As you may know, the planning for this program was initiated almost five years ago by the Faculties of Engineering and Medicine. During this time faculty members, researchers, and administrators from across the University of Manitoba were consulted and provided valuable advice on creating a suitable structure for the program. Many members of the biomedical engineering community, in Manitoba and abroad, have been consulted with regard to developing this new program. The proposal was also favourably reviewed by two external experts from Canadian universities having similar programs. The proposed BME program will see the involvement of many. UM Faculties; significant involvement is expected not only from the two Faculties originating the proposal, but also from the Faculty of Science.

The following are our responses to each of the concerns raised by your committee, which we've included here for clarity:

1. The proposal includes funding for scholarships specific to students in the program. Given the considerable strain on the University wide scholarship funding, this is not. considered appropriate. The students will have the same opportunity to apply for University wide scholarships as other students.

We agree that students in the BME graduate program should be treated in the same manner as other students at the UM with respect to scholarship funding which is targeted to any graduate level program. In the proposal, funding for the new BME scholarships ( $2 \mathrm{MSc} ., 2$ Ph.D., and 6 undergraduate summer scholarships) was being requested from COPSE, and it was not expected that this funding would come from existing UM scholarship funding. If the UM believes that such a request to COPSE would be inappropriate then we will remove this scholarship funding request from the proposal. BME specific scholarships will then be introduced only when the funding can be raised from other external sources.
2. The budget should not include funds already spent. Positions that have already been filled are not considered 'costs' of the proposed program but represent resources that will be part of the overall program, if it moves forward. If there is a desire to show those positions as part of the overall program then the budget items should be split into 'existing resources' and 'required resources' so those items are clearly separated.

This has been changed in the new budget pages of the proposal. The recently acquired baseline positions in the Faculty of Engineering are existing resources available to the program, and are no longer included in the budget for this program. It is important to note that, as the planning for this program began almost five years ago, these positions were requested and justified on the basis that much BME research was already happening at the UM, that BME is an organized area of research excellence in the Faculty of Engineering, and that a new BME graduate program was in the works.
3. The remaining budget items should be examined carefully to ensure they reflect costs absolutely necessary for mounting this program. I will reiterate (although I know you are intimately aware of the financial reality) that new program funding is extremely limited so new program proposals should be as representative of the real costs as possible to ensure that they are not disadvantaged by 'sunny day' cost estimates when compared with other programs for prioritization.

All the costs listed in the proposal were deemed to be sufficient to mount a BME program which would be ranked amongst other Canadian BME programs and comparable to the ranking of existing Faculty of Engineering programs amongst other Canadian Engineering programs. The costs were not 'sunny day' costs and certainly not the minimum costs required to mount such a program. Given the current financial constraints at the UM, the budget for the proposed BME program has been modified such that this minimum level of funding required for this program will be born, at least initially, by the Faculty of Engineering. These costs will include providing teaching relief to the program's director as well as the costs of a part-time administrative assistant.
4. Since the proposal shows funds for hiring sessional instructors to cover undergraduate teaching time for the full-time faculty members that will be used to allow them to offer increased graduate course offerings, we would like confirmation from the Dean that the increased sessional use in the Faculty of Engineering is not going to negatively impact the CEAB position of the faculty.

The Faculty of Engineering has worked effectively during the past three years to reduce its dependence on sessional instructors, especially because the high ratio of courses taught by sessional instructors was identified as a concern during the last CEAB accreditation visit. This reduction has been possible due to some streamlining of course offerings, the arrival of new faculty members, and the reduction of the number of sections offered for some courses. The current low enrolment in some of our programs has allowed the reduction in the number of sections offered for some courses. The Faculty of Engineering believes that the BME graduate program is an important part of our long term strategic plan and
professors capable of teaching BME graduate level courses will be asked to do so as part of their regular graduate course assignment. Special consideration will need to be made for the development of the two new bridging courses proposed in the program. The instructors assigned to the development of these two courses will be given undergraduate teaching relief for the first year while developing the course material. The impact of granting this relief to the regular undergraduate Engineering programs will be minimal. The Faculty of Engineering will pick up the costs of any sessional instructors needed to cover this course relief. Thus, funding requests for sessional instructors have been removed from the budget pages. A copy the costs associated with this program are given below, all of which are explicitly assigned to either the Faculty of Engineering or Medicine.

| Requests | Engineering | Medicine |
| :--- | ---: | ---: |
| Admin Assist (1/2 FTE) | $\$ 20,000$ |  |
| Teaching relief for Director (sessional instructor) | $\$ 20,000$ |  |
| Technician (setting and maintaining labs) | $\$ 15,000$ |  |
| Office Supplies | $\$ 5,000$ |  |
| Seminar/colloquium | $\$ 1,000$ | $\$ 1,000$ |
| Lab Supplies | $\$ 5,000$ | $\$ 5,000$ |
| Totals | $\$ 66,000$ | $\$ 6,000$ |

All costs to be borne by the respective faculties without cost to COPSE

| Existing positions and support from faculties | Engineering | Medicine |
| :--- | ---: | ---: |
| Professor \#1 (TBD) |  | $\$ 90,000$ |
| Professor \#2 (July 1st, 2007: Dr. A. Major) | $\$ 90,000$ |  |
| Professor \#3 (August 1, 2008, Dr. S. Sharif) | $\$ 90,000$ |  |
| Prof \#4 (Medicine - Dr. T. Szturm) |  | $\$ 90,000$ |

5. Although the letters of support are supportive they lack commitment on the part of the authors to identify what potential employment growth they expect to see in the industry to employ the graduates. It would be helpful if someone from the boomed sector (or perhaps the primary proponent) could show provincial growth in terms of jobs and economic growth in this market sector.

Although a detailed employment survey has not been done, there is ample anecdotal evidence to support the view that jobs are available. The growth of such companies as IMRIS and such institutes as the NRC Institute for Biodiagnostics demonstrates the need. Indeed, future growth of these enterprises depends critically on the available of graduates from programs such as that being proposed.

In summary, the Faculty of Engineering will bear the burden of new costs associated with mounting the proposed Biomedical Engineering Graduate Program. As a result the University of Manitoba would not need to seek any new funding from COPSE for purposes of delivering this program.

Sincerely,


Douglas Ruth, P.Eng, PhD.
Professor and Dean

University of Manitoba

Faculty of Medicine

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Fax (204) 789-3942

August 25, 2008

To: Dr. Joe Lovetri, Associate Dean Faculty of Engineering

From: Dr. Patrick Choy, Associate Dean Faculty of Medicine



Cc: Dr. J. Dean Sandham, Dean of Medicine
Dr. E. Kroeger, Assistant Dean (Graduate Studies) in Medicine
Re: The Biomedical Engineering Program
On behalf of Dr. J. Dean Sandham, I wish to reiterate the support of the Faculty of Medicine for the Biomedical Engineering Program. The support from the Faculty of Medicine will include but not limited to the following items:-

1. The Faculty of Medicine and the Faculty of Engineering cosponsored and were successful in obtaining a Tier II Canada Research Chair in Biomedical Engineering. Recruitment of the CRC jointly by Engineering and Medicine has been completed.
2. Dr. Tony Szturm- School of Medical Rehabilitation, Faculty of Medicine and a crossappointee to the Faculty of Engineering, has considerable interest in the Biomedical Engineering Program. He plans to make a significant contribution to the Program.
3. The Faculty of Medicine will sponsor a qualified individual for the New Investigator Award of the Canadian Institutes of Health Research. This sponsorship is contingent on identifying an individual whose research interest in biomedical engineering also fits into the priority of the Faculty of Medicine.
4. The Faculty of Medicine is in the process of recruiting five junior scientists for the Regenerative Medicine Program. Some of these individuals may have interest, background and/or research training in biomedical engineering or a related field. They will be encouraged to participate in the Biomedical Engineering Program.

We wish to thank you for taking the lead in the development of this Program. I hope that our support will provide you with a firm basis to submit the Biomedical Engineering Program to FGS sometime this week.

University of Manitoba

Faculty of Engineering Office of the Dean.

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20 August 2008

Dr. John Doering, Dean
Faculty of Graduate Studies
500 University Centre
Dear Dr. Doering:
The Faculty of Engineering considers the creation of a formal graduate level Biomedical engineering (BME) program one of its highest priorities. This is an important research area for which many of our faculty members already devote much of their research efforts and a formalized program will help these researchers in the many ways that are detailed in the BME proposal. The program will include a comprehensive interdisciplinary curriculum that will give students the foundations needed for state-of-the-art biomedical engineering research and development. We expect the BME program to be quite attractive to students who apply for a graduate program in the Faculty of engineering and that this will create opportunities to recruit students from the life sciences and medicine leading to an increased graduate student population. As described in the proposal, this is a joint program between the Faculties of Engineering and Medicine that will require us to expand our current course offerings and will foster new and enhanced collaborations amongst the researchers of the two Faculties as well as with other faculties such as the Faculties of Science and Dentistry.

The Faculty of Engineering does not foresee any issues related to physical resources associated with mounting this comprehensive BME program. The laboratory and student office space will be accommodated in our existing facilities. Our future growth in terms of Faculty members and research personnel has been outlined in the proposal and will be a natural growth that is to some extent independent of the BME program. That is, our future plans in the area of BME have already been put into motion to include the new BME program, not because of the BME program.

The Faculty of Engineering is fully committed to this new formalized BME program. It is strongly believed that the BME program will enrich the educational experience of our graduate students, will provide a consistent post-graduate curriculum and educational infrastructure

University
of Manitoba

Sciences and
Technology Library

Date: August 22, 2008

To: Dr. Zahra Moussavi, Electrical and Computer Engineering Department
From: Judy Harper, Head, Sciences and Technology Library

## Re: Proposed New Graduate Program: Biomedical Engineering

I have assessed the University of Manitoba Libraries (UM Libraries) resources in response to the proposed plan to introduce a multidisciplinary M.Sc. and Ph.D. program in Biomedical Engineering. It is my understanding that the Faculties of Engineering, Medicine and Science will be involved. My assessment finds that the Libraries' journal collection is strong enough to support the new program. However, while books are less important to the subject, the monograph collection needs to be strengthened. The Libraries will use some of its one-time funds ( $\$ 4,540$ ) to improve the collection, However, it cannot provide the further one-time funds of $\$ 5,000$ needed to bring it up to the desired level, nor the continuing funds of $\$ 5,000$ needed to maintain this collection going forward.

## Background

While the University of Manitoba Libraries has not been supporting a separate Biomedical Engineering graduate program there are a number of related collections presently available in the Sciences and Technology Library (in both the engineering and science collections) and the Neil John Maclean Health Sciences Library.

## Introduction

Because of the importance of current information, journals are normally more important than books in graduate programs in science, technology and medicine. ISI's Journal Citation Reports (JCR) for $2007^{1}$, which provides a ranked list of journals by citation impact factor ${ }^{2}$ was used to assess the

[^6]strength of the journal collection.
Because of time constraints, specific monographs were not checked to determine the level of support the Libraries can provide for this new program. Instead, the three bibliographers involved in collection development in this area (Norma Godavari, Engineering Library, Bill Poluha, Sciences and Technology Library and Hal Loewen, Neil John Maclean Health Sciences Library) were interviewed to determine the current collecting level. The BISON online catalogue was checked to determine the number of books published since 2004 that were in the collection and this figure was compared to the number held by the libraries at the Universities of Alberta and Toronto where similar programs are already being offered.

Databases important for this program were also identified.

## Journals

The University of Manitoba Libraries has current subscriptions, mostly in electronic format, to 28 ( $85 \%$ ) of the 33 journal titles listed in ISI's Journal Citation Reports section "Engineering, Biomedical". According to the "UML Collection Assessment Guidelines" this percentage indicates that the journal collection is capable of supporting graduate research.

## Monographs

Each of the bibliographers mentioned above is presently collecting in one or more aspects of biomedical engineering. The Libraries' approval plan is also bringing in some titles of importance in this area.

A keyword search in the University of Manitoba Libraries' BISON catalogue for the words "biomedical" and "engineering" identified 95 titles (excluding journals) published between 2004 and the present. The same search in the University of Alberta and University of Toronto catalogues identified 206 and 442 titles respectively. Please see the table below.

| Date Published | Number of Titles - UML | Number of Titles - U of A | Number of Titles - U of T |
| :--- | :---: | :---: | :---: |
| 2008 | 5 | 18 | 22 |
| 2007 | 22 | 55 | 64 |
| 2006 | 22 | 59 | 92 |
| 2005 | 20 | 35 | 123 |
| 2004 | 26 | 39 | 141 |
| Total | 95 | 206 | 442 |

While it may not be necessary for the University of Manitoba Libraries to have the same size of collection as the University of Toronto, there should be more books in the UM Libraries than are presently available for it to support this program. Recent books would be of greatest value. Therefore taking the average of the books held by the University of Alberta and the University of Toronto for 2008 and 2007, the University of Manitoba Libraries should have 80 books not 27 (i.e. an additional 53 books). Using $\$ 180^{3}$ as the average price, the Libraries would need an additional $\$ 9,540$ in onetime funds to upgrade the current collection. The Libraries has $\$ 4,540$ available in one-time funds which could be used to purchase some of these books. A further $\$ 5,000$ would be needed from the program or from the faculties supporting it. To maintain the collection once the program begins, the Libraries will need an additional \$5,000 annually.

## Databases

The Libraries provides excellent access to a number of electronic databases which would be useful for students in this program.

ACM Digital Library 1985-
Biological Abstracts 1929-
BioOne
CINAHL 1982-
Compendex 1884- (now also included in Scopus)
Dekker Encyclopedias (Biomaterials and Biomedical Engineering 2008)
IEL (IEEE/IEE Electronic Library) 1988-
EMBASE 1980-
ENGnetBase 1999-
INSPEC 1969-
Knovel
Metadex 1966-
Scopus
SpringerLink (covers e-journals and all books published by Springer in electronic format since 2005 including the areas of biomedical sciences and biosystems engineering)
PubMed 1950-
SciFinder Scholar 1907-
Web of Science 1955-
The ENGnetBASE subscription covers biomedical engineering, electronics, machine design, computer engineering, electrical engineering and lasers and optical engineering

The Knovel subscription covers several engineering sections which include biomedical engineering material.

[^7]
## University of Manitoba

## Registrar's Office

To: Zahra Moussavi, Associate Professor, Dept. of Electrical \& Computer Engineering
From: Neil Marnoch, Registrar


Re: Proposal for a M.Sc. and Ph.D. Programs in Biomedical Engineering (BME)

Dr. Moussavi, having reviewed the program proposal for a Masters and Doctoral Programs in Biomedical Engineering, I see no problems in the Registrar's Office supporting this program with respect to registration, fee assessment and academic evaluation.

Please note that:

- although transfer of credit from external institutions may be permitted by the program administrators, credit awarded will not reduce a student's program fees.
- Based on the outline and description of the Masters program, this program will be administered as a Two-Year Masters program under the current Graduate Studies fee structure.
- In order to be implemented for September 2009 and appear in the 2009-2010 Graduate Calendar, this proposal must be approved by Senate by December 2008.

Best of luck with your proposal.


Neil Marnoch
Registrar

# Review of the Proposal to Establish a Graduate Program in Biomedical Engineering at the University of Manitoba 

Rangaraj M. Rangayyan<br>Department of Electrical \& Computer Engineering, Schulich School of Engineering University of Calgary and<br>- Christopher G. Ellis Department of Medical Biophysics<br>Schulich School of Medicine \& Dentistry University of Western Ontario

March 26, 2009

## Preamble

This is a strong proposal to establish a graduate program in biomedical engineering (BME) at the University of Manitoba, building on existing strengths spanning diverse areas in BME. There is yery strong support for the proposal within the Faculties of Engineering and Medicine at the level of the Deans' offices. The Faculty of Graduate Studies (FGS) has also expressed clear and strong support for the proposal. The senior , administration (Vice-Provost, Programs) clearly had detailed knowledge concerning the proposal and expressed enthusiastic support. There is also support from the National Research Council (NRC) Institute for Biodiagnostics (IBD) in Winnipeg, CancerCare Manitoba; TRLabs, and the School of Medical Rehabilitation.

The overall structure of the curriculum appears to be sound. There is adequate breadth and the curriculum includes the latest developments in the field of BME:

The proposed program is viable and has a high likelihood of success.

## Academic Strength

The faculty members and researchers who made presentations of their research demonstrated the underlying academic and research strength as well as their commitiment to the proposed program.

## Career Opportunities

The representative of NRC-IBD indicated the potential for further growth of the NRC operation in Winnipeg, and the potential for spinoff companies creating significant employment and career opportunities. Graduates in the numbers proposed would not have problems finding employment with the NRC, the spinoff companies from NRC, or with the BME industries across: Canada; according to the representative from NRC-IBD.

## Adequacy of Space and Other Resources

From the information provided and the tours of laboratories, it appears that adequate facilities and resources are available to support the proposed program. Space does not appear to be a matter of concern.

## Comparison with Other Programs

The proposed program compares well with other BME programs in terms of the curriculum and the available expertise.

## Strengths

1. Long history of activity and productivity in BME research and teaching.
2. Current expertise in diverse areas spanning several areas of BME.
3. Strong support for the program from the Dean of Engineering, Dean of Medicine, Faculty of Graduate Studies, and the Vice-Provost (Programs).
4. Support from industry and research collaborators.
5. The presence of the NRC-IBD in Winnipeg.
6. Strong support from TRLabs as indicated in their letter.
7. Compitted leadership of Dr. Zahra Moussavi and Dr. Joe EoV Vetri,

8, Lastitutional support for a Canada Research Chair (CRC) position in BME for Dr Zahra Moussavi.
9. Two recently filled faculty positions Fäculty of Engineering dedicated to BME.
10. One more faculty position to be contributed by the Faculty of Medicine and an additional faculty position budgeted in the proposal.

## Weaknesses in the Proposal and Recommendations to Strengthen the Proposal

Weaknesses in the proposal were identified and discussed. Clarifications were provided by the academic and administrative representatives who attended the various meetings. The followings points need to be addressed in order to strengthen the proposal before it is presented for further consideration within or outside the University of Manitoba.

1. Longterm commitment to teaching courses in the program: The Dean of Medicine indicated that there would be no problem to assign academic staff members of the Faculty of Medicine to offer the modules or courses indicated in the curriculum. It would be desirable to have firm documented commitment to ensure continaing contribution to teaching; this would be especially important as the program grows, and administrative leadership and the associated priorities change:
2. It would be advantageous to promote a specific link with the MD/PhD program, as agreed to by the Dean of Medicine.
3. Students with non-engineering degrees should be advised, at the outset, that the MSc or PhD in BME would not: make them eligible, on its own, to gain registration as Professional Engineers.
4. The curriculum could be strengthened with a course on biomaterial, biofilins, and artificial tissues.
5. The bridging course "BME for Life Sciences Students" is focused mostly on concepts from electrical engineering. The course should be broadened to include the basic elements of engineering materials, mechanics, and thermodynamics. Some of the advanced topics in the course (as described in the proposal) could be dropped to include these elements.
6. The two bridging courses should include a common module on ethics and the practice of the professions of medicine and engineering. Such a module would also bring together all students in the BME program.
7. The statement regarding cooperation among Manitoba's universities (page 4, item $V$ ) should be expanded to identify the areas of strength in BME at other institutions of higher education and research in Manitoba, and also individuals who are willing to collaborate with the proposed program. The identification of complementary expertise could strengthen the proposal.
8. It is recommended that the graduate student be included the process of establishment of his/her advisory committee:
9. Membership criteria appear to include teaching two courses a year (page 10, 2.iv.b); perhaps the intended term is "biennial" and not "biannual".
10. The list of faculty mernbers on pages 13-14 should be organized to indicate not oụly their home departments and faculties but also their areas of expertise in BME. It would be desirable to demonstrate a match between the subject areas listed on page 3 and the faculty members listed on pages 13-14.
11. The overall rate of growth of enrolment numbers from 20 to 97 (over the period 2009-2013), indicated in the table on page 12, may not be realistic. The projected number of almost 100 graduate students by 2013 would require financial support of at least $\$ 2$ million per year. It is not clear if the faculty members listed on pages 13-14 could bring this level of financial support. Supporting information on the research funding of the faculty members participating.in BME would strengthen the proposal.'
12. The ratio of MSc to PhD students indicated in the table on page 12 is optimistic and difficult to achieve. Supporting data on the ratio of MSc to PhD students in other graduate programs at the University of Manitoba or similar BME programs at other universities could strengthen the proposal.
13. The list of faculty members (pages 13-14) is lacking representation from radiology, diagnostic imaging, oncology, and chemistry. The information provided in the discussion sessions indicated that there are other faculty members actively involved in BME research at the University of Manitoba who have not been included in the list. A stronger list with representation from key areas that contribute to BME should be prepared. It would also be desirable to see more faculty members with a stated participation rate of $80 \%$ or higher. A definition of the participation rate would help in interpreting the information provided.
14. The CVs attached to the document should provide clear evidence of expertise in BME, including details of publications in BME journals and grant support for BME projects.
15. It is important to establish a centrally located administrated office to provide services to the students in the proposed BME program, and to provide an academic home. Although no concern was expressed about space, it would be desirable to provide designated space for BME activities in close proximity to the majority of students enrolled in the proposed BME program.
16. A letter of support from NRC-IBD would strengthen the proposal.

We congratulate the proponents of the program for their academic achievements and leadership, and wish the-proposed program success.

## Responses to the Reviewers' comments

Comments 1 and 2: The letter of support addressing both comments of the reviewers is in preparation and will follow.

Comment 3: A sentence to address this comment has been added on page 7 of the proposal and it reads:
> "It should be noted that the MSc or PhD in BME would not make the students eligible, on its own without a B.Sc..in engineering, to gain registration as Professional Engineers."

Comment 4: There are individual courses that are dedicated to the mentioned topics. However, these are special topics; hence, they are not included as part of the mandatory courses modules which are intended to be very broad and provide only the necessary background for students in BME to be able to take special topic courses.

Comment 5 \& 6: A module has been added to the "BME for life science students" course to cover the biomechanics to address the comment of reviewers. Also both courses now have a module on the Ethics as well. The revised course outlines are attached.

Comment 7: A sentence has been added on page 4, part $V$ to address the reviewers' comment and it. now reads:
"we will thereby enhance the, co-operation between Manitoba's unïversities such as University' of Braridon, Biomedical research group in Science faculty and University of Winnipég."

Comment 8: The sentence has been rephrased and now reads: (page 8):
"Each student will have a graduate program adviser and a co-adviser assigned throughout the course of his or her studies as well as an Advisory Committee, whose members are designated by the BME Admission Committee by consültation with the stüdent and his/her graduate program adviṣor."

Comment $9:$ The word has been corrected.
Comment 10: The list of faculty member candidates has been revised entirely address the requested information. The new members names and other information have alṣo been added. See pages 13-17.

Comment 11: After the external reviewers visit, on a second call to all faculty members of the Engineering, Medicine and Sciences, many responded and hence their name are now added to the list. It was explained to the reviewers that there were indeed many people across the university that do research in BME, however, only the name of people who had responded and sent their C.V. was included. But this time, maniy faculty members have sent their C.V. and the list has grown siginificantly (doubled in number).
Comment 12: The anticipated students enrollment to the program has been estimated based on the pool of current applicants for the research in BME related fields. With the newly hired professors in the BME field as well as the CRC position; and hence the new sources of funds for students support, the numbers seem realistic.

Comment 13: It is addressed in the response to Comment 11.
Comment 14: The C.V.s were cut in short due to the FGS guidelines. Therefore, there were no room to mark the publications in a 2-page oniy suggested format. Otherwise, all of the mentioned BME researchers have many relevant publications.

Comment 15: This was written on Page 18. However, it is rephrased slightly to be more clear. It now reads:

Page 1 of 2
"Since the program is Biomedical Engineering, its home administrating issues will be done at the base of Engineering Faculty and a space in an office at the Engineering Building (TBA) will be dedicated as the general office for BME program."

Comment 16: The letter of support is in preparation and will be sent to FGS soon.

University
of Manitoba

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Canada R3T 2N2
Telephone (204) 480-1408
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## Memorandum

To: Mr. Jeffrey Leclerc, University Secretary
From: Dr. D. R. Morphy, Vice-Provost (Student Affairs) herphor and Co-Chair, Student Leadership Development Task Force

Date: $\quad$ May 19, 2010
$\begin{array}{ll}\text { Re: } & \text { The Co-Curricular Record: } \\ & \text { Recognizing Student Success at the University of Manitoba }\end{array}$

Attached is a new policy for the University of Manitoba that I am forwarding to Senate for approval.

The Co-Curricular Record (CCR) is a formalized University-certified transcript of University approved and facilitated activities that support student development in venues that are not for academic credit. This document will be received by students alongside the academic transcript as a clear statement of involvement in activities that support holistic student involvement.

Currently, a student's involvement in University governance is formally recognized on the academic transcript (1979) and will be recognized on the CCR as of September, 2010. As well, Student Affairs introduced the "Transcript Annex" in 1990. The Annex is a self-standing document that recognizes students' accomplishments/activities within the institution that are noteworthy, but not currently on the academic transcript. Examples include the following:

- Peers Program Advisors;
- University 1 Orientation Volunteer Participation;
- UM Society of Automotive Engineers Team;
- Faculty of Arts Graduate Student Teaching Award;
- Faculty of Architecture: Student Editor Warehouse Journal;
- Faculty of Law: Solomon Greenberg Moot Court Competition; and
- Faculty of Law: Phillip C. Jessop International Law Moot Court Competition.

The purpose of the CCR is to encourage student involvement and engagement on campus. It will also contribute to the value-added component of higher education at the UM: the outstanding student experience and enhance the marketability of our students as future employees.

Recognition of the student's involvement and engagement on campus is being addressed by a number of institutions across Canada. Most notably, the CCR has been introduced by the following institutions:

- Wilfrid Laurier University;
- McMaster University;
- University of Calgary;
- Seneca College; and
- Acadia University.

The programs and activities that would be recognized by the CCR would include the following areas:

- Governance;
- Leadership;
- Service Learning;
- Awards/Achievements; and
- Participation/Volunteering.

The criteria for the above categories is under discussion and awaits final approval of the Student Leadership Development Task Force. The infrastructure required for the CCR to be introduced this fall is being put into place. This structure will include an application process for faculties, colleges and student groups for listing on the CCR, an approval board, a student application process and a student verification process.

The value to the student of the CCR is directly linked to the value-added component of a degree from UM, the importance of student engagement to success, and the enhanced marketability of the student's degree to a prospective employer.

To the University, the CCR recognizes the provision of an outstanding student experience as identified in the University's Strategic Planning Framework. Further, this initiative will enhance student participation and engagement in the University community and it will promote the development of integrative learning opporunities.

Following approval from Senate, the timeline for producing the first CCR for students will include movement of current programs on the Transcript Annex/Student Governance to the CCR in June, a campus launch to students, and an open application to faculties, departments, colleges and student associations and clubs for program application in September and an accelerated approval of programs for April, 2011.

DRM:md
Attachment
cc: Dr. J. Keselman, Vice-President (Academic) and Provost
Mr. Joe Danis, Director, Housing and Student Life
Mr. Neil Marnoch, Registrar
Ms Meghan Laube, Assistant Director, Housing and Student Life
Ms Heather Laube, President, UMSU

UnIVERSITY
or Manitoba

## UNIVERSITY OF MANITOBA POLICY



## 1. Reason for Policy

To provide a formal recognition of student's co-curricular activities through a cocurricular record (CCR). The CCR is a formalized university certified record of University approved and facilitated activities that support student development in venues that are not for academic credit. The CCR will be received by students alongside the academic transcript, as a clear statement of involvement in activities that support holistic student development.

## 2. Policy Statement

2.1. Apart from a student's academic learning, experiences in campus programs that are of a developmental nature are considered desirable as part of the university experience, and as such, warrant recognition. This recognition shall take the form of the CCR.
2.2. Areas of recognition that shall be recognized on the CCR shall include:

Governance, Leadership, Service Learning, Awards and Participation/Volunteerism.
2.3. Student participation in Governance activities, currently recognized on a student's transcript in accordance with the Policy on Student Recognition for Committee Participation, as approved by Senate in 1979, shall be recognized on the CCR as of September 2010.
2.4. Activities recognized on the Transcript Annex as of June 2010 will be recognized on the CCR as of September 2010.
2.5. Program participation shall not be noted on the CCR for any activity completed prior to September 2010 that was not previously recognized on the Academic Transcript or Transcript Annex.
2.6. University of Manitoba co-curricular programs may appear on the CCR following application of the relevant department/program and approval of the CCR Review Committee. Departments and/or programs must apply to be recognized on the CCR.
2.7. $\quad$ The Co Curricular Record Review Committee shall approve applications for recognition and review all programs recognized on the CCR on an annual basis.
2.8. The Co Curricular Record Review Committee shall consist of: Assistant Director, Student Life
Registrar
Representative from UMSU
Representative from the Career Services
Representative from the Council of Student Affairs
2.9. A supervising staff member, faculty member, UMSU representative, or GSA representative must verify student participation in order for the student to gain recognition on the CCR.
2.10. To be recognized under the category of Governance on the CCR, students must:
2.10.1. Be an active member of the University of Manitoba Board of Governors, Senate, Faculty Council, Department Council, Presidential Committees, Faculty/School Student Councils, UMSU Council, GSA Council, or their related standing, ad hoc and sub-committees.
2.10.2. The term "active" will be assessed by the chair or designated representative of the body concerned using the following general guidelines:
2.10.2.1. Attendance at $66 \%$ of the meetings in the academic year.
2.10.2.2. The body must convene at least three times per year
2.11. To be recognized under the category of Leadership on the CCR:
2.11.1. Programs must be under the direction of a University of Manitoba Faculty, Department, administrative unit, UMSU, or GSA.
2.11.2. Programs must not be for academic credit.
2.11.3. Programs must have stated developmental outcomes for students at the onset of program launch.
2.11.4. Programs must demonstrate that students acquire and utilize skill sets providing opportunity for professional and self-development.
2.11.5. If students receive monetary compensation for the position, the amount is not reflective of the amount of time the participants dedicate to said program.
2.12. To be recognized under the category of Service Learning on the CCR:
2.12.1. Programs must be under the direction of a University of Manitoba Faculty, Department, administrative unit, UMSU or GSA.
2.12.2. Programs must not be for academic credit.
2.12.3. Programs must engage in project work that impacts a community and is developed in consultation with a community partner.
2.12.4. Programs must include an orientation prior to program commencement that is of appropriate length compared to the duration and intensity of the Service Learning Program.
2.12.5. Programs must included personal reflection that is of appropriate duration and intensity to the Service Learning Program.
2.12.6. Programs must included post-program debriefs in regards to the lessons learned, and implementation of knowledge acquired as a result of the program that is of appropriate intensity to the Service Learning Program.
2.13. To be recognized under the category of Volunteerism/Participation on the CCR:
2.13.1. Programs must be under the direction of a University of Manitoba Faculty, Department, administrative unit, UMSU or GSA.
2.13.2. Programs must not be for academic credit.
2.13.3. Students must commit a minimum of 10 hours to program/activity.
2.13.4. Students must not receive monetary remuneration for participation.
2.13.5. Program must provide training/orientation in regards to skills required to fulfill the Volunteer/Participation prior to program commencement.
2.13.6. Program must contribute to the University community and/or the community at large through the student's commitment to the selected program.
2.14. To be recognized under the category of Awards on the CCR:
2.14.1. The award must not already be recognized on the University of Manitoba Transcript.
2.14.2. The award must be received for contributions and achievements to programs under the direction of a University of Manitoba Faculty, Department, administrative unit, UMSU or GSA.

## 3. Accountability

3.1. The University Secretary is responsible for advising the President that a formal review of the Policy is required.
3.2. Student Affairs is responsible for the functioning, approval and promotion of the Co Curricular Record through the Office of Student Life and the Registrar's Office.

## 4. Secondary Documents

4.1. The Vice-President (Academic) and Provost may approve procedures, which are secondary to, and comply with this Policy.
5. Review
5.1. Formal Policy reviews will be conducted every ten (10) years. The next scheduled review date for this Policy is June 30, 2020.
5.2. In the interim, this Policy may be revised or rescinded if:
5.2.1. the Approving Body deems necessary; or
5.2.2. the relevant Bylaw, Regulations or Policy is revised or rescinded.
5.3. If this Policy is revised or rescinded, all Secondary Documents will be reviewed as soon as reasonably possible in order to ensure that they:
5.3.1. comply with the revised Policy; or
5.3.2. are in turn rescinded.

## 6. Effect on Previous Statements

### 6.1 This Policy supersedes STUDENT RECOGNITION RE COMMITTEE PARTICIPATION, March 9, 1976

## 7. Cross References




[^0]:    Comments of the Senate Executive Committee: The Senate Executive Committee endorses the report to Senate.

[^1]:    cc Richard Lobdell, Vice-Provost (Programs)
    Neil Marnoch, Registrar Weff Leclerc, University Secretary

[^2]:    Cc: Ms. B. Becker
    Ms. E. Goldie
    Dr. D. Sandham

[^3]:     AFHATRS

[^4]:    Comments of the Senate Executive Committee:
    The Senate Executive Committee endorses the report to Senate.

[^5]:    Comments of the Senate Executive Committee:
    The Senate Executive Committee endorses the report to Senate.

[^6]:    ${ }^{1} J C R$ for 2007 was published in July 2008.
    ${ }^{2}$ The impact factor is an indicator of how often, on average, an article in a journal published in the two previous years is cited by other articles in the current year.

[^7]:    ${ }^{3}$ This figure is the average of the following three figures: the 2007-2008 average expenditure at the University of Manitoba Libraries for an engineering book @ $\$ 285$, the average expenditure for a medical book@\$141, and the average expenditure for a science book @ $\$ 116$.

