

BOARD OF GOVERNORS

The material contained in this document is the Agenda for the next meeting of the Board of Governors.

Tuesday, January 25, 2011

**Alan A. Borger Sr. Executive Conference Room
E1-270 Engineering Information and Technology Complex
4:00 p.m.**

OPEN SESSION

Please call regrets to: 474-6165 no later than 9:00 a.m. the day of the meeting.

OFFICE OF THE UNIVERSITY SECRETARY



**UNIVERSITY
OF MANITOBA**

BOARD OF GOVERNORS

Alan A. Borger Sr. Executive Conference Room
E1-270 Engineering Information and Technology Complex
Tuesday, January 25, 2011
4:00 p.m.

OPEN SESSION

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MOTION TO MOVE TO CLOSED AND CONFIDENTIAL SESSION

MOTION TO ADJOURN



**Minutes of the Meeting of the Board of Governors
Open Session
November 16, 2010**

The meeting was held at 4:00 p.m. in the Alan A. Borger Sr. Executive Conference Room, E1-270 EITC.

Present: J. Lederman, Chair
J. Leclerc, University Secretary

M. Ates	D. Barnard	A. Berg	T. Bock	P. Bovey	E. Bowness
M. Forsen	N. Halden	G. Hatch	J. Hoskins	S. Jasper	M. Labine
H. Laube	M. Robertson	H. Sector	R. Zegalski		

Assessors Present:

B. Austin-Smith J. Sealey

Officials Present:

S. Foster J. Kearsey J. Keselman D. McCallum T. Voss

Regrets:

R. Dhalla J. Embree D. Sauer

1. Announcements

Ms. Lederman welcomed Mr. Doug Poapst, the actuary for the University Pension Plans. Ms. Lederman then announced that Ms. Labine had received the "Most Promising Researcher" from the Life Sciences Association of Manitoba and congratulated her on behalf of the Board. Finally, Ms. Lederman congratulated Mr. Bowness for being granted an interview for the Rhodes Scholarship and wished him success on behalf of the Board.

2. Approval of the Agenda

The Chair asked whether any member had concern with any of the items on the Consent Agenda. No concerns were brought forward.

It was moved by Mr. Zegalski and seconded by Mr. Berg:

THAT the agenda for the November 16, 2010 Open Session be approved as circulated.

CARRIED

3. Minutes

3.1 Open Minutes

It was moved by Dr. Barnard and seconded by Mr. Zegalski:

THAT the minutes of the September 28, 2010 Open Session be approved as circulated.

CARRIED

4. Unanimous Consent Agenda

It was moved by Ms. Bovey and seconded by Mr. Robertson that the Board of Governors approve and/or receive for information the following:

THAT the Board of Governors approve twelve new offers, three amended offers, and the withdrawal of five offers as set out in Appendix A of the Report of the Senate Committee on Awards [dated August 24, 2010].

THAT the Board of Governors approve seven new offers, six amended offers, and the withdrawal of two offers as set out in Appendix A of the Report of the Senate Committee on Awards [dated September 20, 2010].

THAT the Board of Governors receive for information the Annual Report of the Ombudsman, April 1, 2009 to June 30, 2010.

CARRIED

5. Report from the President

Dr. Barnard added to the written report included in the agenda, highlighting the recent AUCC mission to India which included fifteen University presidents including himself. Jim Dean from the International Centre and Minister Gary Goodyear also attended. The delegation met with partners and potential partners, and Minister Goodyear and the Indian Minister of Education addressed the group. In particular, the Indian Minister spoke about the challenge of educating sufficient numbers of students at the University level to get their economy where they want it to be.

Dr. Barnard also shared the good news that the University of Manitoba will become a member of the G13 group of Universities, which will be of particular benefit in relation to comparative data collection. With respect to the Stadium Project, Dr. Barnard indicated that there was nothing definitive to announce at this time and that discussions are ongoing.

9. Reports

9.1 Update from the UMSU and GSA Presidents

Ms. Laube reported that UMSU had been very busy planning a number of events, including fundraising. UMSU has submitted a proposal for an UMSU pub and looked forward to continuing discussions with Mrs. McCallum. Upcoming events include: Food for Fun, Holiday Hampers, Toy Drive, and Loonie Lines. These are annual fundraising events with which the Student Union is involved. Currently, UMSU is considering their choice for speakers for Celebration Week, and Ms. Laube will update the Board as more information becomes available.

Ms. Labine reported that the GSA has been very busy doing a revision of the governing documents for the GSA. She added that The Gradzette is now included with The Manitoban once per month and the new Editor was just hired last week. The hope is that student researchers will submit their research so that it can be broadcast to the whole University. Ms. Labine also stated that the GSA is developing a documents process to ensure documents are in order. The GSA is hiring a part time staff person to provide support for the new initiatives, including an endowment fund proposal, to address the funding shortcomings and a "time to completion" report from the Dean of Graduate Studies. Student feedback will be included in this document.

Ms. Labine added that the GSA is contributing to Holiday Hampers and there will be a holiday social at Bannatyne. Additionally, she reported that the AGM will be coming up and also that the GSA will be having a visiting speaker in March, the person who founded Doctors Without Borders. The GSA is working with LSAM to provide student development workshops and the hope is to get more involved with industry, possibly doing a Venture Zone pitch, possibly Shark Tank or Dragon's Den. Ms. Labine also stated that the GSA Executive met with the University Executive team and are working to address issues that have come up. Lastly the GSA has negotiated new Travel Awards with the Dean of Medicine for Bannatyne Graduate Students.

Motion to Move to Closed and Confidential Session

It was moved by Mr. Zegalski and seconded by Mr. Robertson:

THAT the Board of Governors move into Closed and Confidential Session.

CARRIED

Motion to Adjourn

It was moved by Ms. Bovey:

THAT the meeting adjourn.

CARRIED

Chair

University Secretary

PRESIDENT'S REPORT: January 25, 2011

GENERAL

The announcement of an agreement to proceed with building a new football stadium at the University of Manitoba has garnered a great deal of attention. After months of discussions, agreement was reached among the stadium partners in December 2010 on a plan to move the project forward. The new BBB Stadium Inc., a new corporate entity, comprises four partners: Government of Manitoba, The City of Winnipeg, The University of Manitoba and the Winnipeg Football Club, with each partner being represented by one director. John Alho was nominated as Director to represent the University of Manitoba.

The development of a comprehensive event day plan that ensures that congestion is mitigated and resident concerns are addressed while ensuring fan satisfaction is high priority for the University. A consultant has been hired to assist in providing several parking management plan options to the Stadium Event Day Working Group, which will present a plan to the Winnipeg Football Club for discussion and agreement. It is currently expected that the plan will be negotiated and agreed upon by the end of January 2011 and include:

- Security and crowd and traffic control.
- Operating standards for event days including noise and light pollution, but which will recognize that natural crowd and other noises and lighting related to Blue Bomber home football games will occur subject to applicable law.
- The use of parking areas on Landlord (the University) lands on event days, entitlement to revenues for such use, operation of a 'fan tram' parking shuttle system and responsibility for monitoring and enforcing parking infractions.

The winter months typically are the time when searches are underway to replace Deans of Faculties who have concluded their terms and this year is no exception. In 2011, we will welcome new Deans of Engineering, Arts, Law, Education and Pharmacy; the Engineering search has concluded and the remaining four are well underway. In addition, a search will begin in the coming weeks for a new Dean of the Asper School of Business and searches are underway for a new Chief Information Officer and an Executive Lead, Aboriginal Achievement.

The resource planning process this year brings a new innovation: both the planning template and the meeting format have been revised to foster inter-unit collaboration as well as support the integration of planning for all fund types.

In November 2010, Dr. Stan Amaladas joined the University of Manitoba as project lead for the Outstanding Workplace Initiative. A guiding team in support of this initiative has been established and begun its work, and consultations are ongoing with focus groups and individual staff members. A survey for existing UM staff has been posted on the UM web site and is accessible from the home page. Best practices are currently being researched and identified.

A framework and action plan on the basis of the consultation feedback and survey responses received will be drafted by May 2011. Based on emerging themes, a University wide Workplace Experiences Survey will be conducted for staff and faculty to provide feedback. The framework and survey results will be used to develop strategies for action (September 2011).

ACADEMIC MATTERS

- Michael Trevan, Dean, Faculty of Agricultural and Food Sciences, has recently been appointed to both the Canadian 4-H Council Board of Directors and to the Red River Exhibition Association Board of Directors.
- Mary Anne Beecher, architecture, has been elected Vice-President of the Alliance of Canadian Educators in Interior Design. She will serve as president of the organization in 2011-2012.
- John Stapleton, dean emeritus, education, received the honorary Doctor of Sacred Letters degree from Regis College, the Jesuit Faculty of Theology at the University of Toronto. Dr. Stapleton is an outstanding teacher, administrator, and community leader and was bestowed this honor by Regis College for his “contributions to society, culture and the church”.
- Joel Lamoureux, food science student, and Tara Ayotte, human nutritional science student, placed in the top two at the American Association of Cereal Chemists International (AACCI) Product Development Competition held in Savannah, Georgia for their product, "Beta Fruit Bar", an apple and blueberry layered gluten-free, naturally sweetened, oat glucan bar with dried fruits. University of Manitoba teams have placed first or second in each of the last four AACCI competitions.
- Silvia Barcellos Rosa, plant science graduate, has been awarded with the 2010 Seed of the Year Scholarship. This award is for a graduate student enrolled in a western Canadian university and developing research in plant breeding or genetics.
- Luke Nickel, student composer, will have his orchestral work, *L'étoile noyée*, premiered by the Winnipeg Symphony Orchestra during the Winnipeg New Music Festival. The premiere of this piece is part of his prize for winning the 2010 Emerging Composer Competition of the Canadian Music Centre, Prairie Region.
- Allison Pedersen, nursing graduate student, won the 2010 Sheu L. Lee Family Scholarship for Oncology Research (for full-time or part-time graduate students in Nursing, Psychology, or Medicine) awarded by the Canadian Cancer Society.
- Melissa Bailey, science, and Jody Reimer, science/arts students, were both awarded the prestigious Rhodes Scholarship in November 2010.
- David Tang, biology graduate student, is the 2010 winner of the Science Promotion Prize granted by the Canadian Council of University Biology Chairs. The prize is given annually in recognition of outstanding contribution to the promotion of biology in Canada. David Tang was one of the coordinators for the Let's Talk Science (LTS) program, sponsored by the Faculty of Science.
- The fall of 2010 marked the start of the Enrichment Program in Chemistry (EPIC), at the University of Manitoba. For five Saturday mornings, from November to February, 22 high school and homeschooled students from across Winnipeg gather at the Faculty of Science to learn about and experience the multifaceted nature of chemistry. EPIC provides opportunities for young students to explore various branches of chemistry by conducting experiments. The EPIC program was designed and is run by Horace Luong, chemistry, and includes undergraduate volunteers who coach participants during the sessions. Planning is already underway to build on the EPIC program for the next year.

- The Trudeau Foundation organizes an annual public policy conference which was held in Winnipeg this year. The University of Manitoba partnered with the Canadian Museum for Human Rights and the Winnipeg Art Gallery in hosting the 2010 conference on the theme of human rights. More than 250 people from across the country participated in the conference.
- The faculties of dentistry and medicine have merged their continuing education divisions to create a *new* interprofessional office for healthcare professional development. This *new* department will be known as the 'Office of Continuing Professional Development' and will feature the expansion of traditional discipline-specific programs to include joint programming for participants from dentistry, medicine, nursing and pharmacy. The two faculties will combine staff, resources and infrastructure to allow for more cost effective operations and enhanced program delivery.
- The faculty of social work BSW and MSW programs were re-accredited in 2007. The MSW received a seven-year re-accreditation approval and the BSW program received a four-year re-accreditation approval. A BSW report on progress was submitted in November 2010 and confirmation has been received that the BSW's re-accreditation has been extended by three additional years, effective July 2011. Therefore, both the MSW and BSW programs received re-accreditation approval until 2014.

RESEARCH MATTERS

- The federal government announced renewal of two Canada Research Chair holders at the University of Manitoba on November 24, 2010. They are: Tapash Chakraborty, Tier 1 Canada Research Chair in Nanoscale Physics (renewed at \$200,000 per annum over 7 years) and Marc Del Bigio, Tier 1 Canada Research Chair in Developmental Neuropathology (renewed at \$200,000 per annum over 7 years). Chakraborty's research explores the physical properties of systems on a scale of a few nanometers (one nanometer equals one billionth of a metre). Del Bigio's research is directed at understanding how and why injury and disease have different effects on the immature brain in comparison to the adult brain. The University of Manitoba currently holds 48 Canada Research Chairs.
- Distinguished Professor and Vice-President (Research) Digvir Jayas (biosystems engineering) was elected as the 2011 Foreign Fellow into the National Academy of Agricultural Sciences (NAAS) India, for his outstanding contributions in the area of agricultural engineering and technology. Jayas, the fifth researcher in Canada and the first Manitoban to receive this honour is a leader in carrying out interdisciplinary research. The number of elected foreign fellows is limited to two in each year. Dr. Jayas was formally inducted on January 1, 2011 in India.
- The Terry Fox Research Institute launched their Prairie Node in Manitoba and Saskatchewan at CancerCare Manitoba on December 2, 2010. The launch took place in conjunction with the two-day research symposium to discuss mutual research interests related to translational cancer research in Manitoba and Saskatchewan. The institute is partnering with the University of Manitoba, CancerCare Manitoba, and the Saskatchewan Cancer Agency to make their research pan-Canadian. They announced \$1.1 million in funding over the next four years to support the Prairie Node and the training of cancer researchers in Manitoba and Saskatchewan.

- Dr. David Lobb (soil science, Faculty of Agricultural and Food Sciences) has been appointed the first-ever research chair in watershed systems. The creation of the research chair at the university was recommended by both the Clean Environment Commission and the Lake Winnipeg Stewardship Board and is supported with an investment from the Province of Manitoba of \$1.25 million over five years. The new chair is a first step in developing new, innovative ways to clean up Lake Winnipeg.
- On December 3, 2010 the Government of Canada and Province of Manitoba announced \$1,837,917 in funding to 28 University of Manitoba agricultural research projects:

Researcher	Project Title	Funding
Neil Holliday (entomology)	Classical Biological Control of Root Maggots in Canola with <i>Aleochara Bipustulata</i>	\$111,000
Kim Ominski (animal science)	Mechanism of Delivery of Dried Distillers Grains with Solubles (DDGS) in Beef Cattle Overwintering Diets	\$99,375
Juan Carlos Rodriguez-Lecompte (animal science)	Development of a DNA-based Vaccine Against Avian Influenza	\$95,304
Curtis Rempel (Richardson Centre for Functional Foods and Nutraceuticals)	Utilization of Modern Dry Fractionation Processing for Production of Commercially Ready Flours and Fractions with Documented Performance for the Value Chain	\$92,816
Grant Pierce (physiology/Canadian Centre for Agri-Food Research in Health)	The Effect of Dietary Flaxseed on Patients with Heart Disease	\$89,200
Neil Holliday (entomology)	Economic Impact of Plant Bugs on Beans in Manitoba	\$87,600
Usha Thiyam (human nutritional sciences)	Development of an Integrated Raman-NIR Dual Channel Spectrograph for Wheat Quality Assessment	\$87,150
Ranjan Sri Ranjan (biosystems engineering)	Evaluation of the Feasibility of Tile Drainage/Sub-Irrigation System for Sustainable Production of Potato and Corn	\$85,875
Martin Entz (plant science)	Weed Management in Organic Dry Bean and Soybean Production	\$82,500
James House (human nutritional sciences)	The Impact of Omega-3 Egg Consumption on Indices of Vascular Health in Patients with Peripheral Arterial Disease	\$81,050
Genyi Li (plant science)	Transferring of Clubroot Disease Resistance Genes of Brassica Rapa and <i>B. oleracea</i> into Canola Using Synthetic <i>B. napus</i>	\$75,000
Mohammed Moghadasian (human nutritional sciences)	Anti-Atherogenic Effects and Potential Mechanisms of Action of Corn Bran-derived Ferulic Acid Sugar Esters in Experimental Animals	\$74,800
Martin Entz (plant science)	Cereal Research Centre–U of M Collaborative Organic Wheat Breeding Program: Early Generation Nurseries	\$72,600
Drs. J.C. Plaizier and D.O. Krause (animal science)	Reducing Subacute Ruminal Acidosis (SARA) in Cattle Through the Use of <i>Megasphaera elsdenii</i> Probiotic	\$70,000

Harold Aukema (human nutritional sciences)	Comparison of Flax and Fish Oils on Fatty Acids Metabolism to Eicosanoids	\$63,000
Paul Bullock (soil science)	Monitoring Soil Moisture Levels in Western Canada Using Real-time Weather Data	\$59,950
Peter Zahradka (physiology)	Modulation of Intestinal Glucose Metabolism by Buckwheat as a Potential Mechanism for Reduced Blood Glucose in Diabetes	\$55,770
Denis Krause (animal science)	Prevention of Colibacillosis Diarrheal Disease in Weanling Piglets Using Charcoal as an Alternative to Antibiotics	\$53,000
Martin Scanlon (food science)	Effects of Pea Seed Hull Fibre on the Physiochemical Properties of Bread Dough and Antioxidant Capacity of Bread	\$50,000
Jared Carlberg (agribusiness & agricultural economics)	Effects of Market Access Reforms on the Dairy Industry in Manitoba	\$48,000
Denis Krause (animal science)	Use of Potato Starch and Probiotics to Control Inflammatory Bowel Disease in Humans: Infectious Diseases Model in Pigs	\$48,000
Belay Ayele (plant science)	Regulation of Gibberellin Content and Pre-harvest Sprouting in Cereal Grains	\$45,000
Teresa De Kievit (microbiology)	Investigation of Pseudomonas chlorophis PA23 as a Biocontrol Agent for Managing Sclerotinia Stem Rot of Canola/Rapeseed	\$42,000
David Levin (biosystems engineering)	Production of Polyhydroxylaklanote (PHA) Biodegradable Plastics Using Agriculture Residues	\$39,600
Susan Arntfield (food science)	Dairy Products as Functional Foods and Nutraceuticals	\$38,836
Wolé Akinremi (soil science)	Downward Movement of Nitrate and Phosphorus from Liquid Versus Solid Swine Manure in an Annual and Perennial Cropping Systems	\$35,480
Peter Zahradka (physiology)	Regulation of Blood Pressure by Conjugated Linoleic Acid isomers: Effects on Adipocyte Size and eNOS	\$29,500
Trust Beta (food science)	The Potential of Canaryseeds as a Functional Food Ingredient	\$25,511

- Five researchers received funding totalling \$524,687 for 6 projects from four funding sources. They are:

Researcher	Funder	Project Title	Funding
Martin Nyachoti (animal science)	Puratone Corporation	Nutritive value of zero-tannin faba beans, corn DDGS and wheat-corn DDGS for swine	\$25,000
Annemieke Farenhorst (soil science)	Vegetable Growers' Association of Manitoba	Online vegetable crop protection guide: Increasing the efficiency of extension services to Manitoba	\$27,500
Mario Tenuta (soil science)	Agrium Inc	Limiting nitrous oxide emissions from soil using controlled release nitrogen products	\$29,187

Tricia Stadnyk (civil engineering)	Manitoba Hydro	Hydrological modelling in the Deer River watershed	\$42,500
Shawn Clark (civil engineering)	Manitoba Hydro	Modeling the effect of applied shear stress on cohesive riverbank erosion	\$120,000
Tricia Stadnyk (civil engineering)	Manitoba Hydro	Canadian precipitation analysis for hydrological modeling at Manitoba Hydro	\$280,500

Forty-nine researchers received funding totalling \$9,145,209 for 56 health research related projects:

Researcher	Funder	Project Title	Funding
Newman Stephens (physiology)	Andison (D.Elaine) Foundation Inc	Mechanism of non-specific airway smooth muscle hyperreactivity as a cause of post-asthmatic residual respiratory distress	\$25,000
Pawan Singal, (physiology)	Canadian Breast Cancer Foundation	Novel approaches in reducing morbidity and mortality in breast cancer patients	\$188,000
Christina Lee (medical rehabilitation)	Canadian Breast Cancer Foundation	Healthy eating and active living (HEAL) program level 2	\$50,000
Michael Mowat (biochemistry & medical genetics/cell biology)	Cancer Research Society, Inc.	Evaluate the role of the Dlc-1 and Dlc-2 tumor suppressor genes in mammary tumorigenesis and drug resistance	\$126,000
Laura Saward (medical microbiology)	Cangene Corporation	Interaction of Pseudomonas aeruginosa biofilms and epithelial cells: The impact of innate immune modulators	\$23,000
Harold Aukema (human nutritional sciences)	Children's Hospital Foundation of Manitoba Inc.	Effect of dietary interventions on disease progression in the pcy mouse model of nephronophthisis	\$38,000
Shyamala Dakshinamurti (pediatrics/physiologist)	Children's Hospital Foundation of Manitoba Inc.	Understanding the mitochondrial contribution to agonist-induced calcium release in hypoxic pulmonary arterial myocytes	\$38,000
Shayne Taback (pediatrics & child health)	Children's Hospital Foundation of Manitoba Inc.	Teenage pregnancy: Effect on bone health for mother and child	\$37,000
Richard Nason (surgery)	Children's Hospital Foundation of Manitoba Inc.	Biology of breathing	\$120,000
Tom Blydt-Hansen (pediatrics & child health)	Children's Hospital Foundation of Manitoba Inc.	Global metabolic profiling of acute rejection in pediatric kidney transplant recipients	\$39,000
Barbara Triggs-Raine (biochemistry & medical genetics)	Children's Hospital Foundation of Manitoba Inc.	Characterization of the molecular basis of Bowen Conradi Syndrome	\$41,404

Grant Pierce (physiology)	CIHR	Non-invasive determination of biomarkers in exhaled breath condensate (EBC). Effect of dietary n-3 fatty acids on selected biomarkers in both healthy individuals and patients with peripheral arterial disease (PAD) using bio-analytical separations and electronic nose	\$105,000
Aaron Marshall (immunology/biochemistry & medical genetics)	CIHR	Investigation of the role of TAPP proteins in controlling the migration of leukemic B lymphocytes	\$105,000
Rotimi Aluko (human nutritional sciences)	CIHR	In vivo effectiveness of food protein-derived peptide inhibitors of the renin angiotensin system: Renin versus angiotensin converting enzyme inhibition	\$90,000
Francis Plummer (medical microbiology)	CIHR	Characterization of CD8+ T cell responses involved in heterogeneity in progression to AIDS	\$105,000
Gary Kobinger (immunology/medical microbiology)	CIHR	Development and evaluation of a recombinant porcine adenovirus vaccine for post-exposure protection against Ebolavirus	\$105,000
Kevin Coombs (medicine)	CIHR	Systemic host protein changes and requirements for influenza virus infection	\$828,374
Michael Czubryt (physiology)	CIHR	Role of scleraxis in cardiac collagen gene expression	\$278,852
Andrew Halayko (physiology/internal medicine)	CIHR	The S100A8/A9-RAGE axis in airway inflammation hyperresponsiveness and remodeling	\$747,468
Grant Hatch (pharmacology/biochemistry & medical genetics)	CIHR	Regulation of cardiolipin metabolism	\$528,270
James Nagy (physiology)	CIHR	Structural composition and regulation of neuronal gap junctions in the CNS	\$576,056
Jiuyong Xie (physiology)	CIHR	Dissecting the molecular components of Ca ⁺⁺ signal-induced alternative pre-mRNA splicing	\$609,932
David McCrea (physiology)	CIHR	Organization and reflex control of spinal locomotor networks	\$755,200
Lorna Turnbull (law)	CIHR	Empirical analysis of the effectiveness of patent rights as an incentive for pharmaceutical innovation	\$300,000
Charles Bernstein (internal medicine)	CIHR	Evaluating the efficacy and safety of unfractionated heparin in septic shock	\$140,000
Ronald Bouchard (law)	CIHR	Empirical analysis of the effectiveness of patent rights as an incentive for pharmaceutical innovation	\$50,000

Jue He (psychiatry)	Health Sciences Centre Foundation	Therapeutic effect of fluoxetine on memory impairment and brain pathology in a transgenic mouse model of Alzheimer's disease	\$35,000
Ryan Amadeo (anaesthesia)	Health Sciences Centre Foundation	Cerebral oxygen desaturation in thoracic surgery patients is correlated with decreased cardiac output	\$35,000
Hope Anderson (pharmacy)	Heart & Stroke Foundation of Manitoba	Regulation of cardiac hypertrophy by the CB2 cannabinoid receptor	\$100,000
Todd Duhamel (kinesiology & recreation management)	Heart & Stroke Foundation of Manitoba	The role of physical activity to enhance myocardial calcium-transport for the prevention of diabetic cardiomyopathy	\$100,000
Jonathan McGavock (pediatrics & child health)	Heart and Stroke Foundation of Canada	Natural experiment: Investigating Manitoba's new policy for physical education for secondary students	\$50,000
Todd Duhamel (kinesiology & recreation management)	Manitoba Health Research Council	Exercise biology and cardiovascular health laboratory	\$100,000
Jue He (psychiatry)	Manitoba Health Research Council	Beneficial effects of venlafaxine on memory and brain pathology in Alzheimer's disease	\$100,000
Mark Nachtigal (biochemistry & medical genetics)	Manitoba Health Research Council	Investigating altered PCSK6 activity in ovarian cancer	\$60,760
John Wilkins (biochemistry & medical genetics/internal medicine)	Manitoba Health Research Council	Systems biology based approach to the study of T-lymphocyte migration	\$119,283
Karmin O (animal science)	Manitoba Health Research Council	Hepatic contribution to monocyte recruitment and atherogenesis	\$96,813
Sam Kung (immunology)	Manitoba Health Research Council	CD40 signaling and the role of a scaffold protein, JLP, in DC maturation and functions	\$100,000
Larry Jordan (physiology)	Manitoba Health Research Council	Brainstem and spinal cord mechanisms for control of locomotion	\$128,001
Shyamala Dakshinamurti (pediatrics/physiologist)	Manitoba Health Research Council	Functional regulation of pulmonary arterial thromboxane receptor by post-translational modification, in hypoxic persistent pulmonary hypertension of the newborn	\$100,000
Marc Del Bigio (pathology)	Manitoba Health Research Council	Preclinical studies for treatment of hydrocephalus	\$100,000
David Merz (biochemistry & medical genetics)	Manitoba Health Research Council	Timing and position: How a migrating cell knows when to turn	\$100,000
Francis Plummer (medical microbiology)	Manitoba Health Research Council	Determining the role of serpins in HIV-resistance	\$100,000

Afshin Raouf (cell biology/immunology)	Manitoba Health Research Council	NOTCH3 receptor: A key regulator of human mammary epithelial progenitor cell functions	\$102,192
Grant Pierce (physiology)	Manitoba Health Research Council	The effects of specific dietary fatty acids on cardiovascular health	\$113,048
Hao Ding (biochemistry & medical genetics)	Mount Sinai Hospital	The Terry Fox New Frontiers program project in genetic analysis of signaling pathways for vascular development and tumorigenesis	\$927,140
Zahra Kazem Moussavi (electrical & computer engineering)	Neural Diagnostics Pty Ltd	The diagnosis, and biomarker identification for neurological and mental disorders using EVestG	\$28,000
Leigh Anne Shafer (internal medicine)	University Medical Group	Mathematical modelling of infectious diseases	\$50,000
Kumar Pathak (surgery)	University Medical Group	Prognostic potential of markers for invasiveness in human thyroid cancer	\$30,000
David Hudge (internal medicine)	University Medical Group	Sleep research	\$75,000
Richard Keijzer (surgery)	University Medical Group	The role of micro RNA's mir-10a and mir200b in (ab-) normal pulmonary development in relation to congenital diaphragmatic hernia	\$25,000
Darryl Oble (pathology)	University of Manitoba	Combined genetic and immunophenotypic study of mycosis fungoides (MF)	\$50,000
Donna Martin (nursing)	University of Manitoba	A family health needs assessment with a First Nation community using critical and indigenous methodologies	\$24,063
Richard Keijzer (surgery)	University of Manitoba	The role of micro RNA's mir-10a and mir200b in (ab-) normal pulmonary development in relation to congenital diaphragmatic hernia	\$25,000
James Bolton (psychiatry)	University of Manitoba	Physical disease and the risk of suicide: A study of the Manitoba population	\$27,683
Sharon MacDonald (community health sciences)	University of Manitoba	The need to know more about rural, remote, and under-served Manitobans: Building on strength	\$150,000
Shyamala Dakshinamurti (pediatrics/physiologist)	Winnipeg Rh Institute Foundation Inc	Regulation of thromboxane receptor hypersensitivity in persistent pulmonary hypertension of the newborn	\$43,670

ADMINISTRATIVE MATTERS

- **Project ROSE** The implementation Phase of the Resource Optimization and Service Enhancement (ROSE) initiative is well underway. PricewaterhouseCoopers (PwC) is providing project management for a six month period, after which the university will transition to in-house project management.

A Program Governance Framework was established which includes weekly stream status and program status reporting. Risks, issues and decision logs will be maintained and reviewed at each meeting. Since late November, project charters and detailed integrated project plans have been developed for 19 in-scope initiatives within 6 broad stream areas as follows:

- Finance and Supply Chain Management – Billing to Cash; E-Procurement; Monthly Reporting; Strategic Sourcing; Travel and Expense; Target Purchasing Operating Model; , IT Procurement Model;
- Human Resources – Employee Self Serve and Management Information Portal; E-Recruitment;
- Information Technology – Service Delivery Model;
- Physical Plant – Work Order Improvement; Project Management Improvement;
- Research Services – Workflow Software and Document Management; and
- Students – Admissions; Financial Aid and Awards; Student Recruitment Customer Relationship Model; Future Students Website; Classroom Scheduling.

Funding for the current fiscal year has been approved in support of each initiative. Approval for funding beyond 2010-2011 is subject to further refinement of ROSE project initiative plans, and the development of the university's 2011-2012 operating budget.

A change and communications plan has been developed for the overall ROSE program. The change and communications team will also provide guidance to each stream to ensure communications, engagement and capability support are integrated into the project plans for each initiative.

A benefits and cost management framework is being developed to track both benefits and costs against budgets, performance targets and timelines.

Each stream consists of dedicated sponsors, leads, resources and advisors (unit and faculty representatives). Work in support of the various ROSE initiatives has commenced in most streams. For example, Financial Services has arranged for various product demonstrations including an on-line travel and booking tool, e-procurement software and financial reporting tools. A new accounts receivable module has been installed and is currently in test mode. A new agreement has been signed with Fisher Scientific that will save the University between \$150,000 and \$765,000 annually. Xerox has commenced the three month assessment phase for the print management partnership for which potential savings could reach \$1.8 M.

- **Resource Planning Update** - To support the 2011/12 resource planning and allocation process, Deans, Directors and Heads of Administrative units have been requested to submit a Strategic Resource Plan using a prescribed template. Both the planning template and the meeting format have been revised to foster inter-unit collaboration as well as support the integration of planning for all fund types.

Unit Strategic Resource Plans that support the University's Planning Framework are critical to achieving the University's institutional priorities. Deans, Directors and Heads of Administrative Units have been asked to build sufficient flexibility into their unit budgets to absorb a potential reduction of 3 percent as a combination of budget reductions and reallocations are likely. While unit heads are not precluded from requesting additional funds for 2011/12, the expectation is that the majority of new initiatives will be accomplished through the re-alignment of existing resources.

Resource allocation decisions will be based on the following criteria and will be assessed using the information provided in the strategic resource planning submissions and presentations:

- alignment of proposed activities with the University Strategic Planning Framework Priorities;
- evidence of novel/new academic and administrative collaborations;
- enrolment trends;
- degree to which proposed initiatives are reasonable and achievable;

- extent to which the resource plan presents a realistic response to the budget directive (i.e. planning for a potential 3% budget reduction);
- evidence of new revenue generating activities;
- degree to which OARs and ROSE initiatives will realize financial savings;
- relevant comparative data;
- health or sustainability of unit budgets; and
- overall quality of submission and adherence to template requirements.

Deans and Directors of Academic Units, Heads of Colleges and Heads of designated major administrative units will present their strategic resource plans to the President's Executive team in a group/cluster setting in late February/early March.

Unit Strategic Resource Plans will also be shared with the President's Budget Advisory Committee (BAC) to assist them in filling their role of advising on the Operating Budget and related resource allocation issues. In April, the President and Vice-Presidents will present to the BAC on the pressures and opportunities in each portfolio. Following receipt of feedback from the BAC and notification by the province on the operating grant and approved tuition increase levels, a draft budget including recommendations for changes to tuition fees and unit operating budget allocations will be presented to the BAC.

The BAC has the following members:

- President, Chair
- Vice-Presidents or designates, Academic and Administrative Vice-Presidents act as Vice-Chair as required
- University Secretary
- six faculty members from the Senate Planning and Priorities Committee, including the Chair
- two support staff members
- Chair of the Board of Governor's Finance, Administration and Human Resources Committee
- President of UMSU or designate
- President of the Graduate Students' Association or designate
- Assessor from the University of Manitoba Faculty Association
- Vice-Provost (Programs and Planning) – Resource Person
- University Budget Officer – Resource Person
- Executive Assistant to the President – Resource Person

The responsibilities of the Budget Advisory Committee are:

- To recommend to the President on the priorities for allocation of funds to meet the University's strategic objectives; and
- To review the annual budget that is recommended to the Board of Governors.

Budget materials will be presented to the Board of Governors in May, subsequent to notification of the COPSE operating grant and tuition levels.

- **Access Copyright** The Access Copyright license expired at the end of 2010. Recent years have seen significant developments in the law, particularly around the issue of "fair dealing", and the introduction of the proposed new *Copyright Act*, under Bill C-32. The use of copyrighted material by faculty, students, and staff has changed, with a growing emphasis on electronic resources. Instead of renewing this licence, and the equivalent licences it has with most other post- secondary institutions, Access Copyright has applied to the Copyright Board to certify a Tariff.

The proposed Tariff would result in substantial increases in the costs of using works (primarily print publications) in the Access Copyright repertoire. Many believe that such an increase cannot be justified in light of the growing significance of electronic resources, and the changing law. The University has every intention of paying for the use made of copyrighted material by members of our community. However, our view is that allocating the University's limited funds to modernizing our resources and services, rather than perpetuating the antiquated relationship with Access Copyright, would better place our institution in the modern world. For this reason, our institution (like many others) has decided that it will operate outside the Access Copyright Tariff. Although some adjustments will need to be made, we expect that the impact of this decision on the University community will be minimal.

As a result of these developments, the University of Manitoba has participated with other members of the Association of Universities and Colleges of Canada ("AUCC") in developing new guidelines which are being recommended for adoption across member institutions. The new Guidelines have been circulated to all faculty, staff and students and can also be found on the website of the University's Office of Legal Counsel: http://umanitoba.ca/admin/vp_admin/ofp/legal/index.html

Over the coming months, the University will continue to develop programs, educational materials, and learning opportunities to assist members of the University community with regard to the rapidly evolving issues around copyright. Work will continue on a more comprehensive copyright policy, to be brought to the Board for approval.

- **Knowledge Infrastructure Program** The University's projects funded under the federal Knowledge Infrastructure Program (KIP) are being audited. The process has begun and the Financial Services and the Government Relations Office is working with Industry Canada and the auditing consultants to provide all the required documentation.
- **Radioactive Material in Scrap Metal** A balance that was disposed of as scrap metal for recycling triggered a radiation detector at the recycling plant. The balance was retrieved and was found to contain small sealed radioactive sources. The sources were used to control static in some older balances (in this case, the one involved was manufactured between 1955 and 1966). The balance was not labeled by the manufacturer and was designed for use in a normal laboratory environment. While the balance posed no risk in normal use the sources were found to be strong enough to require special precautions during disposal. Environmental Health and Safety Office worked with the recycler, the scrap metal collection firm and Physical Plant to ensure that no other radioactive active sources had inadvertently been sent for recycling, created and distributed a hazard alert so that other suspect balances can be located and tested and made required notifications/reports to the Canadian Nuclear Safety Commission and Manitoba Environment. We have also shared this experience with other educational institutions that may face similar issues.
- **Pension Contributions** – Pension contributions will increase January 1, 2011 by 0.5% (matching increases for both employer and employee), 0.5% effective January 1, 2012 and 1.0% effective January 1, 2013. Over the three year period, these increased contributions will reduce the pension plan annual current service cost deficit by approximately \$ 4 million dollars.
- **Staff Anniversary Awards** – Receptions were held at the Fort Garry Campus (November 25) and Bannatyne Campus (December 3) for staff who were celebrating significant anniversary milestones of 5, 10, 15, 20, 25, 30, 35, 40 and 45 years.

- **University Centre** - The removal of the subfloor was carried out over the holidays and the new tile will be installed in sections with completion anticipated by end of February. Two wall murals and the proposed modular furniture in the Fireplace Lounge were reviewed with UMSU and will be in place by the end of February/March. Negotiations are ongoing with UMSU for an UMSU-managed community- focused pub to replace Wise Guys in University Centre. No other expressions of interest are being considered at this time.
- **CAW Bargaining Update** - The collective agreement in place between the University of Manitoba and members of the CAW Local 3007 (representing caretakers, food service workers, groundskeepers, engineering and skilled trades workers) expired in October, 2010, although the terms and conditions of the agreement will remain in place until at least October, 2011. There are 341 full-time, continuing and seasonal staff and 236 part-time, seasonal and casual staff who work in physical plant, food services and residences.

The university has been in active talks with the union to establish a new collective agreement. Recently, the union held a strike vote with members voting 87% in favour of a strike. No strike deadline has been set. Talks continued last week and more dates for bargaining meetings are being scheduled for later in January and early February. Contingency plans are in place to ensure the continuation of university activities during any labour dispute. Classes would continue.

- **Alcohol-Related Bus Events** - A letter banning 'booze cruises' was sent to all local nightclubs and bus companies that practice sending buses to the Fort Garry campus for the purpose of taking students to bars for excessive alcohol consumption. In light of a number of incidents over the past few months involving over-served students, it was felt prudent to inform bars and bus companies that any buses coming on campus for this purpose would be trespassing and would be dealt with accordingly. The Alcohol Policy is currently under review.
- **Domino Projects:**

ART Lab – Site services and foundation work are virtually complete. Some piling and underpinning work will be required at the Tache Hall connection which is scheduled in January. Concrete work completed on Level 200; walls, columns and elevator shaft; Level 300 floor (partial) and exterior V-shaped columns. Phase 3 began on November 2 and is progressing at an accelerated rate with substantial performance expected in October, 2011.

Biological Sciences Building – New tunnel concrete work is complete and backfilled. The foundation waterproofing is complete on the south, east and north sides. Mechanical and electrical rough-in work is ongoing on all levels. Project completion scheduled for March 31, 2011.

New Student Residence at Pembina Hall – Pembina Hall Residence - The construction schedule continues to be on track. Steel erection above Pembina Hall is complete and the Dining Hall has now reopened to residence students. The colour board for the interior design of the building is in the process of being evaluated and paint options will be applied to the mockup suite for review by Housing and Student Life representatives. Residence bedroom and lounge furniture tenders were issued the week of December 21st.

- **Delta Marsh Field Station** - The Faculty of Science has made the decision to continue funding the operation of the DMFS at a reduced level of activity. Because a number of buildings are unsafe, consultant Ian Shaw is working with the Faculty to identify buildings to be demolished and to also identify recommendations for moving forward. A meeting was held to review the draft report with Mark Whitmore and it will be re-issued by January 14th that will include final observations and recommendations.

- **Application of the Security Guard Act to Security-like Roles** – The University has been working with Manitoba Justice to ensure proper implementation of the new Provincially mandated Security Guard Act that applies to all staff working in a ‘security’ capacity (with the exception of Special Constables). The Act involves ensuring that the University is licensed as a formal Security Guard Employer and also involves training, screening and licensing processes for all security guard staff working for Residence Life and University Centre. Because the administrative process is ongoing and complex, (annual licensing requirements etc) the management of it will now be housed in Security Services which will coordinate and implement all security guard functions across both campuses.
- **Quadrangle Skating Rink** – A skating rink is available for staff and students to enjoy in the Quad. A tarp will protect the underlying grass from damage. This is a joint project with UMSU. The University prepared the rink and students are responsible for keeping the rink clear of snow throughout the winter months.
- **Curry Place Tree Lighting** - Three large deciduous trees have been identified for lighting along Curry Place to enhance the visual presence of the walkway. Those lights should be operational by the end of January.
- **Inspections** – The Winnipeg Fire Department is inspecting all Fort Garry and Bannatyne Campus buildings and has notified the University of violations which need to be addressed. Many of the violations are being addressed through maintenance or project work.
- **Wallace Building Flood** – Significant water damage, estimated at \$4.5 million, occurred to levels 100-400. Some staff have been able to move back to their spaces. A major asbestos/mould abatement program is being carried out. Tender packages are being prepared for carpet replacements and exterior wall painting.
- **Sustainability** – Waste Prevention Office achieved a 3% decrease in waste sent to landfill in 2009/10. Physical Plant expects to assume responsibility for the campus beverage container recycling program by March 2011. While UMSU/UMREG will have a role in dealing with some of the issues facing the recycling program via a steering committee, their role in managing the program will be transferred to the Waste Prevention Office. A cost-sharing agreement with UMSU will fund the wages of student employees.
- **Smartpark** – The grand opening of the **Monsanto Canola Breeding Centre** was held on November 23, 2010 hosting farmers, retail customers and other key industry stakeholders. The new breeding centre is home to the company’s high –tech research and breeding activities focused on top-yielding canola hybrids. The new 29,000 square ft. center was built to “LEED Silver” certification standards.

Innovation Plaza - Work has begun on Innovation Plaza in front of the RCFN with significant project funding from the Richardson Foundation. A bust of Baldur Stefansson will be created for the Plaza and revealed when the project is complete at the opening ceremony in September. Madeline Vrignon is the artist selected to create the bronze bust. She is a graduate of the University’s School of Art. The University will manage the process of commissioning the bust and the Richardson Foundation would cover all costs.

Eureka Project – The official ribbon cutting of the Eureka Incubator expansion took place on November 9, 2010 hosting incubator clients, industry, government and university stakeholders and supporters.

Manitoba Conservation – Trees for Tomorrow will complete their planting of 10,000 tree seedlings in the spring of 2011. These young trees are a mix of mostly poplar cultivars and some white spruce. Half were planted last spring in the north half of Parcel B along Pembina Highway.

EXTERNAL MATTERS

- The External Relations division has renewed its vision and team purpose statements.

Vision:

- To be acclaimed as international advancement leaders who inspire exciting, mutually beneficial relationships that drive the University of Manitoba's success as a global leader in teaching, learning, research and community engagement.

Team purpose:

- We are committed to a fully integrated program of communication and engagement that inspires deep and long-term relationships with alumni, key stakeholders and potential partners to build better futures for students and the community.
- The division is presently determining its goals and strategies. These will include:
 - focusing on meeting its current fundraising objectives for defined capital projects, research initiatives and student support while developing a long-term campaign strategy to support new opportunities;
 - creating a fully-integrated marketing and communications network that unites the University community in a single vision and mandate while recognising and celebrating its many unique entities;
 - positioning the President and the University of Manitoba leadership as global thought leaders specifically in areas reflecting the strategic planning framework.
 - In addition to internal organizational matters, the Vice-President has conducted face to face meetings with 20 alumni, donors and stakeholders.
 - As of December 22, 2010, \$15,470,879.49 has been raised in philanthropic support. These are preliminary numbers as the department is still busy processing end of year donations. Examples of giving in November and December include:
 - Anonymous gift of \$256,000 to the Faculty of Science Endowment Fund;
 - Anonymous gift of \$114,000 to Bison Men's Basketball;
 - Stu Clark gift of \$3,019,805.17 to the Asper School of Business to support the academic programs of the Stu Clark Centre for Entrepreneurship; and
 - N. Murray Edwards gift of \$252,000 in support of a Financial Data Centre in the Asper School of Business.
 - The December 2010 issue of On Manitoba was sent in mid-December to 114,652 graduate households. The alumni e-news, Alumni FYI (featuring alumni and university news), was sent to approximately 45,300 e-mail addresses in late November and another in late December.
 - Welcome to the University of Manitoba iPhone app! The first version of the free app – which provides users with the ability to view the UM newsroom, podcasts and videos as well as the ability to share them across platforms – has been approved by Apple and is now included in the iTunes store listings. The app will be updated regularly with new student-focused tools.
 - Videos of the Sol Kanee Lecture Series (Arthur V. Mauro Centre for Peace and Justice) are now available on the University of Manitoba YouTube channel. The series, which has a dedicated playlist on UM's YouTube channel, currently includes four of the eight Sol Kanee lectures with the final four to be uploaded soon. The videos show the lectures in their entirety.



AGENDA ITEM: Review of the Chancellor Election Process

RECOMMENDED RESOLUTION:

That the Board of Governors:

- a) approve the attached Bylaw outlining the Role of the Chancellor; and
- b) approve the attached Policy governing the Election of the Chancellor.

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

CONTEXT

1. In accordance with section 46 of *The University of Manitoba Act*, the Chancellor shall be elected by the Committee of Election composed of the members of the Board of Governors and the members of the Senate. The Chair of the Board of Governors will serve as the Chair of the Committee of Election, and the University Secretary, as Secretary of Senate, is designated as Secretary of the Committee of Election.
2. In the past, the Board of Governors and the Senate have jointly established an *ad hoc* Committee to oversee the procedures for nomination and election of a Chancellor, including setting the date of the election. The Chair of the Board of Governors and the Vice Chair of the Board of Governors have served as the Board's appointees to the *ad hoc* Committee, with the Chair of the Board serving as the *ad hoc* Committee's Chair. Senate's appointees have been determined by an election on the floor of Senate.
3. During each election process, the procedures for nominating, electing and announcing the Chancellor are developed by the *ad hoc* Committee and approved by the Senate and the Board of Governors. All nominees are presented to the Committee of Election.
4. During the Committee of Election process in 2009, the *ad hoc* Committee of Election recommended that the process for the election of the Chancellor be reviewed.

BACKGROUND

1. In reviewing the process at other institutions, it was noted that there was a wide variation in procedures across the country, with some Chancellors being appointed, others elected by joint Senate/Board of Governor Committees (or equivalent), and a recent amendment to the University Act in BC calls for the Chancellor to be appointed by the Board on the recommendation of the alumni association, after consultation with the senate (or council).

It was also noted that some institutions have joint Board Senate policies that provide for Committees which solicit and review nominations and recommend a candidate to the Committee of Election.

2. It was also noted that some institutions have a Position Profile for the office of Chancellor that has been approved by both the Board and the Senate.
3. The current terms of reference and membership of the *ad hoc* Committee of Election at the University of Manitoba are narrow in scope, dealing mainly with matters of process and timing. Widening the membership on this *ad hoc* Committee and expanding the mandate of this *ad hoc* Committee could provide a useful service to the Committee of Election and the University.
4. Recent experience has also shown that the current process of bringing forth all nominees to the full Committee of Election for voting has compromised the confidentiality of candidate information, which can be embarrassing to both the candidates and the University.
5. Additionally, the current process is not transparent, does not mandate any University body with seeking potential candidates who could best serve the University, and does not provide an opportunity for the *ad hoc* Committee to meet with potential candidates to be briefed on the role and commitment required of the Chancellor.

Recommendations:

1. That a Chancellor Search Committee be established. It is anticipated that with an expanded membership, the Chancellor Search Committee could solicit, interview and consider nominees for Chancellor and provide a recommendation of a candidate to the Committee of Election of the Chancellor.
2. Proposed membership of the Chancellor Search Committee is:
 - Chair, Board of Governors as Chair of the Committee
 - President and Vice-Chancellor, or designate
 - Three members of Senate who are not students (in addition to the President), elected by Senate
 - Two members of the Board of Governors (in addition to the Chair), elected by the Board
 - Two student senators, one undergraduate and one undergraduate, as elected by Senate
 - Two members of the Alumni Association, nominated by the Alumni Association

- University Secretary, as Secretary (non-voting)

3. In the 2009 Chancellor election, a position profile for the office of Chancellor was developed. This document has been made into a Bylaw and is proposed for formal approval.

IMPLICATIONS:

The proposed election process will provide for greater transparency with regard to the process, allow for greater diligence in reviewing potential candidates, and reduce the risk of leaks from bringing multiple candidates to the large Committee of Election.

CONSULTATION:

The Board Chair, the President, the Senate Executive Committee and the Board Governance Committee have reviewed this proposal. Senate approved the proposal on January 5, 2011.



Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Senate Executive	December 8, 2010
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Board Governance Committee	November 22, 2010
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Senate	January 5, 2011
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Board Governance CHe.</i>	<i>January 11 /11</i>
<input type="checkbox"/>	<input type="checkbox"/>		

Submission prepared by: Jeff Leclerc
[Signature]

Submission approved by: *[Signature]*

Attachments

- Bylaw outlining Role of the Chancellor
- Policy governing the Election of the Chancellor



AGENDA ITEM: Sustainability Policy

RECOMMENDED RESOLUTION:

That the Board of Governors approve the Sustainability Policy and accept for information the Sustainability Procedures approved by the Vice-President (Administration) and the Vice-President (Academic) and Provost.

Action Requested: X Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

The University is a signatory to the Halifax Declaration, the Talloires Declaration and the University and College Presidents' Climate Change Statement of Action for Canada by which it agreed to demonstrate a clear commitment to the principles and practices of sustainable development and climate protection.

The University of Manitoba, in compliance with the Sustainable Development Act, adopted financial management guidelines for evaluating the sustainability of programs and activities and procurement guidelines that require the consideration of sustainable development principles and procurement decisions.

The University is already strong in promoting many sustainable initiatives. A policy statement in this regard will provide a framework for existing and future initiatives and foster a University culture that comprehensively and consistently supports and promotes values and principles of sustainability.

RESOURCE REQUIREMENTS:

Not applicable.

CONNECTION TO THE UNIVERSITY PLANNING FRAMEWORK:

The University seeks to become a leader in campus sustainability. This entails attention to the wise use of natural resources, pollution prevention, remediation of adverse environmental impacts, full-cost accounting, implementing sustainable targets and protocols and subsequently assessing their achievement and continuing development and promotion of sustainable development initiatives.

The University of Manitoba shall integrate sustainability principles in all levels of its strategic planning and within its academic and administrative processes.

IMPLICATIONS:

Approval of the Sustainability Policy and Procedures by the Board of Governors will signify the University's support for becoming a leader in campus sustainability. This support will be critical as the Sustainability Committee moves forward to develop and implement a Sustainability Action Plan

CONSULTATION:

Representatives on the Sustainability Committee which include faculty from Engineering, Architecture, Clayton Riddell Faculty of Environment, Earth and Resources; students from UMSU, UMREG and GSA; support staff from Purchasing Services, Buildings and Grounds Department of Physical Plant, Associate Vice-President (Administration) Office as well as the Vice-President (Administration) and the Vice-President (Academic) and Provost. During the development of the Sustainability Action Plan there will be four working groups created with representatives from across the campuses; focus groups, interviews and surveys will also be conducted as appropriate.



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Richard McCall</i>	<i>Dec 17/10</i>
<input type="checkbox"/>	<input type="checkbox"/>	<i>D. McClellan</i>	<i>Dec 17, 2010</i>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>FAHR</i>	<i>Jan. 11/11</i>
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		

Submission prepared by:

D. McClellan

Submission approved by:

This must be the President, a Vice-President, or the University Secretary.

Attachments

Please list any related material attached. Ideally attachments for any given submission will not exceed ten (10) pages.



Title: Sustainability Policy

Effective Date: January 25, 2011 Review Date: 2020

Approving Body: X Board of Governors X Senate X Administration (specify): Vice-President (Administration)

Authority: University of Manitoba Act Section # Other Legislation [name and section #] Bylaw [name and section #] Regulation

Implementation:

Contact:

Applies to: X Board of Governors members X Senate members X Faculty/School Councils X Students X External Parties Neighbours X Employees All Staff

1.0 Reason for Policy

- 1.1 The World Commission on Environment and Development defined Sustainable Development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. Broadly speaking, sustainable development is fundamentally about decision-making that balances economic growth together with the social well-being of individuals and the community and the protection of the natural environment.
1.2 The University is a signatory to the Halifax Declaration, the Talloires Declaration and the University and College Presidents' Climate Change Statement of Action for Canada by which it agreed to demonstrate a clear commitment to the principles and practices of sustainable development and climate protection.
1.3 The University of Manitoba, in compliance with the Sustainable Development Act, adopted financial management guidelines for evaluating the sustainability of programs and activities and procurement guidelines that require the consideration of sustainable development principles in procurement decisions.
1.4 The University is already strong in promoting many sustainable initiatives. A policy statement in this regard will provide a framework for existing and future

initiatives and foster a University culture that comprehensively and consistently supports and promotes values and principles of sustainability.

2.0 Policy Statement

- 2.1 The University seeks to become a leader in campus sustainability. This entails attention to the wise use of natural resources, pollution prevention, remediation of adverse environmental impacts, full-cost accounting, implementing sustainable targets and protocols and subsequently assessing their achievement, and continuing development and promotion of sustainable development initiatives.
- 2.2 The University of Manitoba shall integrate sustainability principles in all levels of its strategic planning and within its academic and administrative processes.
- 2.3 Our community – faculty, staff, students, alumni and neighbours – shall be broadly involved and encouraged to participate in sustainability planning and initiatives at the University. Priorities will be established in a participatory manner and in recognition of potential financial constraints.

3.0 Accountability

- 3.1 The University Secretary is responsible for advising the President that a formal review of the Policy is required.
- 3.2 The Vice-President (Administration) and Vice-President (Academic) are responsible for the communication, administration and interpretation of this policy.

4.0 Secondary Documents

- 4.1 The Approving Body may approve Procedures which are secondary to and comply with this Policy.
- 4.2 Administration may approve Procedures which are secondary to and comply with this Policy.

5.0 Review

- 5.1 Formal Policy reviews will be conducted every ten (10) years. The next scheduled review date for this Policy is 2020.
- 5.2 In the interim, this Policy may be revised or rescinded if:
 - (a) the Approving Body deems necessary; or
 - (b) 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:
 - (a) comply with the revised Policy; or
 - (b) are in turn rescinded.

6.0 Effect on Previous Statements

6.1 A This Policy supersedes the following:

- (a) all previous Board/Senate Policies, Procedures, and resolutions on the subject matter contained herein; and
- (b) all previous Administration Policies, Procedures, and directives on the subject matter contained herein;

7.0 Cross References

Cross referenced to: (1) Purchasing Policy

UNIVERSITY OF MANITOBA PROCEDURE(S)

No. _____	Effective Date: _____
Title: _____	Review Date: _____
Approving Body: <input checked="" type="checkbox"/> Board of Governors <input type="checkbox"/> Senate <input type="checkbox"/> Administration (specify): _____	
Authority: <input type="checkbox"/> Bylaw [name and section #] _____ <input type="checkbox"/> Regulation [name and section #] _____ <input checked="" type="checkbox"/> Policy [name and section#] <u>Sustainability Policy</u>	
Implementation: Vice-President (Academic) and Vice-President (Administration)	
Contact: <u>Associate Vice-President (Administration)</u>	
Applies to:	
<input checked="" type="checkbox"/> Board of Governors members <input checked="" type="checkbox"/> Senate members <input checked="" type="checkbox"/> Faculty/School Councils <input checked="" type="checkbox"/> Department Councils <input checked="" type="checkbox"/> Students	<input checked="" type="checkbox"/> External Parties _____ [Specify applicable employee organizations] <input checked="" type="checkbox"/> Employees _____ [Specify applicable employee organizations and employment groups]

1.0 Reason for Procedure(s)

To establish a committee structure for promotion and implementation of the University's Policy: Sustainability

2.0 Procedure(s)

2.1 A Sustainable Development Committee shall be established that is advisory to both the Vice-President (Academic) and the Vice-President (Administration).

2.2 The Committee's responsibilities are to:

- a) Develop a University of Manitoba Sustainability Action Plan identifying recommended sustainability goals, initiatives, actions and target dates to support the Sustainability Policy.
- b) Assist the Sustainability Coordinator to educate the University community and to communicate and promote implementation of the Sustainability policy action plan.

2.3 The Committee Chair shall be appointed by the Vice-President (Academic) and Vice-President (Administration) for a three year renewable term from among the members of the Committee.

- a) The University's Sustainability Coordinator
- b) Two representatives from UMSU
- c) One representative from GSA
- d) 4 faculty members appointed by the Vice-President (Academic)
- e) 4 administrative members appointed by the Vice-President (Administration)
- f) 1 representative from UMREG
- g) In addition to such members as the Vice-Presidents appoint from time to time.

With the exception of student representatives which will be appointed or renewed

each year, and with the exception of persons holding specific positions, the appointed members will serve three year renewable terms. Meetings shall be held once a month or at the call of the chair.

3.0 Accountability

- 3.1 The University Secretary is responsible for advising the President that a formal review of the Procedure is required.
- 3.2 The Associate Vice-President (Administration) is responsible for the communication, administration and interpretation of this policy.

4.0 Review

- 4.1 Formal Procedure reviews will be conducted every ten (10) years. The next scheduled review date for this/these Procedure(s) is/are 2020.
- 4.2 In the interim, this/these Procedure(s) may be revised or rescinded if:
 - (a) the Approving Body deems necessary; or
 - (b) the relevant Bylaw, Regulation(s) or Policy is revised or rescinded.

5.0 Effect on Previous Statements

- 5.1 This/these Procedure(s) supersede(s) the following:
 - (a) all previous Board/Senate Procedures, and resolutions on the subject matter contained herein; and
 - (b) all previous Administration Procedures, and resolutions on the subject matter contained herein; and
 - (c) all previous Faculty/School Council Procedures stemming from the Faculty/School Council Bylaw and academic and admission Regulations and any resolutions on the subject matter contained herein; and

6.0 Cross References

Cross References

[Indicate names and numbers of other specific Governing Documents which should be cross referenced to this Governing Document. Include section # of other Governing Documents if appropriate.]

Cross referenced to: (1) _____ (3) _____
(2) _____ (4) _____



AGENDA ITEM: Site approvals related to the Stadium Development and the Sport and Active Living Precinct

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve: the extension of the Sport and Active Living Precinct, the relocation of the play fields, and the siting of the Active Living Centre on Parking Lot X [approved by Senate on December 1, 2010].

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

The Stadium Development project led to the displacement of soccer fields on that site. It is proposed that the Sport and Active Living Precinct be extended to the west to allow for new play fields to be located west of the Indoor Soccer Complex.

The proposed siting of the Active Living Centre on the current parking lot X at the northwest corner of University Crescent and Dafoe Road would proved a highly visible location and would mark a significant entry point to the central campus.

RESOURCE REQUIREMENTS:

This report speaks only to siting issues.

IMPLICATIONS:

Siting the play fields adjacent to the Indoor Soccer Complex will allow for parking in the S/D parking areas located in front of the Indoor Soccer Complex. This siting will also open opportunities to use the washroom and change room facilities of the Complex.

The siting of the Active Living Centre will provide a highly visible location which will assist the University in developing world class recreational and athletics facilities, advancing student and community health and wellness interests and promoting the University's interaction with the community. Locating this Centre on "X" lot will reduce parking in this area; discussions are underway to provide additional parking elsewhere.

ALTERNATIVES:

N/A



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
x	x	SPPC	October 25, 2010
x	x	Senate Executive	November 17, 2010
<input type="checkbox"/>	<input type="checkbox"/>	Senate	December 1, 2010
<input type="checkbox"/>	<input type="checkbox"/>		

University Secretary

Submission prepared by:

Submission approved by: University Secretary.

Attachments

- Report of SPPC [October 25, 2010]

Report of the Senate Planning and Priorities Committee RE: Site approvals related to Stadium Development and the Sport and Active Living Precinct

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 physical plant development.
2. The SPPC Space Planning Subcommittee met on September 23, 2010 to review a proposal to extend and further consolidate the Sport and Active Living Precinct.

Observations:

The committee observed and noted the following:

1. The physical and functional relationships between various program elements are well considered in a separate report authored by Alan Simms, Associate VP Administration.
2. Extending the Sport and Active Living Precinct to the west to include the Indoor Soccer Complex and new play fields is appropriate. This will also include the S/D parking area which provides 575 parking stalls.
3. Relocating the existing playing fields to the west and developing artificial play fields adjacent to the soccer complex creates more opportunities for extending soccer programs while providing easily accessed parking.
4. As noted in the Report: "The Active Living Centre will benefit from the bulk of funding from the new football stadium development. The ALC is intended in part to provide a replacement track for the 'gritty grotto' and will make use of existing shower and locker facilities in Frank Kennedy. It will assist the University in developing world class recreational and athletics facility; advancing student and community health and wellness interests and in; promoting the University's interaction with the community".
5. The Active Living Centre is to be located on X lot at the northwest corner at University Crescent and Dafoe Road. The site is highly visible and marks a significant entry point to the central campus. As such, the architectural response should strive to communicate our institutional aspirations. The proposed ACL building is being designed by Cibinel Architects under the direction of a very capable steering committee. The preliminary design work is very exciting and shows great promise providing that the budget can meet noted ambitions.
6. The parking on X lot will be reduced; however, discussions are underway to consider underground parking in the 'gritty grotto' area.

<p><u>Comments of the Senate Executive Committee:</u> The Senate Executive Committee endorses the report to Senate.</p>

Recommendations:

The SPPC recommends:

**THAT Senate approve and recommend to the Board of Governors that it approve
Extend the precinct; to relocate the play fields and; to site the Active Living Centre
on X lot, and recommends these to Senate for approval.**

Respectfully submitted,

Ada Ducas, Chair
Senate Planning and Priorities Committee



AGENDA ITEM: Report of the Senate Committee on Awards [dated October 18, 2010]

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve six new offers, six amended offers, and the withdrawal of eleven offers as set out in Appendix A of the Report of the Senate Committee on Awards [dated October 18, 2010].

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

At its meeting of October 18, 2010, the Senate Committee on Awards approved six new offers, six amended offers, and the withdrawal of eleven offers as set out in Appendix A of Report of the Senate Committee on Awards [dated October 18, 2010].

RESOURCE REQUIREMENTS:

Awards will be funded from the various sources of funding identified within the Report.

IMPLICATIONS:

N/A

ALTERNATIVES:

N/A

CONSULTATION: *[delete if not applicable]*

All of these award decisions meet the published guidelines for awards as approved by Senate and were reported to Senate for information on December 1, 2010.



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
X	X	Senate Committee on Awards	October 18, 2010
X	X	Senate Executive	November 17, 2010
X	X	Senate	December 1, 2010
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		
		Senate	

Submission prepared by:

Submission approved by: University Secretary

Attachments

- Report of the Senate Committee on Awards [October 18, 2010]

REPORT OF THE SENATE COMMITTEE ON AWARDS

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 *Non-Acceptance of Discriminatory Awards*, such offers shall be submitted to Senate for approval. (Senate, October 7, 2009)

Observations

At its meeting of October 18, 2010, the Senate Committee on Awards approved six new offers, six amended offers, and the withdrawal of eleven offers, as set out in Appendix A of the *Report of the Senate Committee on Awards* (dated October 18, 2010).

Recommendations

On behalf of Senate, the Senate Committee on Awards recommends that the Board of Governors approve six new offers, six amended offers, and the withdrawal of eleven offers, as set out in Appendix A of the *Report of the Senate Committee on Awards* (dated October 18, 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
October 18, 2010

1. NEW OFFERS

Shirley Ann Akins Bursary

Shirley Ann Akins (B.Sc./64) has established an endowment fund at the University of Manitoba, with a bequest of \$45,444.85 in 2010. The purpose of the fund is to provide a renewable bursary for students in the Department of Biological Sciences. The available annual interest from the fund will be used to offer one bursary to an undergraduate student who:

- (1) is enrolled full-time in the Faculty of Science, in Year 3 of any B.Sc. degree program delivered by the Department of Biological Sciences;
- (2) has achieved a minimum degree grade point average of 2.5;
- (3) has demonstrated financial need on a University of Manitoba bursary application form.

The award is renewable in the fourth year of study at the University of Manitoba provided that the recipient:

- (1) is registered full-time in the Faculty of Science, in Year 4 of any B.Sc. degree program delivered by the Department of Biological Sciences;
- (2) has achieved a minimum sessional grade point average of 2.5;
- (3) continues to demonstrate financial need on the standard University of Manitoba bursary application form.

The bursary will normally be offered biennially. In the event that a recipient does not qualify for continuation of the bursary, the University may select another qualified student to receive the funds that would have been awarded to the initial recipient.

The selection committee shall be named by the Head of the Department of Biological Sciences (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.

Shirley Ann Akins Undergraduate Thesis Prize

Shirley Ann Akins (B.Sc./64) has established an endowment fund at the University of Manitoba, with a bequest of \$37,182.50 in 2010. The purpose of the fund is to provide support for students in the Department of Biological Sciences who undertake an Honours thesis project and to offset costs related to the research project. The available annual interest from the fund will be used to offer one prize to an undergraduate student who:

- (1) has completed Year 3 of a 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 strongest research proposal for an Honours thesis project, as determined by the selection committee.

Candidates will be required to submit an application that includes a research proposal (maximum 500 words) and a budget listing expected research-related expenses, and a letter of support from their thesis supervisor.

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.

Canada-Wide Science Fair / University of Manitoba Entrance Scholarship

The Office of the Vice-President (Research) at the University of Manitoba offers a renewable entrance scholarship for students who have been awarded a Gold Medal for a senior project at the Youth Science Canada - Canada-Wide Science Fair. Each year, a maximum of twenty scholarships, valued at \$5,000 each, will be offered to undergraduate students who:

- (1) have been awarded a Gold Medal for a senior project in any division of the Youth Science Canada – Canada-Wide Science Fair within the previous two years;
- (2) qualify for admission to University 1 or any direct entry program;
- (3) subsequently enrol full-time (minimum 24 credit hours) in University 1 or any direct entry program.

The award is renewable, at the same value, in the second year of study provided that the recipient:

- (1) continues to be enrolled full-time (minimum 24 credit hours) in any faculty or school, excepting the Faculty of Graduate Studies;
- (2) has achieved a minimum degree grade point average of 3.0.

A student who has been awarded more than one Gold Medal for a senior project (i.e. in his or her grade 11 and grade 12 years) will be offered only one renewable Canada-Wide Science Fair / University of Manitoba Entrance Scholarship.

The Canada-Wide Science Fair / University of Manitoba Entrance Scholarship may not be held with any other University of Manitoba entrance scholarship excepting the Chown Centennial Scholarship and the Advanced Placement and International Baccalaureate Scholarship Enhancement. A recipient who is also named to receive a University of Manitoba renewable entrance award may hold that award, in name only, in the first and second years of study. He/she will be entitled to hold the renewable entrance award in the third and fourth years of study, provided that he/she meets the renewal criteria for that award.

The Office of the Vice-President (Research) will notify Financial Aid and Awards of the recipients each year.

Lamari Travel Award

An endowment fund has been established at the University of Manitoba as a tribute to Dr. Lakhdar Lamari's personal qualities and career accomplishments. Dr. Lamari joined the Department of Plant Science in 1988 as a Post Doctoral Fellow and subsequently served as a faculty member from 1990 until 2009. The available annual interest from the fund will be used to offer one or more awards, with a maximum value to be set by the Head of the Department of Plant Science, on the recommendation

of the Plant Science Graduate Studies Committee. The Lamari Travel Award will be offered to graduate students who:

- (1) have completed at least one year of an M.Sc. or Ph.D. program delivered by the Department of Plant Science;
- (2) have achieved a minimum degree grade point average of 3.0 (or equivalent) based on the last 60 credit hours of study;
- (3) will be attending a scientific meeting in a plant science related area and will be presenting the results of their research at the meeting (poster or oral presentation);
- (4) have demonstrated research ability based on the abstract submitted and the proposed research results to be presented at the meeting.

Applications will be available annually from the Department of Plant Science and must be submitted to the Associate Head of the Department of Plant Science by the advertised deadline. Funding must be used within the 12 month period following the date that the award recipients are announced. Recipients graduating within the 12 month period following the date of the award offer must use the funding no later than six months from the date of convocation.

Recipients may not hold more than one of the Lamari Travel Award, the Morrison Travel Award, or the Helgason Travel Award in the same calendar year.

Selection of the recipients will be based on: 1) academic performance; 2) comments from letters of recommendation; 3) the quality of the abstract submitted and of the proposed research results to be presented; 4) the potential value of the meeting to the student's development.

The award recipient will submit receipts for travel, registration, hotel and food expenses (based on current University of Manitoba *per diem* rates). Expenses will be reimbursed up to the current maximum value of the award.

The Dean of the Faculty of Graduate Studies will ask the Chair of the Awards Committee of the Department of Plant Science to convene 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.

Burton Allen (B.A.) Robinson Athletic Scholarship

Mr. Burton (B.A.) Robinson has bequeathed \$79,045.68 to the University of Manitoba, in 2009. His gift has been used to establish an endowment fund for the Burton Allen (B.A.) Robinson Athletic Scholarship. The Manitoba Scholarship and Bursary Initiative has made a contribution to the fund. B.A. was an avid football fan and a good friend to the Bison Football program. His generosity over the years helped not only the football program but all varsity sports at the University. The Scholarship honours his long-time love of sport. The available annual interest from the fund will normally be used to offer two scholarships of equal value, with a maximum value equal to a recipient's full tuition and ancillary fees.* One scholarship will be offered to a member of the football team and one to a student athlete participating in another interuniversity sport.** The scholarships will be offered to students who:

- (1) are Canadian citizens or permanent residents;
- (2) are eligible to compete in Canadian Interuniversity Sport;
- (3) have completed at least one year of full-time study at the University and, in the previous academic session, have completed at least 18 credit hours;

- (4) have achieved a minimum sessional grade point average of 2.0;
- (5) in the next ensuing academic session are enrolled full-time in any Faculty or School;
- (6) have demonstrated athletic ability in their sport.

*In any given year that there is additional revenue available, one or more additional scholarships, with a maximum value equal to a recipient's full tuition and ancillary fees, may be offered to students in the same sport designated to receive the second scholarship allocation that year.

**The second scholarship will be offered each year to a different sport, according to the following cycle: track and field, women's soccer, men's volleyball, women's volleyball, men's hockey, women's hockey, cross country, men's basketball, women's basketball, and swimming.

The selection committee shall be named by the Dean of the Faculty of Kinesiology and Recreation Management (or designate).

The terms of this award will be reviewed annually against the Canadian Interuniversity Sport (CIS) criteria governing "University Academic Scholarships with an Athletic Component", currently numbered 50.10.3.5 in the CIS Operations Manual.

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.

Walker Wood Foundation Bursary for Science

The Walker Wood Foundation provides an annual contribution of \$4,000 to offer a bursary for undergraduate students enrolled in the Faculty of Science. The donor has agreed to fund the bursary for a term of three years, beginning in the 2010-2011 academic session. One bursary will be offered to an undergraduate student who:

- (1) is a Canadian citizen who has graduated from a high school in Manitoba;
- (2) is enrolled full-time in the Faculty of Science, in the second year of any Major or Honours degree program;
- (3) has achieved a minimum degree grade point average of 3.0;
- (4) has displayed leadership, community and/or extracurricular involvement;
- (5) has demonstrated financial need on the standard University of Manitoba bursary application form.

The Walker Wood Foundation Bursary for Science is renewable in each of the third and fourth years of study provided the recipient:

- (1) continues to be enrolled full-time in the Faculty of Science, in the third or fourth year of any Major or Honours degree program;
- (2) has achieved a minimum sessional grade point average of 3.0;
- (3) continues to demonstrate financial need on the standard University of Manitoba bursary application form.

The bursary cannot be divided.

In the event that there is no qualified applicant, the selection committee will have the discretion to offer the award to a student from the general pool of bursary applicants who meets criteria (1) through (3) and (5), as set out in the first paragraph.

In the event that a recipient does not qualify for continuation of the award, the University may offer that bursary to the next qualified student (i.e. from the original group of applicants), in the same year of study, either as a renewable bursary for a student in the third and fourth years of study (provided that the recipient meets the renewal criteria) or as a one-time bursary for a student in the fourth year of study.

In addition to the standard University of Manitoba bursary application form, candidates must submit a supplementary application identifying the high school from which they graduated, and including a statement (maximum one page) in which they (a) outline specific experiences that speak to their leadership abilities and (b) describe their community and/or extracurricular involvement.

The selection committee will be named by the Dean of the Faculty of Science (or designate).

2. AMENDMENTS

Aboriginal Issues Press Scholarships

Two changes were made to the terms of reference for the Aboriginal Issues Press Scholarships:

- In criterion (4), ‘cumulative grade point average’ was updated to ‘degree grade point average.’
- The description of the application materials has been revised to read: “Applicants will be required to submit a one-page statement explaining how their research relates to Aboriginal issues and how this research will be or has been disseminated in order to be considered for this award.”

Lee Dunlop Anderson Centennial Bursary

The value of the initial gift made to establish the endowment fund was corrected from: \$20,792 to: \$10,507.80 in the opening paragraph of the terms of reference for the Lee Dunlop Anderson Centennial Bursary.

William G. Eamer Co-op Program Scholarship

The terms of reference for the William G. Eamer Co-op Program Scholarship were amended to increase the number of scholarships from: one to: two. A number of editorial changes were made.

William G. Eamer Professional Scholarship

The terms of reference for the William G. Eamer Professional Scholarship were amended to increase the number of scholarships from: two to: three.

Helgason Travel Award for Graduate Students in Plant Science

The follow revisions were made to the terms of reference for the Helgason Travel Award for Graduate Students in Plant Science.

- A statement was added to clarify that the available annual interest from the fund will be used to offer one or more travel awards.
- The terms now set out a required degree grade point average of at least 3.0 (or equivalent) based on the last 60 credit hours of study.
- A condition that recipients must have demonstrated research ability based on the abstract submitted and the proposed research results to be presented at a scientific meeting has been made explicit.

- An application deadline and the date by which recipients were to have been selected were deleted.
- The description of the selection committee was changed to: The Dean of the Faculty of Graduate Studies will ask the Chair of the Awards Committee of the Department of Plant Science to convene the selection committee for this award, from: The selection committee shall be named by the Head of the Department of Plant Science and shall be chaired by the Associate Head of that department.
- A number of editorial changes were made.

Morrison Travel Award for Graduate Students in Plant Science

The follow revisions were made to the terms of reference for the Morrison Travel Award for Graduate Students in Plant Science.

- A statement was added to clarify that the available annual interest from the fund will be used to offer one or more travel awards.
- A required degree grade point average of at least 3.0 (or equivalent) based on the last 60 credit hours of study was added.
- A condition that recipients must have demonstrated research ability based on the abstract submitted and the proposed research results to be presented at a scientific meeting has been made explicit.
- A restriction that recipients may not hold both the Morrison Travel Award and the Helgason Travel Award has been broadened and now reads: “Recipients may not hold more than one of the Morrison Travel Award, the Lamari Travel Award, or the Helgason Travel Award in the same calendar year.”
- An application deadline and the date by which recipients were to have been selected were deleted.
- The following description of the selection committee was added to the terms: The Dean of the Faculty of Graduate Studies will ask the Chair of the Awards Committee of the Department of Plant Science to convene the selection committee for this award.
- A number of editorial changes were made.

3. WITHDRAWALS

CMA – Manitoba Award in Cost Accounting

CMA – Manitoba Award in Managerial Accounting

CMA – Manitoba Award in Advanced Managerial Accounting

The CMA – Manitoba Award in Cost Accounting, the CMA – Manitoba Award in Managerial Accounting, and the CMA – Manitoba Award in Advanced Managerial Accounting, annually funded awards for students in the I.H. Asper School of Business, were withdrawn at the request of the donor.

Freshwater Institute Silver Anniversary Fund

Terms of reference for the Freshwater Institute Silver Anniversary Fund were withdrawn at the request of the donor. Monies from the endowment fund, which had been used to support a travel award for graduate students who had a supervisor at the Freshwater Institute, have been transferred to a general trust fund for graduate fellowships (FOP 623057 307204 5000).

Heinz Jordan Prize in Painting

Heinz Jordan Prize in Printmaking

The Heinz Jordan Prize in Painting and the Heinz Jordan Prize in Printmaking, annually funded awards for students in the School of Art, were withdrawn at the request of the donor.

Manitoba Hatchery Association Scholarship

The Manitoba Hatchery Association Scholarship, an annually funded scholarship for an undergraduate student in the Bachelor of Science in Agriculture (Animal Science), was withdrawn, as the Association no longer exists.

North Winnipeg Credit Union Awards

The North Winnipeg Credit Union Awards, an annually funded prize for graduate and advanced undergraduate students pursuing studies in the area of Ukrainian Studies, was withdrawn at the request of the donor.

Prize in Manitoba Politics and Voting Behaviour

The Prize in Manitoba Politics and Voting Behaviour, an annually funded award for the student who achieves highest standing in either Manitoba Politics and Voting Behaviour or Manitoba History, was withdrawn at the request of the donor.

Sicilian Club of Winnipeg Scholarship

The Sicilian Club of Winnipeg Scholarship, an annually funded award for students who have completed at least one Italian language course, was withdrawn at the request of the donor. The award has not been offered for several years.

Walker Wood Foundation Bursary

Terms of reference for the Walker Wood Foundation Bursary, for students in the Physician Assistant Education Program were withdrawn. The award was established for a term of two years, which has now come to a close.



AGENDA ITEM: Report of the Senate Committee on Awards [dated November 18, 2010]

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve five new offers, five amended offers, and the withdrawal of three offers as set out in Appendix A of the Report of the Senate Committee on Awards [dated November 8, 2010].

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

At its meeting of November 8, 2010, the Senate Committee on Awards approved five new offers, five amended offers, and the withdrawal of three offers as set out in Appendix A of Report of the Senate Committee on Awards [dated November 8, 2010].

RESOURCE REQUIREMENTS:

Awards will be funded from the various sources of funding identified within the Report.

IMPLICATIONS:

N/A

ALTERNATIVES:

N/A

CONSULTATION: *[delete if not applicable]*

All of these award decisions meet the published guidelines for awards as approved by Senate and were reported to Senate for information on January 5, 2011.



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
X	X	Senate Committee on Awards	November 8, 2010
X	X	Senate Executive	December 8, 2010
X	X	Senate	January 5, 2011
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		
		Senate	

Submission prepared by:

Submission approved by: University Secretary

Attachments

- Report of the Senate Committee on Awards [November 8, 2010]

REPORT OF THE SENATE COMMITTEE ON AWARDS

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 *Non-Acceptance of Discriminatory Awards*, such offers shall be submitted to Senate for approval. (Senate, October 7, 2009)

Observations

At its meeting of November 8, 2010, the Senate Committee on Awards approved five new offers, five amended offers, and the withdrawal of three offers, as set out in Appendix A of the *Report of the Senate Committee on Awards* (dated November 8, 2010).

Recommendations

On behalf of Senate, the Senate Committee on Awards recommends that the Board of Governors approve five new offers, five amended offers, and the withdrawal of three offers, as set out in Appendix A of the *Report of the Senate Committee on Awards* (dated November 8, 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
November 8, 2010

1. NEW OFFERS

Joseph P. Boreskie Award in Family Medicine

In memory of their father, Dr. Joseph P. Boreskie, the Boreskie family has established an endowment fund at the University of Manitoba, with an initial gift of \$16,370 in 2010. In recognition of Dr. Boreskie's commitment and contributions to the practice of family medicine in rural Manitoba, the fund will be used to offer an entrance scholarship to students entering the Faculty of Medicine. The available annual interest from the fund will be used to offer one scholarship to a student who:

- (1) has been admitted to the first year of the Undergraduate Medical Education Program in the Faculty of Medicine;
- (2) has declared rural status in the supplementary application to the Faculty and has scored high on the Faculty's rurality index;
- (3) provides a letter of interest in rural family medicine;
- (4) has ranked high on the Admission Composite Score.

The selection committee will be named by the Dean, Faculty of Medicine (or designate).

Lorna Irene Eggertson Scholarship

Lorna Irene Eggertson has established an endowment fund at the University of Manitoba, with a bequest of \$150,000 in 2010. The purpose of the fund is to provide scholarship support for undergraduate students at the University. Initially, the fund will be used to offer scholarships for students in the Faculty of Science. The terms may be amended in the future to change the beneficiaries based on the University's priorities for undergraduate student awards. The available annual interest from the fund will be used to offer a variable number of scholarships, with a minimum value of \$1,000 each, to undergraduate students who:

- (1) have completed at least 24 credit hours of study;
- (2) are enrolled full-time in the Faculty of Science;
- (3) have achieved a minimum degree grade point average of 4.0.

The Lorna Irene Eggertson Scholarship may not be held with other University awards totalling \$2,500 or greater.

The selection committee will be named by the Director of Financial Aid and Awards (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.

Barbara Jean Payne Memorial Award in Social Gerontology

Dr. Barbara Payne has bequeathed \$10,000 to the Centre on Aging at the University of Manitoba, to offer a scholarship for graduate students pursuing studies in social gerontology. Dr. Payne's research expertise was in the fields of social gerontology, health sociology, oral health and older adults, and successful aging. She received her PhD from the University of Toronto, Department of Behavioural Science, University of Toronto in 1994. That same year, she joined the Centre on Aging and the Department of Sociology as a Research Associate and Assistant Professor, and was subsequently promoted to the rank of Associate Professor in 1998. In 2004, she was appointed Senior Scholar St. John's College and in 2005 she joined the Department of Community Health Sciences, Faculty of Medicine. She received a Research Fellowship from the Centre on Aging in 2004-2005 and was appointed Acting Director of the Centre on Aging in 2009.

The scholarship will be offered until the capital and income have been exhausted. The value of the award may be adjusted in the final year. Each year, one scholarship valued at \$1,000, will be offered to a graduate student who:

- (1) is enrolled full-time in the Faculty of Graduate Studies, in a Masters or Doctoral program;
- (2) has achieved a minimum degree grade point average of 3.0 (or equivalent) based on the last 60 credit hours (or equivalent);
- (3) is conducting or will conduct thesis research in the area of social gerontology.

Candidates will be required to submit an application that will consist of a description of their proposed or ongoing research, a current academic transcript(s), and three academic letters of reference from professors at a post-secondary institution.

The award is not automatically renewable but previous recipients may apply.

The Dean of the Faculty of Graduate Studies (or designate) will ask the Director, Centre on Aging to name the selection committee.

Troy Suelzle Memorial Award in Dentistry

In memory of Dr. Troy Suelzle (D.M.D./2001), his classmates and colleagues, Dr. Rick Mehta and Dr. Matt Danchuk, have established an endowment fund at the University of Manitoba, with an initial gift of \$5,000, in 2010. 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 prize for a student who:

- (1) has completed the second year of the D.M.D. program, in the Faculty of Dentistry;
- (2) has achieved a minimum degree grade point average of 3.0;
- (3) has shown the most improvement in crown and bridge fixed prosthetics, based on practical and didactic test scores, during the academic session for which the award is tenable.

The selection committee will be the Faculty of Dentistry Scholarship 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.

Western Manitoba Dental Society Bursary

The Western Manitoba Dental Society has established an endowment fund at the University of Manitoba, with an initial gift of \$10,868.91, in 2010. The fund will be used to offer bursaries for students in the Faculty of Dentistry. The available annual interest from the fund will be used to offer one bursary to an undergraduate student who:

- (1) is a resident of Manitoba;
- (2) is a graduate of a rural Manitoba high school (i.e. outside of the City of Winnipeg);
- (3) is registered full-time in the Faculty of Dentistry, in the Doctor of Dental Medicine program;
- (4) has achieved a minimum degree grade point average of 2.0;
- (5) has demonstrated financial need on the standard University of Manitoba bursary application form.

In any given year that there is no qualified candidate from rural Manitoba, the bursary may be offered to any other student who is a resident of Manitoba and meets criteria (3) through (5).

The selection committee will be the Awards Committee of the Faculty of Dentistry.

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

Shirley Bradshaw Scholarship Fund

The following revisions were made to the terms of reference for the Shirley Bradshaw Scholarship Fund, which provide for one undergraduate scholarship and one graduate scholarship.

- The value of the undergraduate scholarship has been amended from: \$450 to: forty-percent of the available annual interest from the endowment fund.
- The value of the graduate scholarship has been amended from: \$500 to: sixty-percent of the available annual interest from the endowment fund.
- The description of the selection committee, which was previously named by the Director of Financial Aid and Awards, has been amended. The committee will now be named jointly by the Director of Financial Aid and Awards (or designate) and the Dean, Faculty of Graduate Studies (or designate).
- A number of editorial changes were made.

James Palmer Lewis Student Award

Several amendments have been made to the terms of reference for the James Palmer Lewis Student Award.

- Students in Year 4 of the Bachelor of Environmental Design program will now be eligible to hold the Award, in addition to students in Year 3 of the program. Graduate students in the following Masters' programs will no longer be eligible to hold the Award: Architecture, City Planning, Interior Design, Landscape Architecture.

- In criterion (2), the gpa requirement has been changed from: minimum cumulative grade point average of 3.5 based on the last two years of full-time study to: minimum degree grade point average of 3.5.
- A number of editorial changes were made.

Manitoba Women's Institute Bursary

Two changes have been made to the terms of reference for the Manitoba Women's Institute Bursary.

- A reference to 'cumulative grade point average' has been updated to 'degree grade point average.'
- The description of the selection committee has been changed from: the Dean of the Faculty of Human Ecology or designate, the President of the Manitoba Women's Institute or representative, and a representative of the Financial Aid and Awards Office to: the Student Standing and Awards Committee of the Faculty of Human Ecology.

Manitoba Women's Institute Bursary - Esther Thompson MacKay Memorial Bursary

Two changes have been made to the terms of reference for the Manitoba Women's Institute Bursary – Esther Thompson MacKay Memorial Bursary.

- A reference to 'cumulative grade point average' has been updated to 'degree grade point average.'
- The description of the selection committee has been changed from: the Dean of the Faculty of Human Ecology or designate, the President of the Manitoba Women's Institute or representative, and a representative of the Financial Aid and Awards Office to: the Student Standing and Awards Committee of the Faculty of Human Ecology.

Paul Stewart Memorial Transportation Prize

Several amendments were made to the terms of reference for the Paul Stewart Memorial Transportation Prize.

- The prize was formerly offered to the student who obtained highest standing in Transportation, Economics and Research (61.733). As the course is no longer offered, the prize will now be offered to a student who:
 - (1) has completed at least one year of study in the Faculty of Agricultural and Food Sciences;
 - (2) has achieved a minimum degree grade point average of 3.0;
 - (3) has achieved the highest grade in Transportation Principles (currently numbered ABIZ 2210) in the academic session for which the award is tenable.
- The description of the selection committee has been changed from: named by the Dean of Graduate Studies and will include the instructors of the courses [Transportation, Economics and Research (61.733)] to: the Awards Committee of the Faculty of Agricultural and Food Sciences.
- A number of editorial changes were made.

3. WITHDRAWALS

Gordon Arnott Bursary

Terms of reference for the Gordon Arnott Bursary, an annually funded award for undergraduate students in the Faculty of Architecture, were withdrawn at the request of the donor.

UMSU – Harold Buchwald Award for Outstanding Extracurricular Contribution

Terms of reference for the annually funded UMSU – Harold Buchwald Award for Outstanding Extracurricular Contribution were withdrawn at the request of the donor.

UMSU – I.H. Asper Award for Outstanding Extracurricular Contribution in Broadcasting and Journalism

Terms of reference for the annually funded UMSU – I.H. Asper Award for Outstanding Extracurricular Contribution in Broadcasting and Journalism were withdrawn at the request of the donor.



AGENDA ITEM: Proposal to Establish a Professorship in Neurobiology Research

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve the establishment of a Professorship in Neurobiology Research [endorsed by Senate on December 1, 2010].

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

The development of the Neurobiology Research Program is aligned with the Faculty of Medicine, Winnipeg Regional Health Authority, Provincial and National and Canadian Institutes of Health Research priorities for research development. It links well with the new Kleysen Institute for Advanced Medicine and the state-of-art investigation and treatment facilities in that centre and the strong clinician scientists working there.

The term of the appointment will be five years.

RESOURCE REQUIREMENTS:

Funding for the proposed Chair shall be derived from a \$1 million endowment created with funds raised by the Faculty of Medicine.

The Faculty expects that the initial endowment will be sufficient to support a professorship with the commitment of the program and the Faculty to continue fundraising to increase the endowment sufficiently to convert the professorship to a chair in the future.

IMPLICATIONS:

The proposed professorship will be an essential academic leadership role within the Neurobiology Research Program which will enable a faculty member to dedicate time and resources to their research program. The professorship will allow the Neurobiology Research Program to recognize excellence and to hire or retain an outstanding faculty member with a leadership role.

CONSULTATION:

In accordance with the University's policy on Chairs and Professorships, this proposal has been endorsed by the Vice-President (Academic) and Provost and the Senate Committee on University Research.

This proposal was considered and endorsed by Senate on December 1, 2010.



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
X	X	Vice-President (Academic) & Provost	July 6, 2010
X	X	Senate Committee on University Research	October 15, 2010
X	X	Senate Executive	November 17, 2010
X	X	Senate	December 1, 2010
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		
		Senate	

Submission prepared by:

Submission approved by: University Secretary

Attachments

- Proposal to Establish a Professorship in Neurobiology Research



UNIVERSITY
OF MANITOBA

OFFICE OF THE
VICE-PRESIDENT (RESEARCH)

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Telephone (204) 474-6915
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www.umanitoba.ca

MEMORANDUM

TO: Mr. Jeff Leclerc, University Secretary

FROM: Digvir Jayas, Vice-President (Research)
and Chair, Senate Committee on University Research

DATE: October 15, 2010

SUBJECT: Proposal to establish a Professorship in Neurobiology Research

Attached is the proposal to establish a Professorship in Neurobiology Research. The Vice-President (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.

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

**PROPOSAL TO ESTABLISH A PROFESSORSHIP
IN NEUROBIOLOGY RESEARCH,
FACULTY OF MEDICINE,
UNIVERSITY OF MANITOBA**

SUMMARY:

The Neurobiology Research Program currently under development in the faculty of medicine is a collaborative project between the Winnipeg Regional Health Authority, Health Sciences Center with governance and oversight to be provided by the Joint Operating Division. The program will be housed in the new Kleysen Institute of Advanced Medicine. Recruits to the program will be expected to develop independently funded research programs in neurobiology in such areas as: neuropharmacology, developmental neurobiology, neurological and psychiatric disease, neuroinflammation, cerebrovascular biology, stroke, neurotrauma, and regenerative neuroscience. All candidates will be expected to develop a strong collaboration in translational research with clinical departments.

The proposed professorship will be at an essential academic leadership role within the program.

TYPE OF APPOINTMENT:

Professorship

NAME OF PROFESSORSHIP:

Professorship in Neurobiology Research

PURPOSE AND OBJECTIVES OF PROFESSORSHIP:

The purpose of the Professorship is to enable a faculty member to dedicate time and resources to their research program. The Professorship will allow the Neurobiology Research Program to recognize excellence and to hire or retain an outstanding faculty member with a leadership role.

RELATIONSHIP TO THE PROPOSING UNIT

The recipient of the professorship will be a full-time integral member of the Neurobiology Research Program and will report to the Director of The Neurobiology Research Program

THE METHOD BY WHICH THE PROFESSORSHIP WILL BE FUNDED:

The professorship will be funded by a ONE MILLION (\$1,000,000.00) DOLLAR endowment created with funds raised by the Faculty of Medicine.

GENERAL AND SPECIFIC REQUIREMENTS FOR THE PROFESSORSHIP:

The individual holding the Professorship will normally hold a full time appointment in the Faculty of Medicine at the Professor level. The individual will have a PhD and/or MD. The successful applicant will be actively involved in and a member of Neuroscience Research Program.

TERM OF APPOINTMENT:

The Professorship will be awarded on a competitive basis for a five-year period. An interim review of the incumbent will occur at two years and a complete review at five years.

SELECTION COMMITTEE:

The Selection Committee will be appointed by the Dean and consist of the Dean Of Faculty of Medicine (or designate), the Associate Dean (Research), Director of the Neuroscience Research Program, one graduate student selected by the Graduate Students Association, and up to three other members of the Faculty of Medicine appointed by the Dean

OTHER PROVISIONS:

It is expected that the initial endowment will be sufficient to support a professorship with the commitment of the program and the faculty to continue fundraising to increase the endowment sufficiently to convert the professorship to a chair in the future.

May 23, 2010

JDS

CC: J. Johansson / N. Schneide



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

July 6, 2010

To: Digvir Jayas, Vice-President (Research)
From: Joanne C. Keselman, Vice-President (Academic) and Provost
Re: Professorship in Neurobiology Research

Postl fax

Dr. J. Dean Sandham, Dean of the Faculty of Medicine, has provided a letter of support for the proposal to establish a professorship in neurobiology research. This professorship aligns with strengths in a number of departments and will be housed in the Kleysen Institute of Advanced 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 than 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.

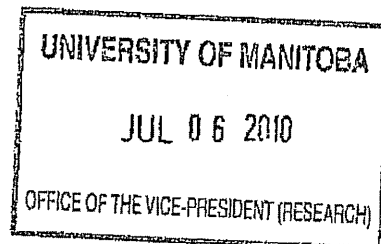
The proposed professorship in neurobiology satisfies all of the above requirements. The funding for the chair shall be derived from a \$1 million endowment fund established in the Faculty of Medicine.

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. B. Postl, Dean, Faculty of Medicine





UNIVERSITY
OF MANITOBA

Faculty of Medicine



Office of the Dean
260 Brodie Center
727 McDermot Avenue
Winnipeg, Manitoba
Canada R3E 3P5
Telephone (204) 789-3557
Fax (204) 789-3928

May 27, 2010

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

Dear Dr. Keselman:

RE: Professorship in Neurobiology

The Faculty of Medicine is pleased to strongly endorse and recommend the development of a Professorship in Neurobiology.

The development of the neurobiology research programme is aligned with the Faculty, WRHA, Provincial and National and CIHR priorities for research development. It links extremely well with the new Kleysen Institute for Advanced Medicine and the state-of-art investigation and treatment facilities in that centre and the strong clinician scientists available to do the work.

The proposed Professorship also aligns well with Faculty investment in five new positions in Neurobiology to be located in the Kleysen Institute for Advanced Medicine and start-up research funding that we have applied to this programme. The programme will be a joint endeavour of the WRHA/Health Sciences Centre site and the Faculty of Medicine and will be a banner programme for the research element of the academic health sciences network under the governance of the Joint Operating Division.

.../2

Dr. Joanne Keselman
May 27, 2010
Page Two

Some of the most exciting work in modern biological research is occurring in understanding of both chronic and acute neurological disease. The presence of this Professorship will allow us to attract a strong academic leader for the programme and allow recruitment of very high quality candidates on a national/international basis. It will also provide a leadership role for the development of graduate basic science and clinical students.

In summary, we are delighted to support the creation of this Professorship.

Yours truly

A handwritten signature in black ink, appearing to read "J. Dean Sandham". The signature is fluid and cursive, with a large initial "J" and "S".

J. Dean Sandham, MD FRCPC FACP
Dean

JDS:min



AGENDA ITEM: Proposal for a Bachelor of Science Joint Honours Degree in Computer Science – Statistics

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve the proposal for a Bachelor of Science Joint Honours Degree in Computer Science – Statistics [as recommended by Senate January 5, 2011].

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

All new programs require approval of the Board of Governors prior to being submitted to the Council on Post-Secondary Education (COPSE).

The Faculty of Science currently offers honours degree programs in both Computer Science and Statistics. The proposed program would train students to be proficient and highly skillful Computer Scientists and Statisticians and would allow students to continue on with graduate studies in either discipline.

RESOURCE REQUIREMENTS:

There are no new resources required to implement this program. The program would use existing instructional resources including instructors, computers and other laboratory equipment to deliver the program.

IMPLICATIONS:

This proposal will provide undergraduate students with a very strong background in both Computer Science and Statistics and a rigorous training to use both computer skills and statistical methods to solve practical real-world problems.

CONSULTATION:

This proposal is forwarded to the Board of Governors by Senate after consideration by the Faculty of Science, SCCCC, and Senate Executive.



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
x	x	Senate Committee on Curriculum and Course Changes	November 10, 2010
x	x	Senate Executive	December 8, 2010
x	x	Senate	January 5, 2011

Submission prepared by: Senate

Submission approved by: University Secretary.

Attachments

- Report of the Senate Committee on Curriculum and Course Changes [dated November 10, 2010]
- Program Proposal

Report of the Senate Committee on Curriculum and Course Changes on a Proposal to Introduce a Bachelor of Science Joint Honours Degree in Computer Science - Statistics

Preamble

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are found on the website at:
http://www.umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/497.htm.
2. The Senate Committee on Curriculum and Course Changes considered a proposal to introduce a Bachelor of Science Joint Honours Degree in Computer Science – Statistics.

Observations

1. The Faculty of Science currently offers honours degree programs in both Computer Science and in Statistics.
2. The proposed program would train students to be proficient and highly skillful Computer Scientists and Statisticians. The proposed program would provide students with the necessary knowledge and skills to enter the workplace or to continue on with graduate studies in either discipline.
3. No additional resources are required to offer this program which will use existing resources. No new courses will be introduced for the proposed program.

Recommendation

The Senate Committee on Curriculum and Course Changes recommends THAT:

Senate approve and recommend to the Board of Governors, the proposal to introduce a Bachelor of Science Joint Honours Degree in Computer Science – Statistics.

Respectfully submitted,

Professor H. Frankel, Chair
Senate Committee on Curriculum and Course Changes

/mb

Faculty of Science
University of Manitoba

Computer Science – Statistics Joint Honours Program

SECTION I: Program Description

1.1 Describe the program, including each area of concentration, as it would appear in a catalogue.

The joint Honours program in Computer Science and Statistics is an intense 4-year program which is a combination of the Computer Science Honours program and the Statistics Honours program. The purpose of this program is to provide students with the necessary knowledge and skills to enter the workplace or to continue on with graduate studies in either discipline.

1.2 Program educational objectives and learning outcomes:

The objective of this program is to train students to be proficient and highly skillful Computer Scientists and Statisticians. The proposed program will provide students with a very strong background in both Computer Science and Statistics and a rigorous training to use both computer skills and statistical methods to solve practical real-world problems.

Upon graduation from this program, students are expected to have gained sufficient knowledge in both Computer Science and Statistics and acquired efficient skills in computer programming, data handling and statistical analysis. These are very important in the modern era when dealing with computation and data analysis. The student will get enough of the Statistics Department's courses to be accredited by the Statistical Society of Canada and enough of the accredited Computer Science courses to have a good background in Computer Science basics to handle advanced algorithms, data mining or bio-theoretic techniques.

1.3 Program requirements

1.3.1 Admission requirements

The entrance requirements for this program are grades of B or better in both STAT 2400 and COMP 1020, and a cumulative GPA of 3.00 or better. In addition, students must have satisfied the Faculty of Science requirements for entry to an Honours program.

1.3.2 Continuation and graduation requirements

To continue in the joint Honours program a student must achieve a *Degree Grade Point Average (DGPA)* of 3.00 or better *at each point of assessment*. In

addition, students must satisfy the Faculty of Science requirements for continuation in an Honours program. Students must complete a minimum of 9.00 credit hours each *Fall and Winter Term*.

To graduate with the B.Sc. Honours degree, a student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" in each of the joint Honours program specific courses (see below), and a minimum grade of "C" on all remaining courses that contribute to the 120 credit hours of the degree requirement. In addition, students must satisfy the Faculty of Science requirements for graduation with a B.Sc. Honours degree.

The following is the description of the Joint Program as it would appear in the calendar.

Computer Science-Statistics Joint Honours Program

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

To enter the Joint Honours Computer Science-Statistics Program, the student must have a "B" or better in COMP 1020 and in STAT 2400 and a "C+" or better in MATH 1300, MATH 1500 and MATH 1700 or any equivalent courses.

To graduate with the Honours degree a student must present a minimum grade of "C" in each course that contributes to the degree. In addition, the student must achieve a minimum DGPA of 3.00 and a minimum grade of "C+" in each of the program specific courses in Statistics.

Both departments must approve a student's Honours program each session. Students must also obtain approval from both departments for any and all revisions to the program.

Computer Science – Statistics Joint Honours Program

University 1	Year 2	Year 3	Year 4
Joint Honours ² 120 CREDIT HOURS (comprising courses listed in chart below and electives)			
MATH 1300 ¹ (C+)	COMP 2080	COMP 3170	STAT 4100
MATH 1500 ¹ (C+)	COMP 2130	COMP 3380	STAT 4520
MATH 1700 ¹ (C+)	COMP 2140	STAT 3050	STAT 4530
COMP 1010	COMP 2150	STAT 3400	
COMP 1020 (B)	COMP 2160	STAT 3470	21 credit hours
STAT 1000	COMP 2190	STAT 3480	of electives
STAT 2000 (B)	STAT 2400	STAT 3800	including 6
	MATH 2300		credit hours from

Plus 6 credit hours from the Faculty of Arts, which must include the required 3 credit hour "W" course plus 3 credit hours of electives	MATH 2720 MATH2730	9 credit hours of electives ⁴ including 3 credit hours from 3 rd year COMP	4 th year, 3 credit hours from 3 rd year COMP and 6 credit hours from 4 th year STAT courses
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¹MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 may be taken in place of MATH 1500. MATH 1690 may be taken in place of the combination of MATH 1500 and MATH 1700. MATH 1710 may be taken in place of MATH 1700.

²The courses required in this program will satisfy the university mathematics requirement.

³COMP 4710 and COMP 4380 are suggested if offered.

⁴The following courses are suggested: COMP 3350, COMP 3020, COMP 3490, MBIO 2410, STAT 3490, STAT 4630, STAT 4690

Computer Science – Statistics Joint Honours Program Cooperative Option
University 1 Year 2 Year 3 Year 4
Joint Honours² 120 CREDIT HOURS (comprising courses listed in chart below and electives)

MATH 1300 ¹ (C+)	COMP2080	COMP3170	STAT 4100
MATH 1500 ¹ (C+)	COMP2130	COMP3380	STAT 4520
MATH 1700 ¹ (C+)	COMP2140	STAT 3050	STAT 4530
COMP 1010	COMP2150	STAT 3400	
COMP 1020 (B)	COMP2160	STAT 3470	21 credit hours
STAT 1000	COMP2190	STAT 3480	of electives
STAT 2000 (B)	STAT 2400	STAT 3800	including 6
	MATH 2300		credit hours from
Plus 6 credit hours from the Faculty of Arts, which must include the required 3 credit hour "W" course	MATH 2720 MATH2730	9 credit hours of electives ⁴ including 3 credit hours from 3 rd year COMP	4 th year COMP ³ , 3 credit hours from 3 rd year COMP and 6 credit hours from 4 th year STAT courses
Plus 3 credit hours of electives			

COMP 2980, COMP 3980, COMP 4980 must be completed prior to graduation⁵

¹MATH 1310 may be taken in place of MATH 1300; MATH 1510, MATH 1520 may be taken in place of MATH 1500. MATH 1690 may be taken in place of the combination of MATH 1500 and MATH 1700. MATH 1710 may be taken in place of MATH 1700.

²The courses required in this program will satisfy the university mathematics requirement.

³COMP 4710 and COMP 4380 are suggested if offered.

⁴The following courses are suggested: COMP 3350, COMP 3020, COMP 3490, MBIO 2410, STAT 3490, STAT 4630, STAT 4690

⁵The work terms COMP 2980, COMP 3980, COMP 4980 will usually be completed in the summers following Year 2, Year 3 and Year 4, respectively.

1.3.3 Course descriptions

1st Year (1000 Level) Computer Science Courses

COMP 1010 - Introductory Computer Science 1 3 Credit Hours (Lab Required) (Formerly 074.101) An introduction to computer programming using a procedural high level language. Not to be held with COMP 1011 or the former 074.112, 074.121, 074.123, or 074.125. Prerequisite: any grade 12 or 40S Mathematics, or equivalent.

COMP 1020 - Introductory Computer Science 2 3 Credit Hours (Lab Required) (Formerly 074.102) More features of a procedural language, elements of programming. Not to be held with COMP 1021 or the former 074.121, 074.123 or 074.125. Prerequisite: COMP 1010 or COMP 1011 (074.101) (C); or High School Computer Science 40S (75%) and any grade 12 or 40S Mathematics, or equivalent.

COMP 1260 - Introductory Computer Usage 1 3 Credit Hours (Formerly 074.126) This course offers an introduction to modern computer services. Areas covered will include word processing, spreadsheets, data management systems and graphics. No prior computer knowledge is necessary. May not hold with COMP 1261. May not be taken within the Computer Science Honours or Major program.

COMP 1270 - Introductory Computer Usage 2 3 Credit Hours (Formerly 074.127) Using advanced tools to design web pages. Students will also learn how to make effective presentations, work in other operating system environments, use file transfer tools, apply simple script programming to web page designs, and understand current issues relating to technology in society. May not hold with COMP 1271. May not be taken within the Computer Science Honours or Major program. Recommended Prerequisite: COMP 1260 (074.126) or equivalent knowledge is strongly recommended.

2nd Year (2000 Level) Computer Science Courses

COMP 2080 - Analysis of Algorithms 3 Credit Hours (Formerly 074.208)
Methods of analyzing the time and space requirements of algorithms. Average case and worst case analysis. Models of computation. Prerequisites: COMP 2130 (074.213) (C); and one of COMP 2140 (074.214), the former 074.206, or COMP 2061 (C). STAT 1000 or STAT 1001 is strongly recommended.

COMP 2130 - Discrete Mathematics for Computer Science 3 Credit Hours (Formerly 074.213) An introduction to the set theory, logic, integers, combinatorics and functions for today's computer scientists. Prerequisites: COMP 1020 or COMP 1021 (C), and a "C" average in one of: MATH 1210, MATH 1300, MATH 1301 (136.130), MATH 1310 (136.131), 010.114, or 013.146; and one of: MATH 1500, MATH 1501(136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or MATH 1690 (136.169).

COMP 2140 - Data Structures and Algorithms 3 Credit Hours (Lab Required) (Formerly 074.214) Introduction to the representation and manipulation of data structures. Topics will include lists, stacks, queues, trees, and graphs. Not to be held with COMP 2061 or 074.206. Prerequisites: one of COMP 1020, COMP 1021 (074.102), or the former 074.123 (C).

COMP 2150 - Object Orientation 3 Credit Hours (Formerly 074.215)
Design and development of object-oriented software. Topics will include inheritance, polymorphism, data abstraction and encapsulation. Examples will be drawn from several programming languages. Not to be held with the former 074.215 or 074.227. Prerequisite: COMP 2160 (074.216); and one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C).

COMP 2160 - Programming Practices 3 Credit Hours (Lab Required) (Formerly 074.216) Introduction to issues involved in real-world computing. Topics will include memory management, debugging, compilation, performance, and good programming practices. Not to be held with the former 074.225. Prerequisite: COMP 1020 or COMP 1021 (074.102) (C).

COMP 2190 - Introduction to Scientific Computing 3 Credit Hours (Formerly 074.219) An applied computational course introducing topics such as approximation by polynomials, solution of non-linear equations, linear systems, simulation and computational geometry. May not hold with COMP 2191. Prerequisites: COMP 1020 or COMP 1021 (074.102) (C); and one of MATH 1500, MATH 1501 (136.150) (C), MATH 1510 (136.151) (C), MATH 1520 (136.152) (C), the former 136.153 (C), or MATH 1690 (136.169)

(C). Prerequisite or concurrent registration: One of MATH 1300, MATH 1301, or MATH 1310.

COMP 2280 - Introduction to Computer Systems 3 Credit Hours (Formerly 074.228) Data representation and manipulation, machine-level representation of programs, assembly language programming, and basic computer architecture. Not to be held with the former 074.222 or 074.240; also not available to students who have previously completed both ECE 3610 and ECE 3680. Prerequisites: COMP 2140 (074.214) (C), COMP 2160 (074.216) (C), and COMP 2130 (074.213) (C).

COMP 2980 - Workterm 1 0 Credit Hours (Formerly 074.298) Work assignment in business, industry, or government for students registered in the Computer Science Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail)

3rd Year (3000 Level) Computer Science Courses

COMP 3010 - Distributed Computing 3 Credit Hours (Formerly 074.301) Introduction to distributed computing. Topics include task models, server-side computing, database connectivity, information sharing. Prerequisite: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C); and COMP 2150 (074.215).

COMP 3020 - Human-Computer Interaction 1 3 Credit Hours (Formerly 074.302) Human-computer interaction: human factors and usability, user-centered design, prototyping, usability evaluation. Not to be held with the former 074.371. Prerequisite: one of COMP 2140 (074.214), the former 074.206, or COMP 2061 (C). A course in cognitive psychology, such as PSYC 2480 (017.248), is recommended.

COMP 3030 - Automata Theory and Formal Languages 3 Credit Hours (Formerly 074.303) An introduction to automata theory, grammars, formal languages and their applications. Topics: finite automata, regular expressions and their properties; context-free grammars, pushdown automata and properties of context-free languages; Turing machines. Applications: lexical analysis, text editing, machine design, syntax analysis, parser generation. Prerequisites: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C); and COMP 2080 (074.208) (C).

COMP 3040 - Technical Communication in Computer Science 3 Credit Hours (Formerly 074.304) This course is designed to help students become more effective and confident writers in the context of the computing profession. Students will be introduced to a broad range of written and oral presentation styles used in the computing workplace. Prerequisite: Students

must be enrolled in third year (or higher) of a Major or Honours program in the Department of Computer Science.

COMP 3090 - Digital Logic 2 3 Credit Hours (Formerly 074.309) Design and implementation of digital circuits. Minimization and state reduction, asynchronous circuits, arithmetic circuits, implementation using modern hardware techniques. Not to be held with ECE 2200, or the former 074.342, 074.447 or 024.422. Prerequisite: COMP 2280 (074.228) (C); or both of the former 074.222 and 074.223(C).

COMP 3170 - Analysis of Algorithms and Data Structures 3 Credit Hours (Formerly 074.317) Fundamental algorithms for sorting, searching, storage management, graphs, databases and computational geometry. Correctness and analysis of those algorithms using specific data structures. An introduction to lower bounds and intractability. Prerequisites: COMP 2140 (or 074.214 or 074.206) or COMP 2061(C), and COMP 2080 (or 074.208) (C).

COMP 3190 - Introduction to Artificial Intelligence 3 Credit Hours (Formerly 074.319) Principles of artificial intelligence: problem solving, knowledge representation and manipulation; the application of these principles to the solution of 'hard' problems. Prerequisite: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C).

COMP 3350 - Software Engineering 1 3 Credit Hours (Formerly 074.335) Introduction to software engineering. Software life cycle models, system and software requirements analysis, specifications, software design, testing and maintenance, software quality. Prerequisites: COMP 2150 (074.215) (C), or COMP 2061(074.206) (C).

COMP 3290 - Introduction to Compiler Construction 3 Credit Hours (Formerly 074.329) Introduction to the standard compiler phases: scanning, parsing, symbol-table management, code generation, and code optimization. The emphasis is on the simpler techniques for compiler construction such as recursive descent. Prerequisites: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C); and COMP 2280 (074.228) or the former 074.222 (C); or both of ECE 3610 (C) and ECE 3680 (C). COMP 2160 (074.216) is recommended.

COMP 3370 - Computer Organization 3 Credit Hours (Formerly 074.337) Principles of computer systems architecture, organization and design. Performance, instruction sets, processors, input/output, memory hierarchies. Prerequisite: COMP 2280 (074.228) or the former 074.222 (C); or both of ECE 3610 (C) and ECE 3680 (C).

COMP 3380 - Databases Concepts and Usage 3 Credit Hours (Formerly 074.338) An introduction to database systems including the relational,

hierarchical, network and entity-relationship models with emphasis on the relational model and SQL. Prerequisite: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C).

COMP 3430 - Operating Systems 3 Credit Hours (Formerly 074.343)
Operating systems, their design, implementation, and usage. Not to be held with the former 074.450 or 074.460. Prerequisites: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C); and COMP 2280 (074.228) (C); or both of ECE 3610 (C) and ECE 3680 (C). COMP 2160 (074.216) is recommended.

COMP 3440 - Programming Language Concepts 3 Credit Hours (Formerly 074.344)
An introduction to major concepts involved in the design of modern programming languages. The imperative, functional, and logical families and differences between them. Facilities for high level data and control structures, modular programming, data typing, and other topics will be covered. Not to be held with the former 074.310 or 074.348. Prerequisite: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C).

COMP 3490 - Computer Graphics 1 3 Credit Hours (Formerly 074.349)
An introductory course in computer graphics including topics such as raster graphics, two and three dimensional transforms, and simple rendering. Prerequisite: one of COMP 2190, COMP 2191 (074.219) (C), or a calculus or algebra course at the 2000 level or higher (C).

COMP 3620 - Professional Practice in Computer Science 3 Credit Hours (Formerly 074.362)
Ethical, moral, and legal issues in the development and use of computer systems; standards of practice; implications of advanced computer systems. Prerequisite: one of COMP 2140 (074.214), the former 074.206, or COMP 2061(C).

COMP 3720 - Computer Networks 1 3 Credit Hours (Formerly 074.372)
This course examines the principles of computer networks, including network architectures, algorithms, and performance. Not to be held with ECE 3700 or the former 074.430. Prerequisites: COMP 2140 (074.214) (C) and COMP 2280 (074.228) (C).

COMP 3820 - Introduction to Bioinformatics Algorithms 3 Credit Hours.
An introduction to problems in molecular biology and computational solutions. Focus on design and analysis of efficient algorithms. Prerequisites: COMP 2080 (074.208) and MBIO 2410 (C); or permission of instructor. Suggested concurrent requirement: COMP 3170.

COMP 3980 - Workterm 2 0 Credit Hours(Formerly 074.398) Work assignment in business, industry, or government for students registered in the Computer Science Cooperative Option. Requires submission of a written report covering the work completed during the four-month professional assignment. (Pass/Fail)

4th Year (4000 Level) Computer Science Courses

COMP 4020 - Human-Computer Interaction 2 3 Credit Hours(Formerly 074.402) Advanced issues in the field of human-computer interaction. Topics will be selected from current research and development issues in the field of HCI. Prerequisite: COMP 3020 (074.302) (C). A course in cognitive psychology such as PSYC 2480 (017.248) is recommended.

COMP 4050 - Project Management 3 Credit Hours (Formerly 074.405) Introduction to the issues involved in managing large, complex software projects. Prerequisite: COMP 3350 (074.335) (C).

COMP 4060 - Topics in Computer Science 3 Credit Hours(Formerly 074.406) This course will examine topics of interest at the fourth-year level. Specific topics will vary from year to year. Topics will be selected from current research in computer science. Prerequisite: Departmental permission.

COMP 4140 - Introduction to Cryptography and Cryptosystems 3 Credit Hours (Formerly 074.414) Description and analysis of cryptographic methods used in the authentication and protection of data. Classical cryptosystems and cryptanalysis, the Advanced Data Encryption Standard (ADES) and Public-key cryptosystems. Prerequisite: COMP 2130 (074.213) (C). Students must be registered in fourth year of a Major or Honours programme in the Department of Computer Science.

COMP 4180 - Intelligent Mobile Robotics 3 Credit Hours. Topics include artificial intelligence, computer vision, human-robot interaction, and multi-robot systems. These abstract components are grounded in the problem of developing a team of intelligent mobile robots. All topics are covered with specific emphasis on applied problems, e.g. real-time performance. Not to be held with the former COMP 4060 –“Mobile Robotics”. Prerequisites: COMP 2160 (074.216) and COMP 3190 (074.319) (C).

COMP 4190 - Artificial Intelligence 3 Credit Hours (Formerly 074.419) Reasoning with temporal knowledge; causal reasoning; plausible reasoning; nonmonotonic reasoning; abductive reasoning. Prerequisite: COMP 3190 (074.319) (C).

COMP 4200 - Expert Systems 3 Credit Hours (Formerly 074.420) Organization of expert systems; knowledge representation in expert systems;

inference; knowledge engineering; tools for building expert systems; limitations of expert systems. Prerequisite: COMP 3190 (074.319) (C).
0.000 TO 3.000 Credit Hours Levels: Graduate, Undergraduate

COMP 4340 - Graph Theory Algorithms 1 3 Credit Hours (Formerly 074.434) Spanning trees, connectivity, planar graphs, directed graphs, networks, colouring problems and tours are studied and their applications to computer science will be highlighted. Prerequisite: COMP 3170 (074.317) (C).

COMP 4350 - Software Engineering 2 3 Credit Hours (Formerly 074.435) Advanced treatment of software development methods. Topics will be selected from requirements gathering, design methodologies, prototyping, software verification and validation. Prerequisite: COMP 3350 (074.335) (C).

COMP 4360 - Machine Learning 3 Credit Hours (Formerly 074.436) Learning strategies; evaluation of learning; learning in symbolic systems; neural networks, genetic algorithms. Prerequisite: COMP 3190 (074.319) (C).
0.000 TO 3.000 Credit Hours Levels: Graduate, Undergraduate

COMP 4380 – Database Implementation 3 Credit Hours (Formerly 074.438) Implementation of modern database systems including query modification/optimization, recovery, concurrency, integrity, and distribution. Prerequisite: COMP 3380 (074.338) (C)

COMP 4420 - Advanced Design and Analysis of Algorithms 3 Credit Hours (Formerly 074.442) Algorithm design with emphasis on formal techniques in analysis and proof of correctness. Computational geometry, pattern matching, scheduling, numeric algorithms, probabilistic algorithms, approximation algorithms and other topics. Prerequisites: COMP 3170 (074.317) (C); and STAT 1000 or STAT 1001 (005.100) (C).

COMP 4430 - Operating Systems 2 3 Credit Hours (Formerly 074.443) Design and implementation of modern operating systems. Detailed analysis of an open source modern operating system and hands-on experience with its kernel and major components. Prerequisites: COMP 2160 (074.216) (C) and COMP 3430 (074.343) (C).

COMP 4490 - Computer Graphics 2 3 Credit Hours (Formerly 074.449) Methods in computer graphics including topics such as representation of curves and surfaces, viewing in three dimensions, and colour models. Prerequisite: COMP 3490 (074.349) (C).

COMP 4510 - Introduction to Parallel Computation 3 Credit Hours (Formerly 074.451) An overview of the architectures of current parallel processors and the techniques used to program them. Not to be held with ECE

4530 or the former 024.446. Prerequisites: COMP 3370 (074.337) (C) and COMP 3430 (074.343) (C).

COMP 4520 - Undergraduate Honours Project 3 Credit Hours (Formerly 074.452) A research based project on a specific area of computer science. Students must find a faculty supervisor and write a proposal in their penultimate term. If acceptable, the defined research is to be carried out in the student's final term. Permission to take the course is given on an individual basis. Available to 4th Year students only. Prerequisite: departmental permission.

COMP 4550 - Real-Time Systems 3 Credit Hours (Formerly 074.455) An introduction to the theory and practice of real-time systems. Topics include the design of real-time systems, scheduling, event based processing, and real-time control. This course may not be held for credit if a student has previously completed both of ECE 4240 and ECE 3760. Prerequisites: COMP 3430 (074.343) (C) and COMP 3370 (074.337) (C).

COMP 4560 - Industrial Project 3 Credit Hours (Formerly 074.456) Students will work in teams on an industrial project. Projects are supplied by the Department. Prerequisites: COMP 3350 (074.335) (C) and departmental permission.

COMP 4580 - Computer Security 3 Credit Hours (Formerly 074.458) Computer security and information management. This course will examine state-of-the-art knowledge about the issues relevant to data and computer security. Prerequisite: COMP 3430 (074.343) (C); and COMP 3720 (074.372) or the former 074.430 (C).

COMP 4690 - Computer Systems and Architecture 3 Credit Hours (Formerly 074.469) Investigation of today's modern computer architecture and system design concepts, including requirements, specifications, and implementation. Instruction sets, instruction-level parallelism, speculative execution, multi-threaded architectures, memory hierarchy, multiprocessors, storage design and implementation, and interconnection networks. Prerequisite: COMP 3370 (074.337) (C).

COMP 4710 – Introduction to Data Mining 3 Credit Hours Introduction to data mining concepts and their applications. Prerequisite: COMP 3380 (074.338) or consent of department.

COMP 4720 - Computer Networks 2 3 Credit Hours (Formerly 074.472) This course examines advanced topics in computer networks, including network security, network management, performance, and multimedia

networking. Prerequisite: COMP 3720 (074.372) or the former 074.430 (C).
Corequisite: COMP 3430 (074.343) (C).

COMP 4740 - Advanced Databases 3 Credit Hours (Formerly 074.474)
Parallel, distributed, object-oriented, object-relational, and XML databases;
other emerging database technologies. Prerequisite: COMP 3380 (074.338)
(C).

COMP 4980 - Workterm 3 0 Credit Hours (Formerly 074.498) Work
assignment in business, industry, or government for students registered in the
Computer Science Cooperative Option. Requires submission of a written
report covering the work completed during the four-month professional
assignment. (Pass/Fail)

MATH 1300 - Vector Geometry and Linear Algebra 3 Credit Hours (Lab
Required) (Formerly 136.130) An introduction to vectors, matrices, systems
of linear equations and three-dimensional geometry. Not to be held for credit
with MATH 1210, MATH 1310 (136.131), MATH 1301, or the former
MATH 1680 (136.168). Prerequisite: a minimum grade of 60% in Pre-
calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of
60% or better in the Mathematical Skills course taught by Extended Education.
NOTE: A minimum grade of 70% in Applied Mathematics 40S may be used
as a prerequisite to this course.

MATH 1310 - Matrices for Management and Social Sciences 3 Credit
Hours (Lab Required) (Formerly 136.131) Matrix methods with examples
relevant to the Management and Social Sciences. Topics include vectors,
matrices, systems of linear equations, and determinants; applications include
economic models, the simplex method for linear programming, Markov
chains, and game theory. Not to be held with MATH 1210, MATH 1300
(136.130), MATH 1301, or the former MATH 1680 (136.168). Prerequisite: a
minimum grade of 60 % in Pre-calculus Mathematics 40S or the former
Mathematics 40S (300), or a grade of 60% or better in the Mathematical Skills
course taught by Extended Education. NOTE: A minimum grade of 70% in
Applied Mathematics 40S may be used as a prerequisite to this course.

MATH 1500 - Introduction to Calculus 3 Credit Hours (Lab Required)
(Formerly 136.150) Differentiation and integration of elementary functions,
with applications to maxima and minima, rates of change, area, and volume.
Not to be held with MATH 1501, MATH 1510 (136.151), MATH 1520
(136.152), the former 136.153, the former MATH 1680 (136.168), or MATH
1690 (136.169). Prerequisite: a minimum grade of 60% in Pre-calculus
Mathematics 40S or the former Mathematics 40S (300), or a grade of 60% or
better in the Mathematical Skills course taught by Extended Education.

MATH 1510 - Applied Calculus 1 3 Credit Hours (Lab Required) (Formerly 136.151) Functions and graphs; limits and continuity; differentiation of functions defined explicitly, implicitly and parametrically; applications of derivatives to velocity and acceleration, related rates, maxima and minima; differentials, indefinite and definite integrals, application of integration to area. Physical applications in this course make it especially suitable for students intending to take programs in engineering. Not to be held with MATH 1500, MATH 1501 (136.150), MATH 1520 (136.152), the former 136.153, the former MATH 1680 (136.168), or MATH 1690 (136.169). Prerequisite: a minimum grade of 60% in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of 60% or better in the Mathematical Skills course taught by Extended Education; and Physics 40S (300) or a "P" in PHYS 0900 (016.090).

MATH 1520 - Introductory Calculus for Management and Social Sciences 3 Credit Hours (Lab Required) (Formerly 136.152) Differentiation and integration of functions of one variable and partial differentiation of functions of several variables. Emphasizes applications in the areas of management and social science. Not to be held with MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), the former 136.153, the former MATH 1680 (136.168), or MATH 1690 (136.169). Prerequisite: a minimum grade of 60% in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a minimum grade of 60% in the Mathematical Skills course taught by Extended Education.

MATH 1690 - Calculus 6 Credit Hours (Lab Required)(Formerly 136.169) An introduction to the calculus of functions of one variable. This course covers the same material as MATH 1500 (or 136.150) and MATH 1700 (or 136.170) together, but in greater depth. Exposure to high school calculus (45S) is desirable, but not essential. Recommended for students with a strong aptitude for and interest in Mathematics. Not to be held with MATH 1500, MATH 1501 (or 136.150), MATH 1510 (or 136.151), MATH 1520 (or 136.152), MATH 1530 (or 136.153), MATH 1680 (or 136.168), MATH 1700 (or 136.170), MATH 1710 (or 136.171), MATH 1730 (or 136.173). Prerequisite: a minimum grade of 80 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300).

MATH 1700 - Calculus 2 3 Credit Hours (Lab Required) (Formerly 136.170) Theory and techniques of integration, curve sketching, volume, arc length, surface area and partial derivatives. Not to be held with MATH 1690 (136.169), MATH 1701, MATH 1710 (136.171), or the former 136.173. Prerequisite: A grade of "C" or better in one of MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or the former MATH 1680 (136.168).

MATH 1710 - Applied Calculus 2 3 Credit Hours (Lab Required) (Formerly 136.171) Applications of integration to volumes, centres of mass, moments of inertia, work and fluid pressure; differentiation of trigonometric, inverse trigonometric, exponential, and logarithmic functions; techniques of integration; polar coordinates. Physical applications in this course make it especially suitable for students intending to take programs in engineering. Not to be held with MATH 1690 (136.169), MATH 1700 (136.170), MATH 1701, or the former 136.173. Prerequisite: A grade of “C” or better in one of MATH 1500 (136.150), MATH 1501, MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or the former MATH 1680 (136.168). Prerequisite or concurrent Requirement: PHYS 1050 or PHYS 1051.

MATH 2300 – Linear Algebra 2 3 Credit Hours (Formerly 136.272) A continuation of MATH 1300 or MATH 1310. Finite dimensional vector spaces; linear transformation and matrices; eigenvalues and eigenvectors; diagonalization and application; linear product spaces. Not to be held with MATH 2301, MATH 2352, the former MATH 2350 (136.235), or MATH 3130 (136.313). Prerequisites: A grade of “C” or better in one of MATH 1300 (136.130), MATH 1301, or MATH 1310 (136.131) (C); and a grade of “C” or better in one of MATH 1500, MATH 1501 (136.150), MATH 1510 (136.151), MATH 1520 (136.152), the former 136.153, or MATH 1690 (136.169).

MATH 2720 - Multivariable Calculus 3 Credit Hours (Formerly 136.272) Calculus of several variables. Not to be held with MATH 2721 (136.272, 136.270), MATH 2750 (136.275), the former MATH 2110 (136.211), or MATH 2130. Prerequisites: A grade of “C” or better in one of MATH 1300 (136.130), MATH 1301, or MATH 1310 (136.131) (C); and a grade of “C” or better in one of MATH 1690 (136.169), MATH 1700 (136.170), MATH 1701, MATH 1710 (136.171), or the former 136.173.

MATH 2730 - Sequences and Series 3 Credit Hours (Formerly 136.273) Introductory analysis, sequences and series. Not to be held with MATH 2132, the former MATH 2100 (136.210), MATH 2731 (136.273, 136.271), MATH 2750 (136.275). Prerequisite: a grade of “C” or better in one of MATH 1690 (136.169), MATH 1700, MATH 1701 (136.170), MATH 1710 (136.171) or the former 136.173. Prerequisite or concurrent requirement: one of MATH 1300 (136.130), MATH 1301, or MATH 1310 (136.131).

STAT 1000 - Basic Statistical Analysis 1 3 Credit Hours (Formerly 005.100) An introduction to the basic principles of Statistics and procedures used for data analysis. Topics to be covered include: gathering data, displaying and summarizing data, examining relationships between variables, sampling distributions, estimation and significance tests, inference for means. Not to be held with STAT 1001, STAT 2220 (005.222). Prerequisite: Any grade 12 or 40S Mathematics, or equivalent.

STAT 2000 - Basic Statistical Analysis 2 3 Credit Hours (Formerly 005.200)
The study of estimation and hypothesis testing procedures for means and proportions in one, two and multiple sample situations, introduction to the analysis of variance; regression and correlation analysis; optional topics may include nonparametric procedures, design of experiments, probability models. Not to be held with STAT 2001. Prerequisite: STAT 1000 (005.100) (C), or STAT 1001 (C).

STAT 2400 - Introduction to Probability I 3 Credit Hours (Lab Required)
Basic probability, discrete distributions including binomial, hypergeometric, geometric and Poisson, joint distributions, continuous distributions, statistical inference and applications involving discrete random variables. This course is not available to any student who has previously obtained credit for STAT 3500. Prerequisites: STAT 1000 or STAT 1001 (005.100) (C); and one of MATH 1700, MATH 1701 (136.170), or MATH 1690 (136.169) (C).

STAT 3050 - Introduction to Probability Theory and Its Applications 3
Credit Hours (Formerly 005.305) Development of the basic concepts of probability theory and application in areas of bioStatistics, actuarial science, reliability theory, queuing theory. Prerequisites: STAT 3400 or the former STAT 3500 (005.350) (C); and MATH 2720 or MATH 2721(136.272, 136.270) (C); and MATH 2730 or MATH 2731 (136.273, 136.271) (C).

STAT 3400 - Introduction to Probability II 3 Credit Hours (Lab Required)
Continuation of STAT 2400. Continuous distributions, properties of common distributions, distributions of functions of random variables. Not to be held with the former STAT 3500 (005.350). Prerequisite: STAT 2400(C). Prerequisite or Concurrent requirement: one of MATH 2720, MATH 2721 (136.272), MATH 2730, or MATH 2731 (136.273).

STAT 3470 - Statistical Methods for Research Workers 1 3 Credit Hours (Formerly 005.347) Linear regression, multiple regression, correlation analysis, introduction to one way analysis of variance, some related topics. Not to be held with the former STAT 3120 (005.312). Prerequisite: STAT 2000, STAT 2001 (005.200) (C). Prerequisite or Concurrent Requirement: STAT 3400 or the former STAT 3500 (005.350).

STAT 3480 - Statistical Methods for Research Workers 2 3 Credit Hours (Formerly 005.348) Analysis of variance, randomized block design, nested and Latin square experiments, analysis of covariance. Not to be held with the former STAT 3130 (005.313). Prerequisite: STAT 3470 (005.347) (C).

STAT 3490 - Time Series Analysis 3 Credit Hours (Formerly 005.349)
Trend and seasonal components, exponential smoothing by the multiple regression method, the Box-Jenkins Methodology, analysis of seasonal data. Prerequisite: STAT 3470 (005.347) (C) or the former STAT 3120 (005.312)

(C).

STAT 3800 – Mathematical Statistics 3 Credit Hours (Lab Required)
Multivariate distributions and transformations, order Statistics, sampling distributions, convergence, introduction to statistical inference. Not to be held with the former STAT 3600 (005.360). Prerequisite: STAT 3400 or the former STAT 3500 (005.350) (C). Prerequisite or Concurrent requirement: whichever of MATH 2720 (MATH 2721) or MATH 2730 (MATH 2731) not yet taken.

STAT 4100 –Statistical Inference I 3 Credit Hours Introduction to methods of estimation, including asymptotic and Bayesian methods. Not to be held with the former STAT 4140 (005.414). Prerequisite: STAT 3800 or the former STAT 3600 (005.360) (C).

STAT 4520 - Sampling Techniques 1 3 Credit Hours (Formerly 005.452) A development of sampling theory for use in sample survey problems, in regression estimates, in systematic sampling, sources of errors in surveys. Prerequisites: STAT 3800 or the former STAT 3600 (005.360) (C); and STAT 3480 (005.348); or consent of department.

STAT 4530 - Design of Experiments 1 3 Credit Hours (Formerly 005.453)
Objectives in designing experiments; designs commonly used in research including analysis and an introduction to the construction of designs. Prerequisites: STAT 3800 or the former STAT 3600 (005.360) (C); and STAT 3480 (005.348) (C); or consent of department.

STAT 4630 - Stochastic Processes 3 Credit Hours (Formerly 005.463) An introduction to stochastic processes. Prerequisite: STAT 3050 (005.305) (C); and STAT 3800 or the former STAT 3600 (005.360) (C); or consent of department.

STAT 4690 - Applied Multivariate Analysis 3 Credit Hours (Formerly 005.469) The course will emphasize applications of various techniques in multivariate analysis and gaining familiarity with the relevant programs in statistical packages, i.e., SAS, BMDP. Prerequisites: STAT 3480 (005.348) (C); and a “C” or better in one of MATH 2300 (136.230), MATH 2301, MATH 2352, or the former MATH 2350 (136.235); or consent of instructor.

1.4 Program fit with institutional mission and planning priorities

1.4.1 University of Manitoba priorities

The planning priorities stated in the University of Manitoba strategic planning framework 2009-2014 include academic enhancement (innovation in academic and research programs), outstanding student experience, and aboriginal achievement. The proposed joint program aims to introduce an innovative academic program. Currently

there are no similar programs in Manitoba combining Computer Science and Statistics, and such a program has much potential to greatly enhance student experience.

1.4.2 Faculty of Science priorities

The theme of Faculty of Science strategic plan is Science for Many Futures. The priorities include excellence, innovation and renewal. One objective is to design and deliver modern, innovative undergraduate programs which enhance student experience. The proposed joint program certainly satisfies this priority by creating an innovative and exciting program. Furthermore, the proposed program is interdisciplinary and draws from expertise in Computer Science and Statistics, and possibly in other relevant fields. In addition, the cooperative option will also strengthen ties with the Computer Science and Statistics sectors, government agencies in Manitoba and abroad. Thus the proposed program satisfies the Faculty of Science priority of building “stronger ties with the community, both internal and external”.

1.5 Comparison to existing programs

Currently there are no similar or comparable programs available in Manitoba.

SECTION II: Market need and market demand for the program

2.1 Local or provincial market needs for graduates

The Computer Science and Statistics sectors have been and still remain strong and vibrant. With increasing demand for computational Statistics, there are great market needs for students with interdisciplinary training in both Computer Science and Statistics. Graduates from the joint program will have obtained high quality training in both areas of Computer Science and Statistics and thus possess unique qualifications to secure a variety of positions in business companies and government departments. The need for graduates of this program will increase as the interplay between computing and Statistics becomes more relevant.

2.2 Probable employment destinations

Based on where our current graduates have been employed, we predict that graduates of this proposed program will be able to find employment in areas involving computing and data mining. Graduates will be desirable employees as technicians or analysts in all sectors of industry, research companies and government departments in Manitoba and across Canada. Potential employers include Great West Life, Manitoba Center for Health Policy, Canadian Wheat Board, WHRA, EISI, and Statistics Canada, among others. In the 21st century, there is a great demand for handling extensive datasets to extract meaningful information. Graduates from the joint program will have unprecedented abilities to make substantial contributions to all aspects of society.

2.3 Consultation with relevant groups/agencies

At this stage, no industry or business has been consulted in developing this program. However, feedback and involvements may be sought for in the future.

2.4 Fit with provincial economic, social and cultural priorities

The province of Manitoba has a strong information technology workforce and therefore we would be enhancing this workforce with this program. A strong knowledge of Statistics will greatly benefit workers in the IT sector who are involved with data analysis.

2.5 Potential for job creation and research and development

In terms of job creation, the proposed program will produce highly trained workers in the areas of Computer Science and Statistics. These workers will be able to work in fields that require a computer scientist, a statistician, or both.

In terms of research and development, this program allows entry into the graduate program of either discipline.

SECTION III: Student demand for the program

3.1 Students the program will serve

This program is for undergraduate students who want to be proficient in both Computer Science and Statistics.

3.2 Existing program offerings in Manitoba

Currently there are no similar or comparable programs available in Manitoba. However, the Department of Computer Science offers both Honours and Major programs in Computer Science, and the Department of Statistics offers both Honours and Major programs in Statistics. Both departments offer joint Honours programs with other departments such as Mathematics, Economics and Actuarial Science. There are programs that specialize in Computer Science or Statistics, but not both. This is the first program in Manitoba that combines the study of Computer Science and Statistics.

3.3 Evidence of student interest and demand for the program

There are no statistical data available to provide the required information.

3.4 Projected enrollments

We believe there will be 1-6 students who will enroll in this program each year.

3.5 Existing programs projected to lose enrollment to this program

The two programs that may lose enrollment due to this program are the Computer Science Honours and Statistics Honours programs. However, the impact would be very minimal.

3.6 Proposed growth limits and minimum enrollments

There is no minimum enrollment requirement or proposed growth limit. All interested and qualified students will be accommodated as required. This program will not require any new courses to be offered and will not require additional resources.

Admission to the cooperative option is competitive and may be limited in any year to the number that can be accommodated at that time.

3.7 Projected number of students for the first 3 to 5 years

We project an average of 3 students will graduate from this program each year.

3.8 Participation and success by under-represented groups

This program will be particularly promoted targeting under-represented groups.

3.9 Availability to part-time learners

As the proposed program is an Honours program, it is intended for full-time studies. Normally it is not available to part-time students.

SECTION IV: Faculty requirements

4.1 Current faculty who will teach in the program

Name	Department	Classification
Anderson, John	Computer Science	Professor
Andres, Terry	Computer Science	Instructor II
Baltes, Jacky	Computer Science	Professor
Bate, John	Computer Science	Associate Professor and Head
Boyer, Gord	Computer Science	Instructor II
Braico, John	Computer Science	Instructor I
Bunt, Andrea	Computer Science	Assistant Professor
Cameron, Helen	Computer Science	Associate Professor
Domaratzki, Michael	Computer Science	Assistant Professor
Durocher, Stephane	Computer Science	Assistant Professor
Eskicioglu, Rasit	Computer Science	Associate Professor
Graham, Peter	Computer Science	Associate Professor
Hoskins, Janet	Computer Science	Professor

Irani, Pourang	Computer Science	Associate Professor
Jin, Dean	Computer Science	Assistant Professor
Kocay, William	Computer Science	Professor
Leung, Carson	Computer Science	Associate Professor
Li, Pak Ching	Computer Science	Associate Professor
Liu, Ellen	Computer Science	Assistant Professor
Marshall, Alan	Computer Science	Instructor II
Meek, Dereck	Computer Science	Professor
Penner, Christina	Computer Science	Instructor II
Scuse, David	Computer Science	Professor
Thulasiram, Ruppa (Tulsi)	Computer Science	Associate Professor
Thulasiraman, Parimala	Computer Science	Associate Professor
van Rees, John	Computer Science	Professor
Walton, Desmond	Computer Science	Professor
Zapp, Michael	Computer Science	Instructor II
Brewster, John	Statistics	Professor
Cheng, Smiley	Statistics	Professor
Davies, Katherine	Statistics	Assistant Professor
Jafari Jozani, Mohammad	Statistics	Assistant Professor
Johnson, Brad	Statistics	Assistant Professor
Leblanc, Alexandre	Statistics	Assistant Professor
Loewen, David	Statistics	Instructor II
Mandal, Saumen	Statistics	Associate Professor
Martsynyuk, Yuliya	Statistics	Assistant Professor
Mateo, Zenaida	Statistics	Instructor II
Morris, Andrew	Statistics	Instructor I
Paquette, Carrie	Statistics	Full Time Instructor
Thavaneswaran, A.	Statistics	Professor
Wang, Liqun	Statistics	Professor
Wang, Xikui	Statistics	Professor

4.2 Additional faculty and staff requirements

No additional faculty and staff are required.

SECTION V: Cooperative arrangements

5.1 Cooperative agreements with other institutions / organizations

Currently no such arrangement has been made. However, the University of Manitoba currently has several student exchange agreements with universities within Canada and world-wide. Students who are interested in studying abroad are encouraged to do so and will be assisted in completing courses that will be transferred into the program.

5.2 Transfer credit

Block and transfer of credits will be accepted from other universities in Canada and abroad, following formal assessment using existing processes.

5.3 Internship / practicum components

All students in the cooperative option will spend at least 12 months in employment terms with an employer approved by both Departments of Computer Science and Statistics.

5.4 Provisions for prior experiential learning

Equivalent courses with decent grades will be transferable to the new program following formal assessment processes, on a case by case basis.

SECTION VI: Learning technologies

6.1 Use of modern learning technologies

The program involves the use of modern learning technologies that are related to programming in Computer Science and Statistics. The method of instruction of each course will be at the discretion of individual instructors. A variety of modern learning technologies such as computers, the internet and statistical software will normally be used. Both Departments of Computer Science and Statistics maintain laboratories with state-of-the-art facilities, including but not limited to computers, printers and a variety of software.

SECTION VII: Resource requirements

7.1 Library resources

The University of Manitoba library system currently has sufficient library resources to support the proposed joint program, as no new courses are being introduced. Please see the attached Library Support Statement.

7.2 Computer facilities

As mentioned above, both the Departments of Computer Science and Statistics maintain laboratories with state-of-the-art computers and printers. Furthermore, the University of Manitoba maintains laboratories with state-of-the-art computers and printers throughout the campus.

7.3 Use of existing infrastructure and equipment

We anticipate no impact with the relatively small expected enrollment. Existing lecture facilities and computing laboratories are currently sufficient to support the proposed joint program. No additional infrastructure or equipment will be required.

7.4 Additional facilities and equipment required

No additional facilities and equipment will be required.

SECTION VIII: Financial considerations

8.1 New resources required

Nil.

8.2 Reallocation of existing funds/new funds required

Nil.

8.3 Program costs accrued through tuition fees

There will be no new costs accrued through tuition fees with the proposed joint program.

8.4 Enrollment impact on overall tuition fees

It is hoped that proposed program presented in this proposal may increase enrollment at this institution and thus increase the tuition revenue.

8.5 Program funding if enrollment decreases

As there are no additional resource implications in adopting the proposed joint program, enrollment projections have no effect on the ability to offer this program. Consequently a decrease in enrollment will not have any financial impact.

SECTION IX: Program consultations and evaluations

9.1 Consultations

The proposed joint program was developed by an interdisciplinary committee consisting of faculty members from both the Departments of Computer Science and Statistics. The proposal was widely consulted with members from both departments. External consultations within the Faculty of Science and the University of Manitoba, as well as within the community, will be conducted in the near future.

9.2 Evaluation of proposed program

The proposed joint program was reviewed and approved by the undergraduate committees of both departments, and by the departmental councils of both departments. The proposed joint program was evaluated by the Faculty of Science committee on Courses and Programs and by the Science Faculty Council. It will be evaluated by the University of Manitoba Senate Curriculum and Course Change Committee, Senate Executive and Senate.

9.3 Procedures for institutional evaluation

Procedures for institutional evaluation are outlined as above. Subsequent to the implementation of the proposed joint program, both the Departments of Computer Science and Statistics will evaluate the success of the joint program on an annual basis.

BOARD OF GOVERNORS

The material contained in this document is the Agenda for the next meeting of the Board of Governors.

Tuesday, January 25, 2011

**Alan A. Borger Sr. Executive Conference Room
E1-270 Engineering Information and Technology Complex
4:00 p.m.**

OPEN SESSION

Please call regrets to: 474-6165 no later than 9:00 a.m.
the day of the meeting.

OFFICE OF THE UNIVERSITY SECRETARY



UNIVERSITY
OF MANITOBA

BOARD OF GOVERNORS

Alan A. Borger Sr. Executive Conference Room
E1-270 Engineering Information and Technology Complex
Tuesday, January 25, 2011
4:00 p.m.

OPEN SESSION

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MOTION TO MOVE TO CLOSED AND CONFIDENTIAL SESSION

MOTION TO ADJOURN



AGENDA ITEM: Proposal for an M.Sc. and a Ph.D. in Biomedical Engineering (BME)

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve the proposal for an M.Sc. and a Ph.D. in Biomedical Engineering [as recommended by Senate October 6, 2010].

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

At the University, Biomedical Engineering (BME) is a rapidly growing area of research focus for many faculty members and their graduate students across a number of faculties. Currently, there are many graduate students whose work involves the area of BME research but, in the absence of a formal BME program, the work of the students not being sufficiently recognized with a specific degree and the existing complementary expertise in various relevant faculties is not made available to these students in a coordinated and coherent manner. The introduction of a BME graduate program would contribute to cooperative resource allocation, increased opportunities for research collaboration and research grant funding.

The main innovative feature of this program is 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. 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-centred BME program that meets the degree objectives and accountability criteria of the institution.

This proposal emerges out of five years of collaborative planning by the Faculties of Engineering and Medicine.

RESOURCE REQUIREMENTS:

The Faculty of Engineering has indicated that no new funds will be required to implement this program. The required complement of faculty positions is four; the Faculty of Engineering has already hired two staff whose duties will include teaching in the program and the Faculty of Medicine will provide the other two academic positions. The additional 1.5 FTE administrative and technical support staff as well as the additional \$17,000 for supplies would be provided by the Faculty of Engineering.

The Faculty of Engineering has noted that it can accommodate the additional equipment, student, instructional and office space requirements for the BME graduate program and there would be no additional funding necessary for space construction or renovation.

IMPLICATIONS:

Demand for graduate studies is high from engineering students but there is also an opportunity to recruit students from the life sciences and medicine. A formal graduate BME program provides for strategic promotion of this area of research training to students locally, nationally and internationally, and expands the University's current offerings in medical devices and clinical technologies through emerging interests in the clinical sector and hospitals.

It is expected that students will come from various areas of Engineering, Medicine, and the Natural Sciences. Within the first year, a total of 20 students are expected (10 M.Sc. and 10 Ph.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. It is estimated that, by 2013, 97 students (M.Sc. and Ph.D. combined) will be enrolled in the program.

Manitoba has a significant biotechnology sector; the 2005 Manitoba Health Sciences Industry Directory lists 42 companies and 32 research institutes. A healthy supply of graduates from the new BME program would benefit the health care enterprise across the board, with students filling positions at 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.

CONSULTATION:

Letters of support were received from the Faculty of Medicine, the Faculty of Engineering, NRC-IBD, and TR Labs.

This proposal is forwarded to the Board of Governors by Senate after consideration by the Faculty of Graduate Studies, the Senate Planning and Priorities Committee and Senate Executive.



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
x	x	Faculty of Graduate Studies	October 1, 2009
x	x	Senate Planning & Priorities Committee	April 26, 2010 and August 30, 2010
x	x	Senate Executive	September 22, 2010
x	x	Senate	October 6, 2010

Submission prepared by: Senate

Submission approved by: University Secretary.

Attachments

- Report of the Senate Planning and Priorities Committee [dated April 26, 2010].
- Report of the Faculty Council of Graduate Studies [dated October 1, 2009] with attached program proposal.

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 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
Senate Planning and Priorities Committee



UNIVERSITY
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Faculty of Engineering
Office of the Dean

Faculty of Engineering
E2-290 EITC
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Canada, R3T 5V6
Telephone (204) 474-9807
Fax (204) 275-3773
dean_engineering@ummanitoba.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 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 biomed 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 availability 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,

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

October 1, 2009

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.

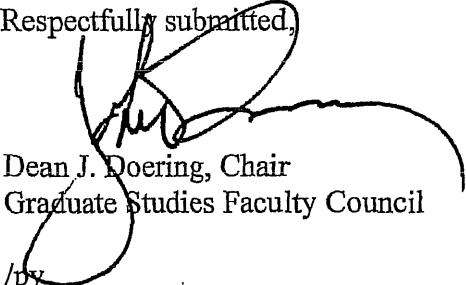
Observations:

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)

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.

Respectfully submitted,



Dean J. Doering, Chair
Graduate Studies Faculty Council

/py

Biomedical Engineering Graduate Program

Course Introductions:

BME 7002 BME for Engineering Students Cr.Hrs. 3 +3

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 7004 BME for Life Sciences Students Cr.Hrs. 3 +3

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 (Linear Algebra), MATH 1510 (Calculus I), PHYS 1050, COMP 1010.

NET CHANGE IN CREDIT HOURS: +6



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Proposal (Revised version, R2):

**Biomedical Engineering
Graduate Program**

Prepared by:

Zahra Moussavi (Faculty of Engineering)

in consultation with:

Joe LoVetri (Faculty of Engineering)

Ed Kroeger (Faculty of Medicine)

Stephen Pistorious (Faculty of Science)

Juliette Cooper (Faculty of Medicine)

Ed Shwedyk (Faculty of Engineering)

April 20, 2009

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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 a biomedical engineering specialist). 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 and 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 strategic area of research activity.

As the need for biomedical specialists 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 field 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, and medicine. A formal graduate BME program provides for strategic promotion of this area of research training to students locally, nationally, and internationally. The program also provides the opportunity to expand 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. The current research strategic plan developed by the Faculty of Engineering lists Biomedical Engineering as one of its four key strategic research areas. 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 physician often encounters clinical problems that a biomedical engineer may help to resolve with considerable laboratory and experimental facilities.

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 4-year 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.

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 re-define 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: 1- BME for Engineers/Life Science Students I (3) 2- Any two courses approved by the student’s advisory committee (6) 3- BME Seminar (0) Thesis: literature review	Courses: 1- BME for Engineers/Life Science Students II (3) 2- Any two courses approved by the student’s advisory committee (6) 3- BME Seminar (0) Thesis: literature review/pilot studies	Working on Thesis project Data collection if necessary
Year 2	One relevant course approved by the student’s advisory committee (3) BME Seminar (0) Thesis: working on project	BME Seminar (0) Thesis: working on project	Writing the thesis Thesis Defense

A typical Program for a Ph.D. student

Year	Fall Semester	Winter/Spring Semester	Summer
Year 1	Courses: 1- BME for Engineers/Life Science Students I (3) 2- Any two courses approved by the student's advisory committee (6) 3- BME Seminar (0) Thesis: literature review	Courses: 1- BME for Engineers/Life Science Students II (3) 2- Any two courses approved by the student's advisory committee (6) 3- BME Seminar (0) Thesis: literature review/pilot studies	Working on research proposal Data collection if necessary Submitting the research proposal by the end of summer
Year 2	BME Seminar (0) Thesis: working on the project	BME Seminar (0) Thesis: working on the project Preparing for Candidacy exam	Working on the thesis project Data collection if necessary Submitting the Candidacy paper Candidacy Exam
Year 3	BME Seminar (0) Thesis: working on the project	BME Seminar (0) 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 M.Sc. and 10 Ph.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. Graduate	Ph.D. Graduate	Total enrolled in program
2009	10	10	20	0	0	20
2010	11	12	43	0	0	43
2011	12	14	69	-4	0	65
2012	13	16	98	-11	0	83
2013	14	18	130	-13	-5	97

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.) The individuals listed in the table below have provided written confirmation that they are willing to serve as inaugural members of the Biomedical Engineering Graduate Program. As such they are able to supervise graduate students in the program and serve on advisory committees in addition to having their graduate courses listed as those eligible to meet BME program requirements. Membership in the program does not require any explicit time commitment as the amount of involvement in supervision and mentoring duties is at the discretion of the members.

Name	Position/Department	Area of Expertise
Zahra Kazem-Moussavi	Assoc. Prof. /Elect. & Comp. Eng.	BME Instrumentation/Sign. Proc.
Arkady Major	Assist. Prof. / Elect. & Comp. Eng.	Biophotonics
Sherif Sherif	Assist. Prof. / Elect. & Comp. Eng.	Biophotonics
Joe LoVetri	Assoc. Prof. /Elect. & Comp. Eng.	BME Image Proc./ Reconstruction
Derek Oliver	Assoc. Prof. /Elect. & Comp. Eng.	Biosensors/electrophysiology
Doug Thomson	Prof. / Elect. & Comp. Eng.	Biosensors /nano-tech
Bob McLeod	Prof./ Elect. & Comp. Eng.	BioInformatics
Witold Kinsner	Prof./ Elect. & Comp. Eng.	BioInformatics
Wai-Kung Fung	Assist. Prof. / Elect. & comp. Eng.	Tele Robotics / Computational Intelligence
Christine Wu	Prof./ Mech. & Manu. Eng.	Biomechanics / Gates
Nariman Sepehri	Prof./ Mech. & Manu. Eng.	Tele Robotics
S. Balakrishnan	Prof./ Mech. & Manu. Eng.	Clinical Applications of Robotics
Yunhua Luo	Assist. Prof. / Mech. & Manu. Eng.	Biomechanics / Rehab.
Qingjin Peng	Assist. Prof. / Mech. & Manu. Eng.	Med. Image Proces.
Jason Morrison	Assist. Prof. /Biosys. Eng.	Biomechanics
Stephan Cenkowski	Prof. / Biosys. Eng.	Biomechanics of Brain
Jitindra Paliwal	Assoc. Prof. / Biosys. Eng.	Vibrational spectroscopy
Tony Szturm	Assoc. Prof. / School of Med. Rehab.	Rehabilitation

Jacque Ripat	Assist. Prof. / School of Med. Rehab.	Rehabilitation
Art Quanbry	Prof. / School of Med. Rehab.	Biomechanics/Rehabilitation
Juliette Cooper	Prof. Emeritus/School of Med. Rehab.	Rehabilitation/ Orthopedic Mechanics
Judy Anderson	Prof. / Biological Sciences	Skeletal Muscle Mechanics
Wen Zhong	Assist. Prof. /Microbiology	Nano tech. (biopolymer nanofibers)
Francis Lin	Assist. Prof. / Physics	Immune cell trafficking
David McCrea	Prof. / Physiology	Biosensors/Rehab
Stephen Pistorius	Prof. / Physics and Astronomy	Med. Image Proc. & Reconstruction
Mark Torchia	Prof. / Surgery	Biomedical Devices, Brain Imaging
Brian Blakley	Prof. / Otolaryngology	Ototoxicity / Hearing devices
Carson K. Leung	Assoc. Prof. / Computer Science	Databases and Data Mining for Biomed Applications
Jiming Kong	Assoc. Prof. / Human Anatomy & Cell Sci.	Cellular Neurological Diagnostics
Marc R. Del Bigio	Prof. / Pathology	Neuropathology
Song Liu	Assist. Prof. / Textile Sciences	Biochemical biosensors
Pourang Irani	Assist. Prof. / Computer Science	Human-Computer 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.

Indicate the extent of participation of thesis advisors listed in I.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 participation of the advisors in the program depends on the individual opportunity to supervise or serve on advisory committees for Biomedical Engineering students. The list of founding members for the program are adequate to service the requirements of the anticipated student numbers presented for the program.

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 part-time 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

Name	Institution	Area of Expertise
Scott King	NRC	Med. Image Proc.
Mark Hewko	NRC	Med. Image Proc.
Dan P. Popescu	NRC	Optical Coherence Tomography
Phillip Unger	Element Life Science	Med. Image Proc. / Instrumentation
Hacene Serrai	NRC	
Lawrence Ryner	NRC	
Sergio Camorlinga	TRLabs	EHealth
Harry R. Ingleby	Cancer Care Manitoba	Med. Image Proc.
Idris Elbakri	Cancer Care Manitoba	Med. Image Proc.
Mark D. Alexiuk	IMRIS Inc	BME. Sig. Proc. / Biosensors
Behzad Mansouri	Neurology, U of Manitoba	TMS on Brain degenerative diseases
Mandana Modirroosta	Psychiatry, U of Manitoba	Neurophysiology
Murry Enns	Psychiatry, U of Manitoba	Psychiatry
Barry Campbell	Psychiatry, St. Boniface	Alzheimer disease diagnosis
Tammy Ivanco	Psychology, U of Manitoba	Human Behavioral
Jonathan Moratta	Psychology, U of Manitoba	Human Visual perception
Eleni Gianouli	Internal Medicien, U of Manitoba	Respiratory Acoustics
Hans Pasterkamp	Pediatrics, U of Manitoba	Respiratory Acoustics

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. Computers

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 BME positions at the level of assistant professor in total, each with an approximate \$90k/year have already been hired by the Faculty of Engineering and Medicine.

0.5 Administrative Assistant, \$20k/year to support the program administration and \$15k/year technician support for technical resources to support the labs for teaching purposes.

Offload (hiring sessional instructors for compensate the teaching loads of BME members, specifically the director of the program), \$20k/year contributed by the Faculty of Engineering

II. Costs associated with Physical Resources implications under the above headings B. 1, 2 &3

Office supplies, \$5k/year

Seminar/colloquium, \$2k/year (cost shared between Engineering and Medicine)

Lab supplies, \$10k/year (cost shared between Engineering and Medicine)

III. Costs associated with research not covered above.

None

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.

New Support	Engineering	Medicine
Admin Assist (1/2 FTE)	\$20,000	
Teaching relief for Director (sessional instructors)	\$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 already invested	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

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) & 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 half-time)	\$55,500			\$20,000		
Professor #1 (TBD)	\$90,000				\$90,000	
Professor #2 (July 1st, 2007: Dr. A. Major)	\$90,000			\$90,000		
Professor #3 (August 1, 2008, Dr. S. Sharif)	\$90,000			\$90,000		
Prof #4 (Medicine - Dr. T. Szturm)	\$90,000				\$90,000	
CRC Chair (Joint Medicine/Engineering - Pos. #06810, TBD)	\$100,000					\$100,000
Offload (hiring sessional instructor)	\$20,000			\$20,000		
Technician (setting and maintaining labs)		\$45,000		\$15,000		
Office Supplies		\$5,000		\$5,000		
Seminar/colloquium		\$2,000		\$1,000	\$1,000	
Lab Supplies		\$10,000		\$5,000	\$5,000	
Sum	\$535,500	\$62,000	\$0	\$246,000	\$186,000	\$100,000
Total Cost	\$597,500					
Revenue: Tuition (See details on sheet 2)	\$182,000					

Expected Enrollement During Next Five Years

	Ph.D.	M.Sc.	Total	MSC	PHD	Enrolled in	Tuition
Year	Intake	Intake	Intake	Graduates	Graduates	PROGRAM	
2009	10	10	20	0	0	20	
2010	11	12	43	0	0	43	
2011	12	14	69	-4	0	65	
2012	13	16	98	-11	0	83	
2013	14	18	130	-13	-5	97	\$182,000.00



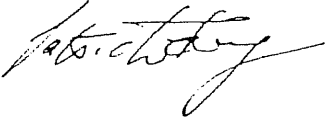
UNIVERSITY
OF MANITOBA

Faculty of Medicine

Office of the Assoc. Dean (Research)
753 McDermot Avenue
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Canada R3E 0W3
Telephone (204) 789-3375
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 cross-appointee 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 | Faculty of Engineering
OF MANITOBA | *Office of the Dean*



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Canada R3T 5V6
Telephone (204) 474-9806/7
Fax (204) 275-3773

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

leading to M.Sc. and Ph.D. degrees in BME, and will attract excellent students from around the world.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Ruth', with a long horizontal flourish extending to the right.

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

DR/jt

Copy: Dr. J. LoVetri, Associate Dean (Research and Graduate Programs)



100, 135 Innovation Drive - Winnipeg, Manitoba, Canada R3T 6A8
t: 204.489.6060 f: 204.488.1564
www.trlabs.ca

Re: A multidisciplinary Biomedical Engineering (BME) Program at the University of Manitoba

TRLabs strongly supports the establishment of a postgraduate level Biomedical Engineering (BME) Program at the University of Manitoba. TRLabs stands to benefit from the establishment of this program given that the research conducted through it would be of interest to organizations affiliated with TRLabs, including the Brandon Regional Health Authority. Consequently TRLabs would support the BME Program by providing Masters and Doctoral level scholarships to BME postgraduate students assigned to TRLabs approved research projects.

A large number of TRLabs' industry sponsors (including the Brandon Regional Health Authority) are interested in supporting research that leads to the realization of a distributed personalized healthcare system. This is one of the goals of TRLabs research program, and has resulted in TRLabs establishing its eHealth Focus Area. Dr. Moussavi is a leading researcher in TRLabs eHealth Focus Area. Her exceptional leadership, insight, and dedication have resulted in research of interest to our industry members. We fully expect her leadership of the BME program will also benefit our sponsors and lead to the commercialization of research conducted through the University of Manitoba. TRLabs' goal is to assist in the commercialization of university research ideas. As a result, the interaction between the UofM researchers and our industry sponsors generated by the BME should result in economic benefits in the form of increased activity within existing companies and/or the generation of new companies.

TRLabs is Canada's largest information and communications technology (ICT) not-for-profit R&D organization. TRLabs drives the competitiveness of western Canada's ICT industry with the supply of brain power and innovative technologies. From the seeds of ideas, to applied research, to technology development, TRLabs' engagement in all aspects of the innovation process delivers sector-leading commercialization rates, and "in-demand" high quality people. We believe that the collaboration between TRLabs and the proposed University of Manitoba's BME program will generate significant innovation within Manitoba which will be embraced by the health care delivery sector and ultimately improve the quality of life in Manitoba.

Sincerely,

Rainer Iraschko
Vice President, Research

Len Dacombe
Director, Manitoba Operations



UNIVERSITY OF MANITOBA | Information Services
And Technology



Executive Director/
Central Administration
E3-606 EITC
Winnipeg, Manitoba
Canada R3T 2N2
Tel: (204) 474-9590
Fax: (204) 474-7515

August 22, 2008

Zahra Moussavi
Associate Professor
Room E3-513 Eng. Bldg.
Dept. of Electrical & Computer Engineering

Dear Dr Moussavi;

Thank you for sending me the proposal for the program in Biomedical Engineering..

Based on the material therein and expected enrollments this proposed new program should have no significant effect on IST facilities.

G E Miller
Executive Director IST

Academic Computing &
Networking
3-606 EITC
Winnipeg, MB R3T 2N2
(204) 474-9590
(204) 474-7515 FAX

Administrative Systems
100 Administration Bldg.
Winnipeg, MB R3T 2N2
(204) 474-9905
(204) 474-7502 FAX

Bannatyne IT Group
5206 Medical Service Bldg.
Winnipeg, MB R3E 0W2
(204) 789-3747
(204) 789-3919 FAX

Telecom Group
133 Macdoug Hall
Winnipeg, MB R3T 2N2
(204) 474-9590
(204) 474-7515 FAX

Classroom Technology Group
123 Fletcher Argue Bldg.
Winnipeg, MB R3T 2N2
(204) 474-8163
(204) 474-7598 FAX

Media Production Group
112 Ames Bldg.
Winnipeg, MB R3T 2N2
(204) 474-8916
(204) 474-7625

LIBRARY SUPPORT STATEMENT FOR PROPOSED COURSE CHANGES

The signatures below endorse the findings of the bibliographer whose comments are attached. They do not necessarily indicate that the library has the resources to support the course change as outlined in the departmental submission.

NAME OF PROGRAM

Faculty: Engineering
Department:
Program: Graduate Program in Biomedical Engineering

SUPPORT STATEMENT

PREPARED BY: Judy Harper (Bibliographer)

APPROVED BY: *Jan Horner*
Coordinator, Collections Management

Jan Horner
Director of Libraries

DATE: 21 August 2008



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 2007¹, which provides a ranked list of journals by citation impact factor² was used to assess the

¹ *JCR* 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.

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 \$180³ as the average price, the Libraries would need an additional \$9,540 in one-time 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.

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.

Other Library Services

In the past few years the Libraries has implemented a number of services to enhance and facilitate research.

Document Delivery

Since 2002 document delivery services, by which the Libraries acquires material from other libraries outside of Manitoba, has been offered free of charge. It takes approximately three days to acquire journal articles and three weeks for books.

RefWorks

This is an online reference manager available to assist students in organizing their research results and creating bibliographies.

UMLinks

This feature provides a direct link from a bibliographic database to the Libraries' electronic resources and BISON.

Conclusion

The Libraries' journal collection can support the proposed graduate program in Biomedical Engineering. Even though books are less important, the monograph collection will 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 Libraries cannot provide these additional funds within its present budget.

cc J. Horner, Coordinator, Collections Management
N. Godavari, Head, Donald W. Craik Engineering Library
B. Poluha, Bibliographer for Physics, Sciences and Technology Library
A. Ducas, Head, Neil John Maclean Health Sciences Library
H. Loewen, Medical Rehabilitation Librarian, Neil John Maclean Health Sciences Library



UNIVERSITY
OF MANITOBA

Registrar's Office

400 University Centre
Winnipeg, Manitoba
Canada R3T 2N2
Telephone (204) 474 9420
Fax (204) 275-2589
registrar@umanitoba.ca

September 9, 2008

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



AGENDA ITEM: Closure of the Manitoba Centre for Hellenic Civilization

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve the closure of the Manitoba Centre for Hellenic Civilization [as recommended by Senate December 1, 2010].

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

The Senate Committee on University Research considered a recommendation from the Director of the Manitoba Centre for Hellenic Civilization to cease operation due to the absence of ongoing financial support.

RESOURCE REQUIREMENTS:

The Faculty of Arts will review the endowment fund agreement and the Department of Classics will draft proposed revisions to the terms of the Centre's scholarships.

IMPLICATIONS:

The Faculty of Arts will convert the Centre's endowment to a fund supporting public lectures by distinguished scholars thus providing a permanent contribution to Hellenic Studies at the University and be consistent with the Centre's original mission.



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
X	X	Senate Committee on University Research	November 3, 2010
X	X	Senate Executive	November 18, 2010
X	X	Senate	December 1, 2010
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		
		Senate	

Submission prepared by:

Submission approved by: University Secretary

Attachments

- Correspondence from Dr. Digvir Jayas, Vice-President (Research)
- Correspondence from Professor Rory Egan, Director, Manitoba Centre for Hellenic Civilization



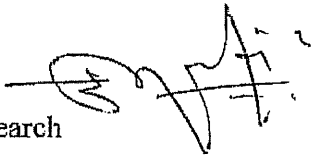
UNIVERSITY
OF MANITOBA

OFFICE OF THE
VICE-PRESIDENT (RESEARCH)

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MEMORANDUM

TO: Mr. Jeff Leclerc, University Secretary

FROM: Digvir Jayas, Vice-President (Research) 
and Chair, Senate Committee on University Research

DATE: November 3, 2010

SUBJECT: Periodic Review of Research Centres and Institutes: Manitoba Centre for Hellenic Civilization

Attached is a letter received from Dr. Egan regarding the Manitoba Centre for Hellenic Civilization. The Senate Committee on University Research (SCUR), according to the Policy on *Research Centres, Institutes, and Groups* has reviewed the letter. Due to the absence of ongoing financial support, it has been recommended that the centre close. SCUR has agreed with this recommendation.

Therefore,

On behalf of the Senate Committee on University Research, I am recommending to Senate:

That the Manitoba Centre for Hellenic Civilization cease operations as a Research Centre effective immediately.

As outlined in the letter, the Faculty will be reviewing the endowment fund agreement and looking to implement other appropriate uses of the funds. 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.

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



UNIVERSITY
OF MANITOBA

Department of Classics

UNIVERSITY OF MANITOBA
SEP 16 2010
OFFICE OF THE VICE-PRESIDENT (RESEARCH)

4.3

University College
220 Dysart Road
Winnipeg, Manitoba
Canada R3T 2M8
Telephone (204) 474-9502
Fax (204) 474-7684
classics@umanitoba.ca

September 14, 2010

Dr. Digvir Jayas
Vice-President (Research)
University of Manitoba

Dear Dr. Jayas;

Re: Report on the University of Manitoba Centre for Hellenic Civilization

I make this report as the person who has served as Director or Acting Director of the CHC since the sudden departure of the founding Director, Dr. M. Cosmopoulos; in 2001 until the end of June 2010.

The Centre's activities have of necessity been very limited for the past three and a half years or so. Shortly after the Centre's mandate had been renewed by Senate for a second five-year period, the Onassis Foundation, whose generous support had been a mainstay of the Centre's operation since its inception, withdrew that support abruptly citing "other priorities." The announcement came only weeks after I had received 'unofficial' assurances that our most recent application for annual assistance had been successful. The discontinuation of the Foundation's annual grants means that CHC has no way of maintaining its programs which included sponsorship of visiting scholars, instruction in Modern Greek, support of scholarly publications in Hellenic studies, assistance to academic conferences and funding of the University's memberships in the Canadian Academic Institute in Athens and the American School of Classical Studies in Athens and acquisition of research materials such as library books and (by license) the *Thesaurus Linguae Graecae Digital Library*. It has also meant an inability to continue providing an honorarium to an Acting Director, Dr. P. Halamandaris of Brandon University, who provided CHC with valuable assistance in liaison with the local Hellenic community and with ministries of the government of Greece. In addition the Centre has lost the means of funding any release time from teaching for the Director and for hiring students as part-time clerical assistants. The CHC's modest endowment does not yield enough interest to cover even a fraction of such activities and services.


The full impact of the Onassis Foundation's withdrawal was delayed for about a year as many financial provisions had been made in advance from the previous year's grant. Twelve months later, though, we were in a position where only routine house-keeping operations were possible and that only with the services of an unremunerated

Director and with contributions of supplies and clerical support from the Department of Classics, the Director's home department.

Under the circumstances outlined above I, as Acting Director, met with Prof. Joyal, Head of the Classics Department and Dr. R. Sigurdson, Dean of Arts in June of this year to discuss procedures for closing the Centre while also protecting its achievements and ensuring that such resources as it has would continue to serve the same academic interests for which the Centre was established. We were agreed that in the absence of ongoing financial support it would be fruitless and pointless to ask Senate to accord CHC a renewed mandate when the present one expires. Such support is of course an explicit *sine qua non* for the approval of University Research Centres. We agreed also that the Centre's endowment (which the Director had decided not to deplete for any purposes during the past several years) would appropriately be converted to a fund supporting public lectures by distinguished scholars (under the rubric of the *U. of M. Hellenic Civilization Lectures*). This would be a permanent contribution of CHC to Hellenic studies at the University and consistent with the Centre's original mission. The lectureship is to be administered by the Department of Classics, the seat of most of the University's Hellenists, but the lecture topics may pertain to Hellenic Civilization of any time period. At the same meeting it was agreed that the two endowed scholarships administered by CHC would come under the aegis of the Department of Classics and, subject to the consent of the donors and the University Awards office, that the terms of the competitions would be changed in the interests of clarity and simplicity of administration.

At the end of the meeting it was agreed that the Dean's office would initiate appropriate action with your office for closure of the Centre and reassignment of its endowment, while the Department of Classics would draft proposed revisions to the terms of the Centre's scholarships. That, to the best of my knowledge, is how matters now stand. It is my expectation that the Centre will officially cease to exist at the latest with the expiry of its present mandate, or earlier, once the anticipated arrangements have been made regarding its endowment and scholarships.

Respectfully,


Rory B. Egan
Professor of Classics

cc. Prof. M.A. Joyal
Dr. R. Sigurdson



AGENDA ITEM: Statement of Intent: Internationally Educated Agrologists Program
(Certificate)

RECOMMENDED RESOLUTION:

For information only.

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

The Faculty of Agricultural and Food Sciences currently offers an Internationally Educated Agrologists Pilot Program that serves Internationally Educated Agrologists pursuing formal recognition of their non-Canadian credentials by the Manitoba Institute of Agrologists. The pilot project has, to date, attracted 35 students and a fourth cohort of seven students is currently enrolled. The pilot program has accepted students from 23 countries: Bangladesh, Bolivia, China, Columbia, Egypt, El Salvador, Eritrea, Ethiopia, Germany, India, Indonesia, Kenya, Macedonia, Mexico, Moldova, Nigeria, Pakistan, Philippines, Russia, Rwanda, South Africa, Sri Lanka and Sudan.

The pilot program has been funded by the Government of Manitoba, through the Department of Labour and Immigration, for the last four years. The intent now is to transition this pilot to a permanent certificate program with baseline funding.

RESOURCE REQUIREMENTS:

Details will be provided in the full program proposal.

IMPLICATIONS:

The proposed certificate program will assist new Manitobans with the requisite qualifications to gain formal recognition of their non-Canadian credentials. This will allow them to achieve meaningful work within their field, and to contribute to Manitoba's growing agricultural industry.

ALTERNATIVES:

N/A



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
X	<input type="checkbox"/>	Senate Executive	December 8, 2010
X	<input type="checkbox"/>	Senate	January 5, 2011
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		

Senate

Submission prepared by:

Submission approved by:

University Secretary.

Attachments

- Statement of Intent

STATEMENT OF INTENT

Institution

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

Program Overview

Program Name: Internationally Educated Agrologists Program (IEAP)

Credential to be offered: Certificate

Does the program require accreditation from a licencing group? YES NO
If yes, name group: Manitoba Institute of Agrologists (MIA)

Length of the program: 1 Years Months Semesters

Proposed program start date: 01 / 04 / 2012
Day/Month/Year

Which department(s) within the institution will have responsibility for the program?
Faculty of Agricultural and Food Sciences/Dean's Office

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

Is this a new program? YES NO
This is a program that has been funded by the Government of Manitoba, through the Department of Labour and Immigration (LIM), for the last four years, as a pilot project. The intent is to move this pilot program to a permanent program with baseline funding provided to the University of Manitoba.

Is this a revision of an existing program: YES NO
If YES, name program
What are the impacts of changing this program?

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

Will this program have a cooperative education component? YES NO
If YES, how long with the field placement be? 4 months

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

- Assessment of Academic credentials by:
- MIA in order to become a member, and
 - The Faculty of Agricultural and Food Sciences, to choose courses and waive course prerequisites based on student's transcripts, knowledge and skills

Will there be distance delivery options? YES NO
Provide Details

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

Are similar programs offered in Manitoba or other jurisdictions? YES NO
If YES, indicate why this program is needed (e.g., area of specialization)
This is the only program of its kind in Canada.

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

The IEAP program students will be registered in accredited courses, which will be transferable to other institutions as per the normal transfer credit policies of the University of Manitoba and the

Institution to which the transfer is sought.

Specific Program Information

1. Program Description

Describe the program and its objectives:

The Program

The Faculty of Agricultural and Food Sciences currently offers the Internationally Educated Agrologists Pilot (IEAP) Program to serve Internationally Educated Agrologists (IEAs) pursuing formal recognition of their non-Canadian credentials by the Manitoba Institute of Agrologists (MIA) the regulatory body for Agrologists in Manitoba. An agrologist is the term used to describe a professional with formal education in the Agricultural and Food Sciences field.

According to MIA, an agrologist "is a professional who is a member of a provincial institute of agrology. Practicing agrology includes every act, with or without reward, which has as its objective the experimentation with or the giving of advice with respect to the principles, laws or practices relating to the production, improvement, use, processing or marketing of agricultural products, crops or livestock. In Manitoba, only members of the Manitoba Institute of Agrologists can legally call themselves Agrologists".

The IEAP is a skill-bridging program to facilitate the integration of foreign-trained Agrologists into the Manitoba agriculture sector, through a one-year program of coursework and work experience.

The program assists new Manitobans with an agricultural degree, diploma or advanced degrees from outside of Canada to gain formal recognition of their non-Canadian credentials by the Manitoba Institute of Agrologists, to achieve meaningful work in their field, and to help the Manitoba agricultural industry discover new talent.

The program is designed for people with an educational or professional background in:

- Agronomy
- Agricultural business and economics
- Animal science
- Entomology
- Food science
- Plant science
- Soil science

Objectives

- To help IEAs to get licensed to practise agrology in Manitoba by gaining formal recognition of their non-Canadian credentials
- To help IEAs to successfully meet knowledge requirements for MIA licensure
- To improve IEAs integration into the agricultural industry in Canada
- To provide IEAs with:
 - knowledge about Canadian agriculture;
 - knowledge of cultural integration, cultural understanding and professionalism in Canada
 - opportunities to learn about codes, regulations and structure of agriculture in Manitoba (by visiting and learning about Manitoba agricultural workplaces);
 - valuable regional agricultural network of students, professors and industry contacts;
 - Ideas about how to use existing agricultural expertise to become successful in Manitoba;
 - a solid Manitoba agricultural work experience through the IEAP cooperative work experience;
 - a timely way to integrate into the Manitoba agriculture industry sectors; and
 - an immersion in the technical and professional language of their agriculture profession in English.
- To make the agricultural sector more aware of the benefits of hiring Internationally educated Agrologists

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

The IEAP Program is a 12-month program, divided into two parts:

Part 1 – Eight months

IEAP Program participants are enrolled in degree courses and on occasion diploma level courses, in the Faculty of Agricultural and Food Sciences at the University of Manitoba. The coursework provides an opportunity for participants to demonstrate and confirm their technical and professional skills in the Canadian context.

- 1) Courses related to IEAP participants' areas of knowledge and expertise.
- 2) Courses that provide knowledge, specific to Canada, about agricultural business, agricultural science, as well as production and management practices.
- 3) "Business and Technical Communication" course, designed specifically for the IEAP to improve participants' communication and language skills.
- 4) "Practising the Profession of Agrology" course, designed specifically for the IEAP to help participants learn about the agriculture industry and the responsibilities of a practising agrologist.

Students take a minimum of 8 courses and a maximum of 10 (3 credit hours each) in two academic terms beginning with the fall term.

Part 2 – Four months

From May to August, participants will work in agricultural positions in Manitoba. The four month cooperative work experience gives participants some of the Canadian job experience that so many employers seek. Participants will be paid for their work by the employers.

2. Enrollment

What is the program's initial projected enrollment? 10 students

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

2nd year 11 to 13 students

3rd year 14 to 15 students

In order to maintain the quality and effectiveness of the program, we recommend to have not more than 15 students in one group. This allows us to work with students on an individual bases to identify possible communication/cultural barriers that may be interfering with their ability to succeed as a professional. This also allows for a regular individual follow-up on their "professional brand", as well as their academic and co-op work. Additionally, the program needs to ensure it does not produce more graduates than can be absorbed by the industry.

Labour and Immigration figures show that 126 IEAs had immigrated to Manitoba between 2002 and 2009.

Describe the expected student profile?

Requirement for admission to the IEAP Program include:

- A degree or diploma in agriculture from another country
- A completed Assessment of Academic credentials with WES (World Education Services)
- A referral from MIA indicating that the educational requirements for membership have been met
- Permanent resident or Canadian citizen status
- English Language proficiency to benchmark 8 or higher on the Canadian Language Benchmarks Assessment
- A valid driver's license

3. Labour Market Information

What labour market need is the program expected to meet?

Manitoba is encouraging more immigration. The province currently welcomes about 10,000 new immigrants every year. Immigration accounts for more than 70 per cent of growth in the labour force and it is expected to account for up to 100 per cent of that growth within this decade.

Manitoba is home to a strong agricultural sector in need of skilled professionals. A significant number of new Canadians move to Manitoba with impressive agriculture credentials from their countries of origin.

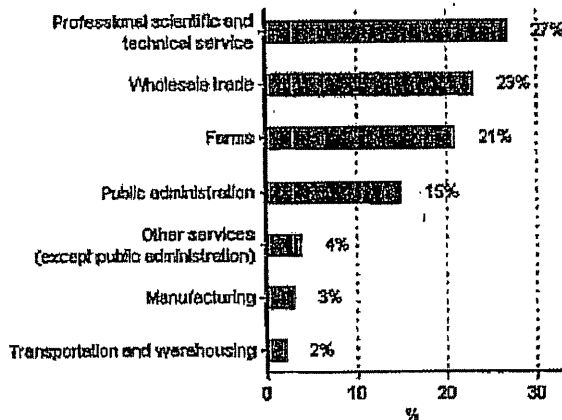
"Manitoba's rich soil and clear skies – plus the energy and innovation of its agricultural community – allow a province with four per cent of Canada's people to produce ten per cent of the nation's agricultural products"¹.

The number of new Agrologist graduates entering the Manitoba workforce is less than the demand.

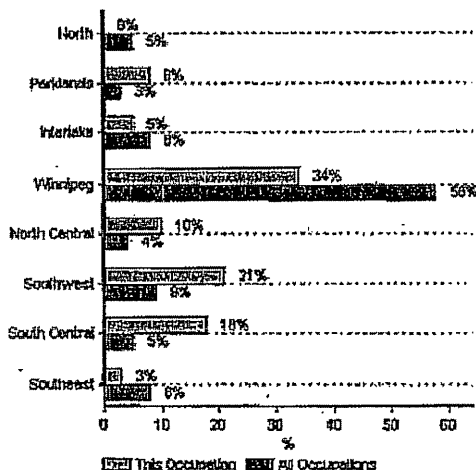
Are there currently jobs in Manitoba in this field? YES NO
If yes, where (geographic location and industry)?

Employment by Industry

Source: Manitoba Job Futures (2006 Census)



Employment by Region



This occupation refers to: Agricultural Representatives, Consultants and Specialists

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

It is expected that IEAP program students will find jobs in urban centres, but primarily in rural Manitoba. Inter-provincial mobility of licensed professional Agrologists allows them to pursue opportunities in other provinces and territories as well. However, experience shows that students who have gone through the program to get their non-Canadian credential recognized stay in Manitoba.

Graduates will find employment with various organizations including: the agriculture industry involved in plant breeding, crop land/livestock production and development, livestock nutrition,

¹ Manitoba Diverse Economy, Entrepreneurship, Training and Trade web site: <http://www.gov.mb.ca/cti/invest/strategic/strat4.htm>

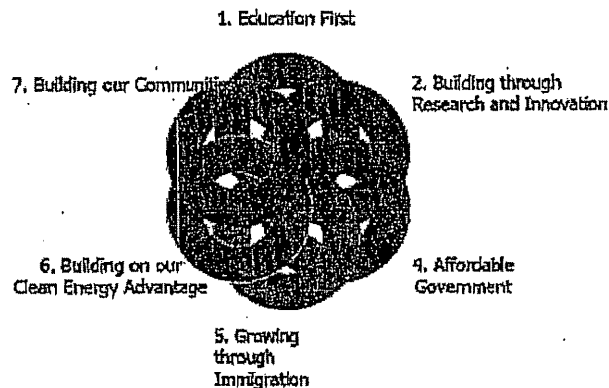
consulting, research, grain handling and marketing; Manitoba Agriculture, Food and Rural Initiatives (MAFRI), Manitoba Conservation; Agriculture and Agri-Food Canada; Credit Unions, etc.

Livestock accounts for 48 per cent of market agricultural receipts; crops account for 52 per cent in Manitoba. Also, Manitoba's food products sector is one of our largest industries. Increasingly, Manitoba's agricultural products are processed in Manitoba, creating more value-added employment and spin-offs in the construction and trucking industries. The agricultural biotechnology industry is also growing in Manitoba, as researchers strive to develop new crops and new uses for existing crops.²

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

One of the Manitoba's action strategies for economic growth is growing through immigration.

Manitoba's Action Strategy for Economic Growth



Source: Government of Manitoba. Immigration Facts and Figures:

Immigration to Manitoba is steadily growing. According to Labor and Immigration's Fact and Figures, more people are choosing to settle in regions outside of Winnipeg. Also, the province has set a goal of receiving 20,000 immigrants annually during the next 6 to 10 years.

With shortages of skilled agricultural employees clearly pending over the next decades, it is critical that we continue to find innovative and practical ways to recognize international credentials and integrate global talent into our workplaces in Manitoba. The IEAP Program benefits not only immigrants, but also the agricultural industry and Manitobans.

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

MIA, the agricultural industry and the Department of Labour and Immigration (LIM) have been involved already.

Is there any other information relevant to this program?

The program is in its fourth year pilot phase. So far, the program has welcomed 35 students. The fourth cohort of seven students is currently enrolled and in progress.

Of the 28 that went through the program already, 25 have successfully completed it, 2 did not complete the academic work, and 1 dropped the program.

24 of the 25 students obtained a term or permanent job in the Agriculture industry after completing the program, and to date 19 remain employed.

² Manitoba Diverse Economy, Entrepreneurship, Training and Trade web site:

<http://www.gov.mb.ca/ctt/invest/strategic/strat4.htm>

3. Immigration website: http://www2.immigratemanitoba.com/browse/regionalcommunities/plan_guide/community-facts.html

Employers of IEAP students and number of students per employer:

MAFRI (3), Canterra Seeds (2), Integrated Crop Management Services- ICMS- (1), Cargill (1), The Departments of Animal Science (2), Soil Science (1) and Plant Science (1), University of Manitoba, Manitoba Conservation (1), Steinbach Credit Union Limited (1), Agriculture and Agri-Food Canada- AAFC-(1), R-Way Ag (1), AAFC-Brandon Research Centre (1), Maple Leaf (1) and Monsanto (2).

The starting salaries of term or permanent positions fluctuate from \$28,000.00 to \$53,000.00. Those who have decided to relocate within Manitoba to pursue a career are earning more money.

The program has been improved thanks to the input of industry, academics, MIA and LIM. The 3rd year group has been very successful; in 4 of 7 cases; they had more than one job offer.

The students who have gone through the program so far are from 23 different countries: Bangladesh, Bolivia, China, Colombia, Egypt, El Salvador, Eritrea, Ethiopia, Germany, India, Indonesia, Kenya, Macedonia, Mexico, Moldova, Nigeria, Pakistan, Philippines, Russia, Rwanda, South Africa, Sri Lanka and Sudan.

In addition, the program has won the 2008 PEARL Award (Pursuit of Excellence in the Assessment and Recognition of Learning) offered by the Manitoba Prior Learning Assessment Network (MPLAN).


4. Financial Information

●Projected Program Costs:	Salaries	\$180,000.00
	Operating	\$ 30,000.00
	Capital	\$ 0.00
	Ongoing program support	40,000.00
	Total cost	\$250,000.00
●Projected Program Revenue:	Tuition	\$ 44,000.00 (10 students)
	Other	
	Total revenue	\$ 44,000.00

Submitted by:

Dr. Merv Pritchard
Name (print)

Associate Dean (Academic),
Faculty of Agricultural and Food Sciences
Position


Signature

November 18, 2010
Date



AGENDA ITEM: Statement of Intent: Community Recreation and Active Living
Diploma

RECOMMENDED RESOLUTION:

For information only.

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

The proposal is for a collaborative two-year diploma between the Faculty of Kinesiology and Recreation Management, University of Manitoba and the Faculty of Kinesiology and Applied Health, University of Winnipeg. The proposed diploma has been under development since 1999 when the Faculty of Kinesiology and Recreation Management received an Employment Equity Incentive Grant to aid in the recruitment and retention of Aboriginal students.

RESOURCE REQUIREMENTS:

Details will be provided in the full program proposal.

IMPLICATIONS:

The purpose of the diploma is to tap into the potential of Aboriginal and inner city Winnipeg communities in the area of community recreation and active living. Working in collaboration with community partners, the program will provide access to meaningful and relevant university courses related to physical activity, sport, recreation, fitness, health and wellness that have been enhanced by incorporating Aboriginal perspectives and/or adapted for delivery in the community. The diploma program will be located at the William Norrie Centre on Selkirk Avenue.

ALTERNATIVES:

N/A



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
x	<input type="checkbox"/>	Senate Executive	December 8, 2010
x	<input type="checkbox"/>	Senate	January 5, 2011
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
		Senate	

Submission prepared by: _____

Submission approved by: University Secretary.

Attachments

- Statement of Intent

STATEMENT OF INTENT

Institution

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

Program Overview

Program Name: **Community Recreation and Active Living (CRAL) – working title**

Credential to be offered: Diploma (as an extension to the 5 course Certificate in Interdisciplinary Studies: CRAL Certificate)

Does the program require accreditation from a licencing group? YES NO
If yes, name group

Length of the program: 2 years Years Months Semesters

Proposed program start date: 01 / 09 / 2011
Day/Month/Year

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

Kinesiology and Recreation Management (University of Manitoba)
Kinesiology and Applied Health (University of Winnipeg)

The arrangements for the joint governance of the diploma will be arranged along the lines of the UM/UW graduate program agreement.

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

Is this a new program? YES NO

Is this a revision of an existing program: YES NO
If YES, name program
What are the impacts of changing this program?

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

Will this program have a cooperative education component? YES NO
If YES, how long with the field placement be?

(However, students will have the opportunity to take, on a part-time basis, PHED 3760 Diverse Populations Mentorship, an experiential learning course which includes on-site learning opportunities in a multicultural school context)

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

Yes, Red River College and other college courses may be accepted as prior learning, as well as work experience.

Will there be distance delivery options? YES NO
Provide Details

PERS 1200 Physical Activity, Health and Wellness is currently offered through Distance Education, and PERS 1400 Concepts of Recreation and Leisure is offered on-line (UM). PERS 1200 has also been offered twice in Thompson, MB by Inter-Universities North, where it was an elective in the Northern Social Work program. Both the Faculty of Kinesiology and Recreation Management (UM), and the Department of Kinesiology and Applied Health (UW) plan to develop more distance and on-line courses.

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

If YES, name the institution

The program will be delivered jointly by the University of Manitoba and the University of Winnipeg.

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

University College of the North (UCN) offers an 18-month Certificate program in Recreation Leadership, which "provides knowledge and skills required to provide assistance and support to professionals in a variety of settings involving recreation, program planning, and community development". The program has been offered in Split Lake, Norway House and Cross Lake. The CRAL diploma will have a broader focus, and will integrate "active living", including fitness leadership, physical activity for chronic disease prevention, as well as courses related to sport and coaching. In addition, the CRAL diploma will be delivered in the City of Winnipeg, potentially expanding to other locations if demand warrants. UCN also offers the Eco-Adventure Tourism Certificate and the Tourism Business Development Certificate, which can be combined to form the Eco-Adventure Tourism Diploma. Various "clusters" of certificates can be completed in from five to eight months, and may be laddered to the diploma over 16 months. There is very little overlap between these programs and the CRAL diploma, except for an emphasis on leadership and planning. The latter programs are delivered primarily at The Pas Campus of Keewatin Community College, and are not available to students in Winnipeg.

Extended Education (Aboriginal Focus Programs) at the University of Manitoba offers an Aboriginal Community Wellness Diploma (ACWD). This diploma is holistic in its approach, incorporating "knowledge of 'western' concepts and traditional philosophies and knowledge systems of Aboriginal people as they relate to mental health and wellness". It is intended primarily for social services workers. The program currently available is "Traditions of Healing for Societies Today", with specializations in Wellness, Addictions, Sexual Health HIV/STI's. A specialization in Diabetes has also been proposed. Although the focus is somewhat complimentary to the CRAL diploma, the majority of content is distinct between the two programs. Program outcomes, potential jobs and employers also differ. The ACWD is 60 credit hours compared to the 30 credit hours proposed for the CRALD.

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

- Agreement with the Urban and Inner City Studies program (University of Winnipeg) to transfer credits between programs.
- Agreement with the Faculty of Social Work, Inner City Social Work program (University of Manitoba) to transfer credits between programs.
- Agreement with Extended Education, ACWD, to transfer credits between programs.
- Articulation with Red River College regarding a block transfer of credits (e.g. Recreation Facilitator for Older Adults, Community Development, and Aboriginal Governance programs)
- Articulation with Recreation Leadership Certificate Program at UCN

Specific Program Information

1. Program Description

Describe the program and its objectives:

The purpose of the *Community Recreation and Active Living (CRAL)* diploma is to tap into the enormous potential of Aboriginal and inner city Winnipeg communities in the area of community recreation and active living. Working in collaboration with community partners, the CRAL diploma provides access to meaningful and relevant university courses related to physical activity, sport, recreation, fitness, health and wellness that have been enhanced by incorporating Aboriginal perspectives and/or adapted for delivery in the community. The diploma will be located at the William Norrie Centre on Selkirk Avenue, site of classrooms, offices, library and computer facilities.

The proposed CRAL diploma consists of 10 courses (3 credit hours each equivalent to 36 hours of instruction time/course) for a total of 30 credit hours. The courses include a combination of theory and practice (i.e., 'experiential learning courses'), are delivered in the community and are

inclusive of Aboriginal perspectives.

Ultimately, students who successfully complete the program will exit with:

- 1) enhanced education and training in the area of sport, recreation and physical activity leadership;
- 2) university course credits that can be directly transferred into the related degree programs:
 - Bachelor of Kinesiology (UM)
 - Bachelor of Physical Education (UM)
 - Bachelor of Recreation Management and Community Development (UM)
 - Bachelor of Arts (Kinesiology and Applied Health, UW)
 - Bachelor of Social Work (UM)
 - Bachelor of Arts (Urban and Inner-City Studies, UW)

The CRAL diploma can be delivered over a two-year period, with five courses offered each year. A cohort of students can be drawn from individuals working with community agencies (i.e., mature students), Aboriginal youth and/or recent high school graduates.

The intent is to ladder the CRAL diploma from a five-course (15 credit hours) Certificate in Interdisciplinary Studies (Faculty of Extended Education, U of M: CRAL Certificate) to allow multiple exit points (courses, certificate, diploma, degree), leading to further study or to paid work. This format will increase opportunities for success, and enable students to achieve different goals. Both the certificate and diploma will adopt a mentorship approach to further facilitate student success. This approach is exemplified by the course PHED 3760 Diverse Populations Mentorship, and is proving successful in pilot courses offered to date.

Background Development

The proposed *Community Recreation and Active Living* diploma has been under development since 1999, when the Faculty of Kinesiology and Recreation Management (FKRM) at the University of Manitoba received an Employment Equity Incentive Grant to aid in recruitment and retention of Aboriginal students. The need for a long-term plan was apparent, and led to community consultations beginning in 2003 with rural and urban Aboriginal community groups (including the Northern Interlake Recreation Association, Peguis First Nation, urban Winnipeg community groups, Children of the Earth High School, Skowman First Nation, and The Pas). These consultations were led by the Faculty of Kinesiology and Recreation Management at the U of M, in partnership with the Aboriginal Focus Programs (Extended Education), and funded by the U of M Strategic Development Fund. On March 2nd, 2005, the Faculty Council of the FKRM supported a motion to support the CRAL diploma in principle.

Adopting a model recommended by the Aboriginal Focus Programs, our faculty also received funding from the U of M Major Community Outreach Award to "enhance" three courses by adding Aboriginal perspectives. In 2005-2006, revisions were completed for PERS 1400 Concepts of Recreation and Leisure, PERS 2200 Program Planning Principles, and PERS 1200 Physical Activity, Health and Wellness.

In the spring of 2009, FKRM Dean Jane Watkinson met with David Fitzpatrick (Dean of Arts, University of Winnipeg) to initiate talks regarding a possible collaboration between the two universities on the delivery of the CRAL diploma. The Director of the Urban and Inner-City Studies program at U of W, as well as the Director of the Inner-City Social Work program at U of M are actively involved in the CRAL diploma planning process. Collaboration between the two institutions will enhance delivery of the diploma, as well as opportunities for students who wish to carry on beyond the diploma (i.e., transfer CRAL credits to a variety of degree programs). Faculty Council of the FKRM at U of M unanimously approved the CRAL diploma in the spring of 2010.

Community-Based in the North End of Winnipeg

Development of the CRAL diploma has been "energized" by the involvement of a variety of Aboriginal community groups from the north end of Winnipeg (including Ndinawa, the North End Community Renewal Corporation, The Families And Communities Together (FACT) Coalition), the Manitoba Métis Federation, the City of Winnipeg, and the Winnipeg Regional Health Authority. In 2009, north end Winnipeg Aboriginal community partners worked with the FKRM to fund the delivery of two pilot courses, one completed in the spring (PHED 3770, *Aboriginal Games and Activities*, student tuition funded by a grant from the City of Winnipeg) and one completed in the fall (PERS 2100, *Introduction to Professional Practice*, student tuition funded by The FACT Coalition and the Assiniboine Credit Union). PHED 3760, *Diverse Populations Mentorship* was offered in the winter of 2010. KIN 2305, *Issues in Health*, the first course to be offered by the University of Winnipeg, was successfully completed in the spring of 2010.

Support for the CRAL diploma was enhanced substantially in January 2010, when the FKRM, together with the Departments of Inner City Social Work and Community Health Sciences received a University of Manitoba Academic Enhancement Fund grant "Building the University's Commitment to Disadvantaged Children". This project aims to enhance opportunities and

improve outcomes of children in the core area, by building on existing initiatives and developing a strong and sustainable infrastructure over the next two years. Relationship building will be a large focus of this project, which is centred at the UM William Norrie Campus on Selkirk Avenue. Intended outcomes include development of local capacity, knowledge translation, and advocacy, as well as contribution to the WRHA community health assessment. Development of the CRAL diploma is a goal of the project, and a large portion of the \$75,000 grant will be used to hire a community outreach coordinator who will facilitate community development, including establishment of the necessary infrastructure and supports for the CRAL diploma.

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

The diploma will consist of 10 courses (30 credit hours), seven core courses (two courses each from FCRM at U of M and KAH at U of W, one from either FCRM or KAH, and one each from Inner City Social Work and Urban and Inner City Studies), and three electives. Many of the courses offered by FCRM and KAH have been granted transfer equivalency by both universities. Course offerings will be flexible to allow full-time students to complete the diploma in two years, and part-time students to complete the program over a more extended period.

Core Courses	Elective Courses
PERS 2100 Professional Practice (UM)	PHED 2740 Fitness Theory and Practice (UM) or KIN 2304 Scientific Principles of Fitness and Conditioning (UW)
PHED 3770 Aboriginal Games and Activities (UM)	PHED 3720 Coaching Theory Practice (UM) or KIN 1200 Principles of Coaching (UW)
KIN 2100 Leadership in Sport (UW)	PHED 3760 Diverse Population Mentorship (UM)
KIN 2305 Issues in Health (UW)	PERS 1200 Physical Activity Health and Wellness
PERS 2200 Program Planning Principles (UM) or KIN 2101 Program Planning in Sport (UW)	PERS 1400 Concepts of Recreation and Leisure
SWRK 2080 Interpersonal Communications (UM)	PERS 4200 Aboriginal Song and Dance (UM)
UIC 2020 Colonization and Aboriginal Peoples (UW)	KIN 1109 Instructing Sport and PA (UW)
	KIN 2400 Teaching Games for Understanding (UW)
	KIN 2710 Human Movement Principles (UM) or KIN 2206 Movement Education (UW)
	CAW 1105 Academic Writing (UW)
	ARTS 1110 Introduction to University (UM) or DMISC 18476 Introduction to University (UW)
	UIC 1001 Introduction to Urban Studies or UIC 2001 Community Development, Community Economic Development
	SWRK 2070 Small Group Dynamics

The following list describes all required and elective courses:

University of Manitoba (FCRM)

- PERS 1200 Physical Activity Health and Wellness: The importance of physical activity for health and wellness - theories, determinants and strategies for promoting healthy behaviours.
- PERS 1400 Concepts of Recreation and Leisure: The nature and scope of recreation and leisure, past influences and implications for the future.
- PERS 2100 Introduction to Professional Practice: Foundational knowledge and skills for working within the sport and recreation field.
- PERS 2200 Program Planning Principles: Foundational knowledge and skills related to program design and delivery.
- PERS 4200 Special Topic: Aboriginal Song and Dance: Cultural song and dance traditions from Manitoba's diverse indigenous populations.
- PHED 2710 Human Movement Principles: An introduction to the principles of inclusive physical education, integrating theory, practice and guided reflection pertaining to the

- development of fundamental movement skills and strategies applied to educational games, gymnastics and dance. (Experiential Learning Course (ELC))
- PHED 2740 Fitness Theory and Practice:* Theory and practice related to fitness programming and assessment. (ELC)
- PHED 3720 Coaching Theory and Practice:* Theory and practice related to coaching at the community level.(ELC)
- PHED 3760 Diverse Populations Mentorship: Guided practical experience working within the Aboriginal Youth Mentor program.(ELC)
- PHED 3770 Aboriginal Games and Activities: Cultural games and traditions representing Manitoba's Indigenous populations. (ELC)

* students who complete these courses can write the tests and complete the practical components related to certification as a Manitoba Fitness Council Group Fitness Leader and/or as a trained National Coaching Certification Program Coach

University of Winnipeg (KAH)

- KIN 1200 Principles of Coaching: An introduction to key components of successful coaching including: planning, values & ethics, skill analysis, motor learning, sport psychology and physical training.
- KIN 2100 Leadership in Sport: Exploring leadership theory to help the student uncover their own leadership framework.
- KIN 2101 Program Planning in Sport: Analysis of the planning process as it relates to the delivery of sport programs.
- KIN 2304 Scientific Principles Fitness and Conditioning: The application of the physiological principles of training and conditioning methods including fitness evaluation and exercise prescription.
- KIN 2305 Issues in Health: A look at contemporary issues in health to promote healthy decisions.
- KIN 1109 Instructing Sport and Physical Activity: Introduction to the teaching of a preselected sport or physical activity such as track and field, soccer, or dance. (ELC)
- KIN 2206 Movement Education: Theory and practice of movement education and its application to contemporary physical activity programs. (ELC)
- KIN 2400 Teaching Games for Understanding: A 'learner centered' approach that develops the skills and strategies necessary to be successful in games. (ELC)

University of Manitoba (Inner City Social Work)

- SWRK 2070 Small Group Dynamics: Group norms, values and goals as they relate to decision-making and communication patterns in groups.
- SWRK 2080 Interpersonal Communication Skills: A basic core of interpersonal skills for communicating effectively and for establishing and maintaining relationships in one-to-one and group situations. Emphasis is on experiential learning using a variety of techniques.

University of Winnipeg (Urban and Inner-City Studies)

- UIC 1001 Introduction to Urban Studies: This course examines the dynamics that drive urban change, the social impacts of that change, the inter-relationships of different parts of cities, and the role of governments in shaping cities.
- UIC 2001 Community Development/Community Economic Development. This course examines the principles and philosophy of CD and CED, with an emphasis on such inner-city issues as neighbourhood revitalization, housing rehabilitation and employment development and training.
- UIC 2020 Colonization and Aboriginal Peoples. This course examines the impact that colonization has had and continues to have on Aboriginal peoples, and identifies processes and strategies for decolonization.

Introductory Courses (UM and UW)

- ARTS 1110 Introduction to University: Designed to help students make the transition from high school, college or work-places to university, It offers a unique combination of educational principles, practical skills, regular assignments, and the support of a group of fellow students. (UM)
- DMISC 16476 Introduction to University: To provide practical strategies for more efficient reading and writing, note-taking and studying. (UW)
- CAW 1105 Academic Writing: To prepare first year students with academic writing to facilitate success in university. (UW)

2. Enrollment

□What is the program's initial projected enrollment? 15 students/year

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

Year 1: 15 with the intent of increasing this intake

Year 2: 30 (15 plus 15) (with potential to expand numbers if interest warrants)

As the goal will be to admit 20 students/year after year 2, we estimate 35 students in year 3 (20 plus 15), and 40 students in year 4 (20 plus 20). Although these projections do not account for the expected attrition or for students proceeding on a part-time basis, they provide a basis for planning. Based on the high demand for inner city Winnipeg university programs, including Inner City Social Work (UM) (yearly intake of approximately 25 full-time and 25 part-time students), and Urban and Inner City Studies (UW) (presently delivering over 100 Full Course Equivalents per term), we are confident that we will meet our initial enrollment target of 15 students. Enrollment in UICS has increased steadily since its inception in 2007, and includes a significant cohort of staff members from Ma Mawi Wi Chi Itata Centre. The proposed CRAL program has the added advantage of flexibility (exit points range from 1-year certificate to 4-year degree), and breadth (after completing the diploma in recreation and active living, students may transfer credits towards related degrees in Kinesiology, Recreation Management or Physical Education, or further afield to degrees in Social Work or Urban and Inner City Studies). The long-term objective is to expand the program beyond the urban Winnipeg location.

□Describe the expected student profile?

Inner city, urban, north end Aboriginal and non-Aboriginal residents, including newcomers and recent immigrants to Canada. We anticipate both mature students, many of whom are already working in the community in the areas of community development, recreation and active living, as well as recent high school graduates, including those who have been in the Aboriginal youth mentor programs. The flexible nature of the program (certificate/diploma/degree) will be attractive to students who hesitate to commit initially to a 4-year degree, yet wish to leave this option open. Similarly, the program will appeal to students who may need more academic supports before applying to a degree program, for example those who have been away from school for some time, or for whom English is not a first language.

3. Labour Market Information

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

The City of Winnipeg, non-profit community organizations (e.g., Ndinawe, WASAC), and health promotion groups (e.g., Diabetes Integration Project) have all expressed a need for educated employees with leadership skills in the areas of fitness, health promotion, recreation, physical activity and sport. The following are examples of the career opportunities and types of employers that will be open to the CRAL diploma graduates:

Fitness, Health and Active Living

Career Opportunities:

- Fitness Leader
- Chronic Disease Prevention
- Health Promotion
- Physical Activity and Aging

Potential Employers:

- Diabetes Integration Project
- Seniors' Centres
- Community Clinics
- Not-for-profit Organizations
- Bison Sport and Active Living (University of Manitoba)

Community Development and Wellness

Career Opportunities:

- Rural or Urban Recreation Director
- Seniors' Programs
- Youth and Children's Programs
- Recreation and Leisure Programs
- Physical Activity Programs
- Community Development Coordinator

Potential Employers:

- Winnipeg Regional Health Authority
- City of Winnipeg
- Winnipeg Boys and Girls Club
- North End Wellness Centre
- North End Y
- Community Centres
- Neighbourhood Renewal Corporations
- Women's Resource Centres
- Youth and Family Organizations
- Siloam Mission

- Rossbrook House
- North End Community Renewal Corporation
- The FACT Coalition
- Aboriginal organizations, for example:
 - Ndinawe
 - Ma Mawi Wi Chi Itata Centre (Ma Mawi)
 - Ka Ni Kanichihk Inc.
 - Aboriginal Centre of Winnipeg, Inc.
 - Winnipeg Métis Association, Inc.

Sport Management

Career Opportunities:

- Sport Administrator
- Event Organizer
- Youth Sport Programs

Potential Employers:

- University of Manitoba, Bison Sports
- University of Winnipeg, Wesmen Athletics
- Manitoba Aboriginal Sport and Recreation Council
- Winnipeg Aboriginal Sport Achievement Centre
- True North Sports and Entertainment Inc.
- Sport Associations

Community Tourism and Recreation

Career Opportunities:

- Event Management
- Community Festivals
- Recreation Leader
- Children and Youth Programs
- Outdoor Recreation

Potential Employers:

- Travel Manitoba
- Parks Canada
- Manitoba Conservation
- First Nation Communities
- Not-for-profit Organizations
- Festival Associations

Community consultations have been held with numerous stakeholders over the past five years:

i) Aboriginal Education Centre, University of Manitoba (April 5, 2005)

The CRAL diploma working group invited community professionals who have been working in the areas of sport, recreation, and healthy living to participate in a community – University consultation session. During this session, they discussed ideas about curriculum design, and development of the proposed CRAL diploma.

The community professionals who were invited to the consultation session work with Aboriginal and non-Aboriginal people in both rural and urban settings. They represent a number of individuals and organizations who develop and deliver programs in the areas of sport, recreation, and healthy living, including government, the public and Aboriginal school systems, and Aboriginal organizations (Aboriginal Health Services, WRHA; Public Relations & Recruitment, Faculty of Human Ecology, U of M; Aboriginal Sport and Recreation Program, Sport Manitoba; Aboriginal Focus Programs, U of M; Community Groups, City of Winnipeg; R.B. Russell School; Aboriginal Health & Wellness Centre; Aboriginal Women's Advisory Council; Community Health & Wellness Coordinator, ACCESS program, U of M; COTE TY program; Vision Seekers, Skownan; Children and Education/Aboriginal Education, Health & Nutrition; Recreation Facilitator, Children & Youth, Spence Street Neighbourhood; Hockey School Business).

The invited participants and the CRAL working group engaged in both small and large group discussions centred on topics that were provided by the working group. As a result of these discussions, we identified several issues that were raised by participants in a number of different areas.

Participants had many helpful suggestions about what should be included in the curriculum of the program. In addition to basic academic skills, participants felt that more practical information should be included to better prepare graduates for the less than ideal conditions of many rural communities. Many participants suggested that the diploma should have a practicum component. Some history of Aboriginal peoples should also be in the curriculum, as should learning about how band and government systems work. The program should have a strongly Aboriginal focus, both in curriculum and methods of delivery, while at the same time respecting the cultural and racial diversity of potential cohort groups.

Many participants indicated that the working group would need to work closely with community members before, during and after the program was run in their community. Aboriginal Focus Programs has always established and maintained these community relationships but not to the

extent that was suggested in the consultation session. Students who complete the program will also need to know how to work with communities and how to form other partnerships, such as with government and non-government organizations.

Overall, many of the participants in the community consultation stated that there is a real need for the CRAL diploma and for graduates from this diploma in communities. The information that could be offered in the diploma would be helpful to people who are working in communities now and also to people who may do so in the future.

ii) Skownan First Nation (March 8, 2006): A group of community members from Skownan First Nation who participate in the Career Trek program joined the FKRM and Aboriginal Focus Programs for a consultation that was facilitated by Ken Catcheway, a Vision Seekers Community Facilitator. Feedback from the Skownan community participants was provided regarding the relevance of a proposed CRAL diploma in terms of meeting the needs in the Skownan community. While there was general agreement for the value of the course content that would be offered in the diploma, the need for courses to have immediate relevance to the community was highlighted. Of note, based on this evening consultation, the idea for three credit hour "experiential learning courses" was brought forward to the FKRM's Curriculum Review Committee for consideration. As a consequence, new experiential learning courses were developed and are now part of the Bachelor of Physical Education degree as well as the proposed CRAL diploma.

iii) Children of the Earth School (March 10, 2006): A group of eight high school students and one teacher participated in a one hour focus group consultation. Students expressed interest in the overall concept of the CRAL program, and were surveyed regarding their interest in potential courses on offer. Students appreciated the idea of taking courses in the north end.

iv) The Pas, Manitoba, March 14, 2006: As with the previous consultations, community members and professionals from the region of The Pas and Opaskwayak Cree Nation (including officials from University College of the North/UCN) were asked to discuss the need for health promotion, physical activity, recreation and nutrition. Participants also identified the key knowledge areas that need to be part of the course content, as well as a process for moving forward on the proposed diploma. Dr. Stan Wilson, Dean of Education at UCN attended the session, and we discussed opportunities for collaborating with UCN in the future.

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

The City of Winnipeg is supporting pilot courses toward the diploma, and has indicated that hiring qualified inner-city and urban Aboriginal graduates in the areas of fitness, health promotion, recreation, physical activity and sport is a high priority. In addition, many rural and northern communities have expressed a need for qualified employees in these areas.

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

The recognized value of physical activity, recreation and sport to overall health and well-being, and the demonstrated lack of educated, skilled leaders in these fields, suggests that the forecast for future jobs is very promising.

Note that in the delivery of two pilot courses, some of the students in the courses are already working within these capacities, but do seek formal education and skill development.

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

Education and training are the cornerstones of Manitoba's economy. "Focusing on skills and knowledge" is point three of a 10-point economic plan introduced in the 2008 Speech from the Throne (Harvard 2008). The province recognizes that investments in education, training and skills development will help Manitoba prosper in the knowledge-based economy. In the 2009 Budget Speech, Premier Selinger indicated that the way to move forward and to build our province's future is to invest in our greatest resource – the people of Manitoba (Selinger, 2009). He also stated that all Manitobans should have the opportunity to go to college or university, and that encouraging disadvantaged students to stay in school and consider a post-secondary education is a high priority. This priority was confirmed in the 2009 Speech from the Throne, which stated "improving education outcomes and graduation rates for First Nations students is one of the most important challenges we face as a province. Recent urban immigration trends indicate that newcomer populations are increasing in Winnipeg.

Success in this area will mean a brighter future for all of our communities and stronger prospects for the economy as a whole (Lee, 2009). Agreements have been made to promote school readiness programming, and to expand course offerings to First Nations students, both goals of the CRAL diploma. The province is also expanding the Bright Future's Fund to support new

youth-oriented initiatives. Expanding Manitoba's skill base, and opening new opportunities for youth are critical to increasing our competitive advantage in the long-term, as are Aboriginal Training programs (Harvard, 2008). Pathways to Education, the highly successful high school support program started in 2001 in Toronto's low-income Regent Park, is just getting underway in Winnipeg's North End. Administered through the Community Education Development Association (CEDA), Pathways will provide a range of supports to North End Winnipeg junior high and high school students, and is likely to have a significant effect on high school graduation rates, which according to Manitoba Centre for Health Policy data are currently much lower in the North End than in other parts of the city. This will be likely to increase the numbers of students interested in and capable of benefiting from our Community Recreation and Active Living diploma.

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

Since 2003, the FKRM at the U of M has been consulting with a variety of community groups and partner organizations (see background description above).

Over the next year, the following agencies, groups and institutions will be contacted to provide direct consultation on the CRAL diploma:

University of Manitoba (various departments, including the Aboriginal Student Services)

University of Winnipeg (various departments, including the Aboriginal Student Services)

City of Winnipeg

North End Community Renewal Corporation

The FACT Coalition

Ndinawe

Ma Mawi Wi Chi Itata

Diabetes Integration Project (Four Arrows Regional Health Authority)

Winnipeg School Division Schools (e.g., Children of the Earth High School, R.B. Russell High School, etc).

□ Is there any other information relevant to this program?

University of Manitoba

Facilitating Aboriginal achievement is a top priority of the University of Manitoba (Strategic Planning Framework, 2009-2014). The University of Manitoba is committed to work with a variety of partners to make Winnipeg the national centre of excellence in Aboriginal education. To enable Aboriginal students to prepare for, and to achieve success in the full range of academic programs, the University is allocating resources to identify impediments to participation and success, and to develop measures to address these impediments. Implementing the CRAL diploma, with laddering from certificate to degree, is part of this plan.

For more than forty years, the Faculty of Kinesiology and Recreation Management (formerly the Faculty of Physical Education and Recreation Studies) at the University of Manitoba has provided service to the community through its core purpose: to improve the health and well-being of Manitobans. The Faculty mission: *Discover and disseminate knowledge related to physical activity, human movement, sport, and leisure to improve the health, well-being and quality of life of Manitobans, Canadians, and citizens of the world.* For the past ten years, the FKRM has directed energy and resources toward improving its research, teaching and service in relation to Aboriginal peoples. Scholars associated with the Faculty's research arm, the Health, Leisure and Human Performance Research Institute, have undertaken a number of community-based research initiatives in partnership with schools and Aboriginal communities. Working in partnership with the Government of Manitoba, the FKRM created an Aboriginal Scholar Position in the area of Physical Activity, Sport and Recreation, a model that has since been adopted in other universities across Canada. A cornerstone of the FKRM's recent initiatives has been the Aboriginal Youth "Healthy Living" Mentor programs, which have evolved out of two significant studies funded by the Social Sciences and Humanities Research Council of Canada. In the Aboriginal youth mentor programs, university students work with Aboriginal (and other) high school students to develop and deliver an after school physical activity, nutrition and educational after school program for early years children at neighbouring schools. As a long term vision for recruitment and retention of Aboriginal (and other under-represented groups), high school mentors who graduate will be encouraged to participate in the CRAL diploma, at which point they will be guaranteed jobs as 'university mentors' in the mentor programs.

University of Winnipeg

The University of Winnipeg has a strong commitment to accessible education for our Aboriginal community. This past year, President Lloyd Axworthy commissioned a task force entitled President's Task Force on Athletics and Academics: Enhancing Excellence. The mission of the task force was: *"The University of Winnipeg will develop, implement, and promote academically relevant athletics, intramural, wellness, and instructional physical activity and sports programs that provide increased participation opportunities and*

benefits for University students, staff, faculty, and the Community." Target populations of the Task Force included the aboriginal community

"Our programs and proposed facility will target the populations in our midst: Aboriginal/Indigenous peoples, International students (including those who will be living in residence at the new McFeeter's Hall, new Canadians (with immigrants usually finding an initial home in a city's core area); and inner-city children and youth."

"One of the key recommendations of the Task Force is to reinstitute an updated Community Access Program."

The establishment of the CRAL diploma and its location in Winnipeg's North End for the purpose of attracting 'non-traditional' students is completely consistent with the mission and strategic plan of the UW. *The University of Winnipeg Strategic Plan 2004-2010* says, under the heading of "Mission":

We view both accessibility and excellence as important goals, and will endeavour to make the University as accessible as we can while maintaining high standards of quality in our academic programs.

Under the heading of "Values" *The University of Winnipeg Strategic Plan 2004-2010* says:

Above all, we value what makes this University distinctive: its history of excellence and social consciousness; its student body, drawn from a diverse population of ethnicities, income levels, ages, and cultures; and its belief that a liberal education, when taught in an exciting, creative, and humane way, can have transforming effects on individual lives, and on society as a whole.

And under the heading "Mission Restated", on page 4, *The University of Winnipeg Strategic Plan 2004-2010* says:

Our central mission, to provide a liberal education in the Arts and Sciences, predisposes us to embrace rather than fear the future, to be open to new ideas and to be changed by them. We continue to believe that this mission implies openness to participation by the broadest possible spectrum of society, and to the institutional changes such participation may necessitate.

The establishment of a CRAL diploma located in the North End for the purpose of improving accessibility to post-secondary education for "non-traditional" students—North End residents; Aboriginal people; newcomers to Canada—is therefore completely consistent with *The University of Winnipeg Strategic Plan 2004-2010*, and consistent as well with the recent internal UW document titled: *The University and Community Learning: An Evolving Mission*, a policy paper prepared by Lloyd Axworthy, President and Vice-Chancellor of the University of Winnipeg, Fall 2009.

The Department of Kinesiology and Applied Health at The University of Winnipeg has a wide and varied program of study including teacher preparation, exercise science, athletic therapy, coaching and personal fitness training. Students also have the option of pursuing a major in Kinesiology – General Studies which, when combined with other courses can open doors in sports marketing, adapted physical activity, physical activity for the aging population, physical activity for chronic disease, sport psychology among others.

The mission of the Department is "To provide an environment where students in Kinesiology and Applied Health can pursue their potential through our commitment to excellence in teaching, research, and community service."

4 Financial Information

Full budget details will be submitted in the final proposal.

□ Projected Program Costs:

The primary program cost will be staffing, including salary costs at the baseline level of Assistant Professor to replace the University of Manitoba professor who will assume the position of full time Program Director. The Program Director's responsibilities will be the equivalent of 50% administration and community outreach, and 50% teaching (i.e., two courses per year). The full

time Program Coordinator will have three primary responsibilities: community outreach, program administration, and student support and academic advising. Stipends will be required for instructors for seven courses per year (when the program is at capacity), however several other courses will be available at no cost to the program (those offered by Inner City Social Work, Urban and Inner-City Studies, Distance and On-line, and on-campus introductory level courses). Other expenses include operating costs, however much of these will be contributed in kind.

□Projected Program Revenue:

Tuition and other student fees will be the primary source of program revenue. These fees may be student funded, or community or Band sponsored. Students will also have access to ACCESS Program Bursaries. We have learned from our delivery of pilot courses, all of which were funded through small grants from community groups and/or the City of Winnipeg, that there may be an interest by local community groups to sponsor some students in the program. UICS has also been successful in receiving sponsorship for students who are working with inner-city community-based organizations and who enroll on a part-time basis. This type of sponsorship and/or funding may be sought in the future as a means to support those students with interest and ability, but lacking in financial resources to pursue the CRAL program.

Submitted by:

JANE WATKINSON
Name (print)

Position

J. Watkinson

Signature

Aug 20, 2010
Date



AGENDA ITEM: *Student Referendum: School of Medical Rehabilitation*

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve that the students from the School of Medical Rehabilitation contribute \$1.66 per credit hour for a three year term to the School of Medical Rehabilitation Endowment Fund, beginning in the fall of 2011/2012.

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

On Tuesday and Wednesday, November 16 and 17, 2010 the School of Medical Rehabilitation Students' Association held a referendum to support the School of Medical Rehabilitation Endowment Fund. Each student was proposed with making a donation of \$1.66 per credit hour for a three year term, beginning in the fall of 2011. This amounts to an approximate donation of \$50.00 per student per year for 30 credit hours. There was 33% participation rate with 56 of the 168 eligible student voters casting a ballot. Of those votes, 32 were "yes" votes, 22 were "no" votes and there were 2 spoiled ballots.

RESOURCE REQUIREMENTS:

N/A

CONNECTION TO THE UNIVERSITY PLANNING FRAMEWORK:

N/A



UNIVERSITY
OF MANITOBA

Faculty of Medicine
School of Medical Rehabilitation

R106-771 McDermot Ave.
Wpg., MB R3E 0T6
Telephone (204) 789-3897
Fax (204) 789-3927
Department of Occupational Therapy
Department of Physical Therapy
Department of Respiratory Therapy

December 2, 2010

Dr. David Barnard
President and Vice-Chancellor
University of Manitoba

Dear Dr. Barnard:

I am pleased to inform you that the students in the School of Medical Rehabilitation have once again voted to continue making contributions to the school through their student referendum.

Attached you will find the letter I received from Meg Cliff and Kayla Jensen, Co-Sticks of the School of Medical Rehabilitation Students' Association. The letter details how proper notice was provided to the students about the referendum initiative, including the disbursement and the vote date, through presentations made by the representatives of the student council.

As Meg and Kayla explain, the students wish to contribute \$1.66 per credit hour for a three year term, to the School of Medical Rehabilitation endowment fund. This will result in a contribution of \$25,200 (pending enrolment) to the university. This contribution is to be collected from each student in each term when fees are paid, beginning in the fall of the 2011/2012 fiscal year.

I would appreciate it if you would present these results to the Board of Governors for approval.

Sincerely,

Emily Etcheverry
Director, School of Medical Rehabilitation

enclosure

cc: Annual Giving Program, Department of Development



December 1, 2010

Dr. Emily Etcheverry,
Director, School of Medical Rehabilitation
R118 Rehabilitation Bldg
University of Manitoba

Dear Dr. Etcheverry,

On Tuesday, November 16 and Wednesday, November 17, 2010 the School of Medical Rehabilitation Students' Association held a referendum to support the School of Medical Rehabilitation Endowment Fund. Each student was proposed with making a donation of \$1.66 per credit hour for a three year term, beginning in the fall of 2011. This amounts to an approximate donation of \$50 per student per year. We are pleased to inform you that the vote was successful and as such, the students will be contributing \$25,200 (pending student enrolment) to the School of Medical Rehabilitation over the next three years. The ballot read as follows:

**SCHOOL OF MEDICAL REHABILITATION
2010/2011 REFERENDUM BALLOT**

I agree to make a tax-deductible contribution of \$1.66 per credit hour
(\$50 per year for 30 credit hours)
to be paid at the time of registration.

This contribution will be directed to the
School of Medical Rehabilitation as follows:

100% School of Medical Rehabilitation Endowment Fund

The term for this agreement is to be 3 year.

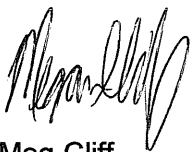
Yes **No**

There was a 33% participation rate with 56 of the 168 eligible student voters casting a ballot. Of those votes, 32 were "yes" votes, 22 were "no" votes and there were 2 spoiled ballot.

Prior to the referendum vote the student representatives conducted a presentation at an open forum to ensure all students were made aware of information detailing the referendum process, the proposed donation amount and disbursement and the need to give back.

The School of Medical Rehabilitation Students' Association supports the results of this referendum and asks that the university take the necessary steps to implement the contributions. We are requesting that you forward this information to Dr. David Barnard, President of the University of Manitoba, who will present it to the Board of Governors for ratification. If you require any additional information or have any questions, please feel free to contact us.

Sincerely,



Meg Cliff
Senior Stick, PT



Kayla Jensen
Senior Stick, RT

cc: Sana Mahboob, Department of Development



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>John Kearsy</u>	<u>Jan 13/11</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>David Barnard</u>	<u>Jan 13, 2011</u>
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

Office of the Vice-President (External)

Submission prepared by:

Submission approved by: *Vice-President (External)*

Attachments

- Letter from Director, School of Medical Rehabilitation*
- Letter from Meg Cliff*

Received
JAN 13 2011
University Secretariat



AGENDA ITEM: *Student Referendum: Faculty of Medicine*

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve that the students from the Faculty of Medicine contribute \$100.00 per year for a four year term to the Faculty of Medicine Student Scholarships, the Student Initiative Fund, and the Wish Clinic , beginning in the fall of 2011/2012.

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

On Monday and Tuesday, December 6 and 7, 2010 the Manitoba Medical Students' Association held a referendum to support the Faculty of Medicine Student Scholarships, the Student Initiative Fund, and the Wish Clinic. Each student was proposed with making a donation of \$100.00 per year for a four year term, beginning in the fall of 2011. The split of donations will be 50% to the Medicine Student Scholarship, 40% to the Medicine Student Initiative Fund, and 10% to the Wish Clinic. There was a 40% participation rate with 172 of the 429 eligible student voters casting a ballot. Of those votes, 118 were "yes" votes, 53 were "no" votes and there was 1 spoiled ballot.

RESOURCE REQUIREMENTS:

N/A

CONNECTION TO THE UNIVERSITY PLANNING FRAMEWORK:

N/A



UNIVERSITY
OF MANITOBA

Faculty of Medicine

Office of the Dean
260 Brodie Center
727 McDermot Avenue
Winnipeg, Manitoba
Canada R3E 3P5
Telephone (204) 789-3557
Fax (204) 789-3928

January 12, 2011

Dr. David Barnard, President
Chair of Senate
University of Manitoba
202 Administration Building
Fort Garry Campus
WINNIPEG, Manitoba
R3T 2N2

Dear Dr. Barnard:

RE: Manitoba Medical Students Referendum

I am pleased to inform you that the students in the Faculty of Medicine have once again voted to continue making contributions to the faculty through their student referendum.

Attached you will find the letter I received from Jessica Cudmore, Senior Stick, Michael Gousseau, Senator and Konstantin Jilkin, Communications Representative of the Manitoba Medical Students Association. The letter details how proper notice was provided to the students about the referendum initiative, including the disbursement and the vote date, through a presentation made by the Communications representative of the student council.

As the letter explains, the students wish to contribute \$100 per year for a four year term, to the Faculty of Medicine Student Scholarships, the Student Initiative Fund and the Wish Clinic. This will result in a contribution of \$171,600 (pending enrolment) to the university. This contribution is to be collected from each student in each term when fees are paid, beginning in the fall of the 2011/2012 fiscal year.

I would appreciate it if you would present these results to the Board of Governors for approval.

Yours truly,

Brian Postl, MD
Dean

enclosure

cc: Annual Giving Program, Department of Development

December 21, 2010

Dr. Brian Postl,
Dean, Faculty of Medicine
260 Brodie Ctr
University of Manitoba

Dear Dr. Postl,

On Monday, December 6 and Tuesday, December 7, 2010 the Manitoba Medical Students Association held a referendum to support the Faculty of Medicine Student Scholarships, the Student Initiative Fund and the Wish Clinic. Each student was proposed with making a donation of \$100 per year for a four year term, beginning in the fall of 2011. We are pleased to inform you that the vote was successful and as such, the students will be contributing \$171,600 (pending student enrolment) to the Faculty of Medicine over the next four years. The online ballot read as follows:

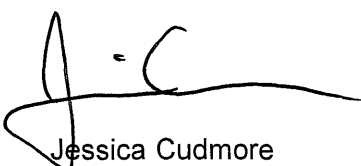
<p style="text-align: center;">FACULTY OF MEDICINE 2010/2011 REFERENDUM BALLOT</p> <p style="text-align: center;">I agree to make a contribution of \$100 to be paid at the time of registration.</p> <p style="text-align: center;">This contribution, which is eligible for a tax-credit will be directed to the Faculty of Medicine as follows:</p> <p style="text-align: center;">50% Medicine Student Scholarship 40% Medicine Student Initiative Fund 10% Wish Clinic</p> <p style="text-align: center;">The term for this agreement is to be 4 years.</p> <p style="text-align: center;"><input type="checkbox"/> Yes <input type="checkbox"/> No</p>
--

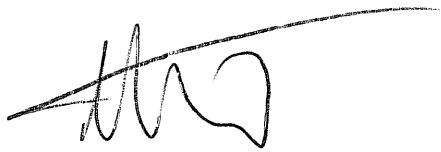
There was a 40% participation rate with 172 of the 429 eligible student voters casting a ballot. Of those votes, 118 were "yes" votes, 53 were "no" votes and there was 1 spoiled ballot.

Prior to the referendum vote the MMSA Communications representative conducted a presentation at an open forum to ensure all students were made aware of information detailing the referendum process, the proposed donation amount and disbursement and the need to give back. This information was also distributed to all students via email.

The Manitoba Medical Students Association supports the results of this referendum and asks that the university take the necessary steps to implement the contributions. We are requesting that you forward this information to Dr. David Barnard, President of the University of Manitoba, who will present it to the Board of Governors for ratification. If you require any additional information or have any questions, please feel free to contact us.

Sincerely,


Jessica Cudmore
Senior Stick


Michael Gousseau
Senator


Konstantin Jilkin
Communications Rep

cc: Sana Mahboob, Department of Development



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>John Kearsey</u>	<u>Jan 13/11</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>David Barnard</u>	<u>Jan 13, 2011</u>
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		

Office of the Vice-President (External)

Submission prepared by:

Submission approved by: *Vice-President (External)*

Received
JAN 13 2011
University Secretariat

Attachments

- Letter from Dean Brian Postl, Faculty of Medicine*
- Letter from Jessica Cudmore, Michael Gousseau and Konstantin Jilkin*



AGENDA ITEM: *Student Referendum: Faculty of Pharmacy*

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve that the students from the Faculty of Pharmacy contribute \$3.67 per credit hour for a three year term to Faculty of Pharmacy Endowment Fund, the Student Initiative Fund, and the Wish Clinic, beginning in the fall of 2011/2012.

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

On Wednesday and Thursday, September 29 and 30, 2010 the Faculty of Pharmacy Students' Association held a referendum to support as follows the Pharmacy Endowment Fund – 45%, the Faculty of Pharmacy Student Initiative Fund – 45%, and the Wish Clinic – 10%. Each student was proposed with making a donation of \$3.67 per credit hour for a three year term, beginning in the fall of 2011. This amounts to an approximate donation of \$110.00 per student per year for 30 credit hours. There was a 78% participation rate with 151 of the 194 eligible student voters casting a ballot. Of those votes, 143 were "yes" votes, 7 were "no" votes and there was 1 spoiled ballot.

RESOURCE REQUIREMENTS:

N/A

CONNECTION TO THE UNIVERSITY PLANNING FRAMEWORK:

N/A



UNIVERSITY
OF MANITOBA

Faculty of Pharmacy

Apotex Centre
750 McDermot Avenue
Winnipeg, Manitoba
Canada R3E 0T5
Telephone (204) 474-9306
Fax (204) 474-7617

October 6, 2010

Dr. David Barnard
President and Vice-Chancellor
University of Manitoba

Dear Dr. Barnard:

I am pleased to inform you that the students in the Faculty of Pharmacy have once again voted to continue making contributions to the faculty through their student referendum.

Attached you will find the letter I received from Yvette Sanders, Senior Stick of the Faculty of Pharmacy Students' Association. The letter details how proper notice was provided to the students about the referendum initiative, including the disbursement and the vote date, through a presentation made by the representatives of the student council.

As Yvette explains, the students wish to contribute \$3.67 per credit hour for a three year term, to the Faculty of Pharmacy endowment fund, the Student Initiative Fund and the Wish Clinic. This will result in a contribution of \$64,020 (pending enrolment) to the university. This contribution is to be collected from each student in each term when fees are paid, beginning in the fall of the 2011/2012 fiscal year.

I would appreciate it if you would present these results to the Board of Governors for approval.

Sincerely,

Lavern Vercaigne, B.Sc. (Pharm), Pharm.D.
Professor and Acting Dean

enclosure

cc: Annual Giving Program, Department of Development

October 6, 2010

Dr. Lavern Vercaigne
Acting Dean, Faculty of Pharmacy
143 Apotex Ctr
University of Manitoba

Dear Dr. Vercaigne,

On Wednesday, September 29 and Thursday, September 30, 2010 the Pharmacy Students' Association held a referendum to support the Faculty of Pharmacy Endowment Fund, the Student Initiative Fund and the Wish Clinic. Each student was proposed with making a donation of \$3.67 per credit hour for a three year term, beginning in the fall of 2011. This amounts to an approximate donation of \$110 per student per year. I am pleased to inform you that the vote was successful and as such, the students will be contributing \$64,020 (pending student enrolment) to the Faculty of Pharmacy over the next three years. The ballot read as follows:

**FACULTY OF PHARMACY
2010/2011 REFERENDUM BALLOT**

I agree to make a \$3.67 per credit hour contribution
(\$110 per year for 30 credit hours)
to be paid at the time of registration.

This contribution, which is eligible for a tax credit, will be directed to the
Faculty of Pharmacy as follows:
45% Faculty of Pharmacy Endowment Fund
45% Faculty of Pharmacy Student Initiative Fund
10% Wish Clinic

The term for this agreement is to be 3 year.

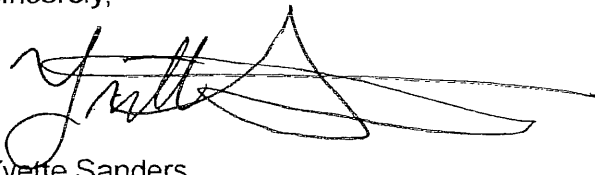
Yes No

There was a 78% participation rate with 151 of the 194 eligible student voters casting a ballot. Of those votes, 143 were "yes" votes, 7 were "no" votes and there was 1 spoiled ballot.

Prior to the referendum vote the student representatives conducted classroom presentations to ensure all students were made aware of information detailing the referendum process, the proposed donation amount and disbursement and the need to give back.

The Pharmacy Students' Association supports the results of this referendum and asks that the university take the necessary steps to implement the contributions. I am requesting that you forward this information to Dr. David Barnard, President of the University of Manitoba, who will present it to the Board of Governors for ratification. If you require any additional information or have any questions, please feel free to contact me.

Sincerely,



Yvette Sanders
Senior Stick

cc: Sana Mahboob, Department of Development



Board of Governors Submission

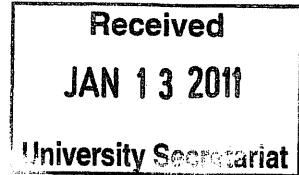
Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>John D. Kearsey</u>	<u>Jan. 13/11</u>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<u>David Barnard</u>	<u>13, 2011</u>
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____
<input type="checkbox"/>	<input type="checkbox"/>	_____	_____

Office of the Vice-President (External)

Submission prepared by:

Submission approved by: *Vice-President (External)*



Attachments

- Letter from Acting Dean Lavern Vercaigne
- Letter from Yvette Sanders



AGENDA ITEM: *Student Referendum: Faculty of Engineering*

RECOMMENDED RESOLUTION:

THAT the Board of Governors approve that the students from the Faculty of Engineering contribute \$3.05 per credit hour for a three year term to Faculty of Engineering Endowment Fund, beginning in the fall of 2011/2012

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

On Wednesday and Thursday, November 24 and 25, 2010 the Faculty of Engineering Students' Association held a referendum to support the Engineering Endowment Fund. Each student was proposed with making a donation of \$3.05 per credit hour for a three year term, beginning in the fall of 2011. This amounts to an approximate donation of \$110.00 per student per year for 36 credit hours. There was 17.4% participation rate with 220 of the 1262 eligible student voters casting a ballot. Of those votes, 206 were "yes" votes, 13 were "no" votes and there was 1 spoiled ballot.

RESOURCE REQUIREMENTS:

N/A

CONNECTION TO THE UNIVERSITY PLANNING FRAMEWORK:

N/A



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	John Kearsey	<i>John D. Kearsey</i>
<input type="checkbox"/>	<input type="checkbox"/>	David Barnard	<i>[Signature]</i> Apr 4, 2010
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		

Office of the Vice-President (External)

Submission prepared by:

Submission approved by: *Vice-President (External)*

Attachments

- Letter from Acting Dean Doug Buchanan*
- Letter from Derek Neufeld,*



UNIVERSITY
OF MANITOBA

Faculty of Engineering
Office of the Dean



E2-290 Engineering Building
Winnipeg, Manitoba
Canada R3T 5V6
Telephone (204) 474-9806/7
Fax (204) 275-3773

November 29, 2010

Dr. David Barnard
President and Vice-Chancellor
University of Manitoba

Dear Dr. Barnard:

I am pleased to inform you that the students in the Faculty of Engineering have once again voted to continue making contributions to the Faculty of Engineering Endowment Fund through their student referendum.

Attached you will find the letter I received from Derek Neufeld, Senior Stick of the University of Manitoba Engineering Society. The letter details how proper notice was provided to the students about the referendum initiative, including the disbursement and the vote date, through presentations made by the representatives of the student council.

As Derek explains, the students wish to contribute \$3.05 per credit hour for a three year term, to the Faculty of Engineering endowment fund. This will result in a contribution of \$360,000 (pending enrolment) to the university. This contribution is to be collected from each student in each term when fees are paid, beginning in the fall of the 2011/2012 fiscal year.

I would appreciate it if you would present these results to the Board of Governors for approval.

Sincerely,

Douglas Buchanan, P.Eng., Ph.D.
Professor and Acting Dean

enclosure

cc: Annual Giving Program, Department of Development



**University of Manitoba
Engineering Society**

www.umes.mb.ca

E2-292 EITC
University of Manitoba
75A Chancellors Circle
Winnipeg, MB R3T 5V6
Tel: (204) 474-6362

DATE: November 26, 2010
TO: Dr. D. Buchanan
CC: J. Martino, S. Mahboob
FROM: Derek Neufeld, Senior Stick, UMES
RE: Engineering Endowment Fund Referendum Results

University
of Manitoba
NOV 29 2010
Dean's Office
Engineering

Dr. Buchanan,

On Wednesday and Thursday, November 24th and 25th, 2010, students in the Faculty of Engineering held a referendum concerning student fee allocation towards the Engineering Endowment Fund. The ballot from the referendum can be found below:

**FACULTY OF ENGINEERING
2010/2011 REFERENDUM BALLOT**

I agree to make a tax-deductible contribution of \$3.05 per credit hour
(\$110 per year for 36 credit hours)
to be paid at the time of registration.

This contribution will be directed to the
Faculty of Engineering as follows:

100% Faculty of Engineering Endowment Fund

The term for this agreement is to be 3 year.

Yes No

I am pleased to inform you that student turnout showed a strong interest in the Engineering Endowment Fund. The results from the vote are as follows:

Yes: 206

No: 13

Spoil: 1

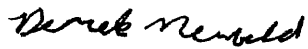
Outcome: Yes

Total ballots cast: 220
Total eligible voters: 1262
Voter turnout: 17.4%

Students will therefore be contributing \$110 per year (\$3.05 per credit hour) towards the Engineering Endowment Fund for the next three (3) academic years.

I am requesting that you forward this information to the President of the University of Manitoba to present to the Board of Governors. If you require any additional information or have any questions, please send me an email or give me a call.

Sincerely,

A handwritten signature in black ink that reads "Derek Neufeld". The signature is written in a cursive style.

Derek Neufeld
Senior Stick
University of Manitoba Engineering Society



AGENDA ITEM: *Revisions to the Student Advocacy Office Terms of Reference*

RECOMMENDED RESOLUTION:

That the Board of Governors approve the revised Student Advocacy Office Terms of Reference as presented.

Action Requested: Approval Discussion/Advice Information

CONTEXT AND BACKGROUND:

These revisions are necessary as the original Terms of Reference (1994) are outdated. The main changes reflect the current titles used by other University of Manitoba offices/officers and the reporting relationship of the Student Advocacy Office. The latter is related to the restructuring within Student Affairs. The terms of reference have also been moved into the new governing document format.

RESOURCE REQUIREMENTS:

none

CONNECTION TO THE UNIVERSITY PLANNING FRAMEWORK:

IMPLICATIONS:

None. These are revisions to an existing document.



Board of Governors Submission

Routing to the Board of Governors:

<u>Reviewed</u>	<u>Recommended</u>	<u>By</u>	<u>Date</u>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>Angus Gethheil</i>	<i>Dec 21, 2010</i>
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<i>[Signature]</i>	<i>Dec 22, 2010</i>
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<i>[Signature]</i>	<i>Jan 4, 2011</i>
<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>		

Shelley Foster, Office of the University Secretary

Submission prepared by:

Submission approved by:

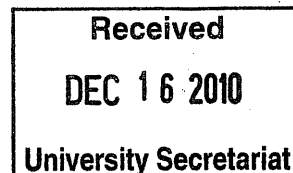
This must be the President, a Vice-President, or the University Secretary.

Attachments

Please list any related material attached. Ideally attachments for any given submission will not exceed ten (10) pages.



MEMORANDUM



DATE: December 13, 2010
 TO: Mr. Jeff Leclerc, Senate Secretary
 FROM: Lynn M. Smith, Executive Director, Student Services
 RE: **Revisions to the Student Advocacy Office Terms of Reference**

Lynn M. Smith

Attached please find a revised version of the Terms of Reference for the Student Advocacy Office. These revisions are necessary as the original Terms of Reference (1994) are outdated. The main changes reflect the current titles used by other University of Manitoba offices/officers and the reporting relationship of the Student Advocacy Office. The latter is related to the restructuring within Student Affairs.

Several of these changes were submitted previously but it appears that they were not forwarded to the Board of Governors for approval. Thus, Ms Heather Morris has updated the revisions and we now submit to you the attached version.

If you would prefer an electronic copy of the current document please do not hesitate to contact me.

I would be pleased to answer any questions you might have regarding the recommended revisions.

LMS/jb
Attach.

c.: Ms S. Gottheil, Vice-Provost (Students)
Ms H. Morris, Acting Director, Student Advocacy and Resource Services



UNIVERSITY
OF MANITOBA

Student Advocacy and Resource Services

Student Advocacy
519 University Centre
Winnipeg, Manitoba
Canada R3T 2N2

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

MEMORANDUM

DATE: December 2, 2010

TO: Dr. Lynn Smith, Executive Director, Student Services

FROM: Heather Morris, Acting Director, Student Advocacy and Resource Services

RE: Revisions to Student Advocacy Office Terms of Reference

I have enclosed a newly revised version of the Student Advocacy Office Terms of Reference. The policy currently published on the Governing Documents website was last updated in 1994. Since then, there have been significant changes that necessitated updating of our office's policy. This includes a re-organization within Student Affairs and changes to offices and/or office titles in the U of M community that our office works with on a regular basis.

Please forward these revisions to the University Secretary for processing and approval. It is hoped that this can be processed expeditiously. It is important that accurate information can be published and available to students to understand how our unit operates and the type of services students can expect to receive.

An electronic version of the attached is available if needed.

Thank you.



Title: Office of Student Advocacy Office

Effective Date: Review Date:

Approving Body: X Board of Governors, Administration (specify):

Authority: University of Manitoba Act Section #, Other Legislation, Bylaw, Regulation

Implementation: Contact: Director of Student Advocacy

Applies to: Board of Governors members, Senate members, Faculty/School Councils, X Students, External Parties, Employees

1.0 Reason for Policy

This policy outlines the Terms of Reference for the Student Advocacy office in providing services to University of Manitoba students(current, former, and prospective).

2.0 Policy Statement

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

- 1. be under the general charge of a Director who shall report to the Board of Governors and Senate at least annually on the activities of the Office and to the Vice-Provost (Student Affairs) Executive Director, Student Services, for routine financial, logistic and administrative matters;
2. serve as a general information unit for students, former students, or those who have applied to become students, and provide them with information on their rights, responsibilities, and the procedures to follow to resolve problems or concerns resulting from actions or decisions, arising from actions or decisions taken by the University that may be unfair, unjust, discriminatory or create undue hardship; and,

- (a) in carrying out its information function, shall establish and be responsible for a Special Student Services Referral Centre which the **Student Advocacy Office** will receive student complaints and refer complainants, as appropriate, to other University officers or staff, including, without limitation, the Director, Office of Student Advocacy, The Sexual Harassment Officer, the Human Rights Officer, Mediation Services; **Human Rights and Advisory Services**; the Ombudsman; faculty members and academic or support service administrators;
3. investigate or facilitate the investigation of any concern or complaint presented by a student or former student or applicant against the University or against anyone in the University exercising authority;
 4. review policies, procedures, regulations, rules and criteria and recommend any changes thereto that are necessary or desirable to ensure prompt decision making, appropriate procedures and protection of the rights of students;
 5. subject to clause 5 (b) hereof, provide assistance or representation to students who are appealing an academic or disciplinary action and are appearing before a residence, faculty, Senate or University committee; and,
 - a) in discharging its representational function, be responsible for the recruitment, selection, training and assigning of 'Student Advocates' recruited from the student body or from the members of the academic or support staff to assist and work with students who are appealing an action;
 - b) withhold or withdraw representation if, in the opinion of the Director of the Office, the case has no merit; the student is not co-operative; the student has retained legal counsel; and/or the circumstances indicate that such involvement would be counterproductive;
 6. have access to such information as is appropriate having regard to the representational functions of the Office, while at all times respecting confidentiality and only releasing confidential information after written permission is given by the affected parties for such release;
 7. keep suitable records of complaints, findings and recommendations as may be necessary; such records shall be accessible only to members of the Office, **as per FIPPA and PHIA legislation.**

3.0 Accountability

- 3.1** The Director of the Student Advocacy office, Executive Director (Student Services), and Vice-Provost (Students) are responsible for ensuring compliance with all aspects of this Policy.

4.0 Secondary Documents

- 4.1** The Approving Body may approve Procedures which are secondary to and comply with this Policy.

5.0 Review

5.1 Formal Policy reviews will be conducted every ten (10) years. The next scheduled review date for this Policy is _____.

5.2 In the interim, this Policy may be revised or rescinded if:
(a) the Approving Body deems necessary; or
(b) 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:
(a) comply with the revised Policy; or
(b) are in turn rescinded.

6.0 Effect on Previous Statements

6.1 This Policy supersedes Office of Student Advocacy/November 24, 1994
[Previous Governing Document no./title/effective date]

7.0 Cross References

Cross References:

[Indicate other specific Governing Documents which should be cross referenced to this Governing Document.]

_____ Student Discipline By-Law

_____ Academic Appeals Procedures and Guidelines

STUDENT ADVOCACY OFFICE
TERMS OF REFERENCE

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

1. be under the general charge of a Director who shall report to the Board of Governors and Senate at least annually on the activities of the Office and to the Executive Director, Student Services, for routine financial, logistic and administrative matters;
2. serve as a general information unit for students, former students, or those who have applied to become students, and provide them with information on their rights, responsibilities, and the procedures to follow to resolve problems or concerns resulting from actions or decisions, arising from actions or decisions taken by the University that may be unfair, unjust, discriminatory or create undue hardship; and,
 - (a) in carrying out its information function, the Student Advocacy office will receive student complaints and refer complainants, as appropriate, to other University officers or staff, including, without limitation, Human Rights and Advisory Services; faculty members and academic or support service administrators;
3. investigate or facilitate the investigation of any concern or complaint presented by a student or former student or applicant;
4. review policies, procedures, regulations, rules and criteria and recommend any changes thereto that are necessary or desirable to ensure prompt decision making, appropriate procedures and protection of the rights of students;
5. subject to clause 5 (b) hereof, provide assistance or representation to students who are appealing an academic or disciplinary action and are appearing before a residence, faculty, Senate or University committee; and,
 - a) in discharging its representational function, be responsible for the recruitment, selection, training and assigning of 'Student Advocates';
 - b) withhold or withdraw representation if, in the opinion of the Director of the Office, the case has no merit; the student is not co-operative; the student has retained legal counsel; and/or the circumstances indicate that such involvement would be counterproductive;
6. have access to such information as is appropriate having regard to the representational functions of the Office, while at all times respecting confidentiality and only releasing confidential information after written permission is given by the affected parties for such release;
7. keep suitable records of complaints, findings and recommendations as may be necessary; such records shall be accessible only to members of the Office, as per FIPPA and PHIA legislation.