

Senate  
Senate Chamber  
Room 245 Engineering Building  
WEDNESDAY, December 1, 2004  
1:30 p.m.  
Regrets call 474-6892

## AGENDA

### I MATTERS TO BE CONSIDERED IN CLOSED SESSION

1. Report of the Senate  
Committee on Honorary Degrees

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

### II MATTERS RECOMMENDED FOR CONCURRENCE WITHOUT DEBATE

1. Post-Baccalaureate Certificate in Aerospace Engineering Page 17
2. Report of the Senate Committee on  
Curriculum and Course Changes - Part A Page 26

### III MATTERS FORWARDED FOR INFORMATION

1. ELECTION OF A SENATE REPRESENTATIVE
  - a) To the Board of Governors Page 94
2. 2004 Report on Accredited Academic Programs Page 96
3. Report of the Senate Committee on Awards Page 117
4. Correspondence from the Vice-President (Academic)  
Re: Implementation of the Joint Honours Program in  
Computer Science and Physics and Astronomy Page 119

### IV REPORT OF THE PRESIDENT

1. President's Report, December 1, 2004 Page 120
2. Annual Progress Report, Building for a Bright Future Page 144

**V QUESTION PERIOD**

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

**VI CONSIDERATION OF THE MINUTES  
OF THE MEETING OF November 3, 2004**

**VII BUSINESS ARISING FROM THE MINUTES**

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

1. Report of the Senate Executive Committee Page 174
2. Report of the Senate  
Planning and Priorities Committee

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

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

3. Report from the Faculty Council of the  
I.H. Asper School of Business re: Proposed  
Professorship in Financial Management Page 175
2. Report of the Senate Committee on University Research  
Re: Periodic Review of Research Centres and Institutes Page 179
3. Report of the Senate Committee on Curriculum  
and Course Changes - Part B Page 184
  - a) Report of the Senate  
Planning and Priorities Committee  
on Undergraduate Changes with  
Resource Implications or Course  
Changes Beyond Nine Credit Hours Page 192

**X ADDITIONAL BUSINESS**

1. Notice of Motion Page 197

**XI ADJOURNMENT**

Please Call Regrets to 474-6892.

/cdak

**THE UNIVERSITY OF MANITOBA  
FACULTY OF ENGINEERING**

**Post-Baccalaureate Certificate in Aerospace Engineering  
Formal Proposal**

**1.0 PROGRAM DESCRIPTION**

**1.1 Title of the proposed program**

Post-Baccalaureate Certificate in Aerospace Engineering

**1.2 Type of credential proposed**

Certificate.

**1.3 Is this a new program or major revision to an existing program?**

New program.

**1.4 A brief description of the program and rationale for the selected credential**

The proposed certificate is designed to provide industry-specific education and training to recent Engineering graduates working in the aerospace industry. It responds directly to the needs of the aerospace sector and has been developed with extensive input from industry representatives.

According to the University of Manitoba Non-degree Programs Taxonomy, a program of a minimum of 180 contact hours offered to graduate students would be classified as a Post-Baccalaureate Certificate.

**1.5 Academic unit within the Division proposing the program**

Faculty of Engineering is proposing this certificate.

**1.5.1 Other academic units within the University or external agencies that are partners to this proposal and the roles, responsibilities, and expectations of these partners in the development and delivery of the proposed program.**

In addition to the Faculty of Engineering proposing this program, the Manitoba Aerospace Human Resources Coordinating Committee (MAHRCC) has played an active role in the development of the certificate. MAHRCC represents over 35 companies within Manitoba and plays a central role in providing training and education for the Aerospace Industry. Its mandate is to assist industry and educational institutions in developing and delivering training for both existing and prospective employees in the Manitoba aerospace industry, consistent with current and projected demands for skills.

The recommendations for course content for the proposed certificate come from an Aerospace Focus Group of MAHRCC. One of the members of this committee is also a professor in the Faculty of Engineering who teaches in this field. While MAHRCC is not a formal partner in this proposal, their involvement is necessary for the program's continued success. They will play a significant role in marketing the certificate. The Continuing Education Division will handle the registration and administration processes on a fee for service basis.

**1.5.2 Role of the Program Director submitting the program proposal**

The Program Director is responsible for all aspects of program quality, including the program's design, delivery, evaluation, budget, marketing, and all matters concerning program requirements and instructional quality.

**1.5.3 Name of Program Director submitting the program proposal**

Dr. Sandra Ingram, Faculty of Engineering, Program Director.

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

- 1.6 Is the program intended to be ongoing or one that will be offered for a limited period of time?**  
The program is intended to be ongoing, however we recognize that the aerospace sector currently has a limited number of potential participants. Accordingly, the market will dictate the longevity of the program and its ongoing viability. It is expected that the program will have a minimum lifespan of 4-5 years.

**2.0 NEED ASSESSMENT**

- 2.1 Assessment or consultation process used to identify the intended audience, their educational needs, their demand for the program, and potential supports and barriers to participation. Explain why this method was selected and what method was used to ensure that the information collected is credible.**

The aerospace industry, by its nature, places a high value on corporate training and invests heavily in making its employees well prepared and in compliance with regulatory requirements. As such, it conducts a comprehensive training process from needs assessment to ultimate delivery. The training of engineers up until now however, has been ad hoc and delivered on a more individualized basis, as opposed to a systematic, centralized training program.

For some time, the aerospace industry in Manitoba has been requesting training for recent engineering graduates who are employed in the industry. The request stems from the aerospace industry's need for highly trained engineers, who, in the typical undergraduate program's time constraints have not had the opportunity to learn critical skills needed in this specialized sector. There is also a need for more advanced training and regulations-based training not available in the undergraduate program.

Formal discussions began on September 27, 2001 when the Faculty of Engineering and Continuing Education Division held a meeting with industry representatives from several engineering sectors to obtain feedback on the viability of a post-baccalaureate program for engineers. An Aerospace Focus Group was formed from that initial contact. This group included a representative from the Faculty of Engineering, training managers within the industry as well as line managers. During the next 18 months, this group met on a regular basis to identify industry needs, recent graduate engineer capabilities and how to bridge the gap.

The Aerospace Focus Group determined that additional training was required in two main areas: hands-on practical skills and advanced engineering analysis. While these areas may seem diametrically opposed, there is a strong relationship between the two and good capabilities in both will yield better engineers.

The purpose of the hands-on practical, or skills training is not to produce advanced capability in these skills but rather to foster a strong understanding and appreciation of them. An engineer should be sufficiently well versed in these skills to work more effectively with the trades and technicians. The purpose of the required skills in advanced engineering analysis is to provide capability on topics not normally found in an undergraduate curriculum. These analysis methods are used extensively in the aerospace industry and are necessary for the success of both the engineer and the industry.

- 2.2 Characteristics of the intended audience, including its size, educational level, and employment factors related to the audience, and potential supports for and barriers to participation.**

**2.2.1 Characteristics of the intended audience**

The intended audience will consist primarily of recent engineering graduates currently employed in Manitoba's aerospace industry. Students would be drawn primarily from 4 major aerospace companies in the province namely: Bristol, Standard, Boeing, and Cadorath. The certificate will be aimed at Engineers in Training (EITs) that is, newly graduated engineers who are within their 4 years of work experience leading to registration, as well as those who have received their P. Eng. designation. Given the involvement of MAHRCC, we know the proposed program has very strong industry support. Accordingly, students will receive financial support from employers and if necessary, time off work.

**2.2.2 Market size**

There are currently 157 engineering employees within the aerospace industry in Winnipeg who would be eligible for this advanced training. They consist of 36 engineers from Bristol Aerospace; 84 from Standard Aero; 35 from Boeing and 2 from Cadorath.

However, MAHRCC anticipates that there will be significant renewal and expansion in the industry within the next few years and all of these companies are projecting through their human resources forecasts that engineers will form a major part of the expansion. By 2008, there are expected to be a significant number of retirements and a replacement workforce will be needed. MAHRCC has communicated these projections to the High Demand Occupational Research Project of the Manitoba Department of Advanced Education and Training.

Because the market size is currently small, the courses will need to be structured on a planned schedule with restricted offerings in order to ensure cost efficiency of the program.

**2.2.3 Barriers to participation**

The principal barrier to participation is likely to be the work schedules of participants as the time required to complete the program will place constraints on working employees. That is why flexible offerings for courses so that they may take place on weekends, evenings and possibly even during work hours are essential. A modular approach will also help to condense course material into shorter, more timely offerings.

Furthermore, offering courses at or near the work sites of participants will enhance participation by making use of on-site resources and decreasing travel time. Most of these companies are located in the northwest part of the city, and for convenience sake, the delivery of this program should also be centered in that region.

Cost of tuition is not likely to be a barrier to participants as the program will be company-sponsored.

- 2.3 Referring clearly to data from the consultation process, identify discrepancies between the audience's current educational capabilities and desired capacities. Distinguish between the discrepancies identified by potential learners and by key informants. Describe limitations on the ability to identify educational needs and market demand. How will these limitations be addressed during the early delivery process?**
- The companies involved in the proposed certificate have conducted their own needs assessment as mentioned earlier and have identified what training they require. The training that currently exists is largely ad hoc and de-centralized, often involving employees being sent away for expensive training, which is disadvantageous to the smaller aerospace companies (e.g. Cadorath) who do not have access to the same financial resources as the larger ones. Thus, the proposed program will replace this existing training with a more regularized, centralized and systematic process that will be beneficial to both large and small aerospace companies alike.

**3.0 DESIGNS AND DELIVERY****3.1 Method used to develop the program and course and reason for this approach.**

As mentioned previously, a sub-committee of MAHRCC was struck in September 2001 and over 18 months, this committee composed largely of aerospace training directors and a U of M aerospace professor laid out the general curriculum requirements and required course outcomes of the proposed program. As such, the committee was comprised of knowledgeable people from the industry laying out their training needs.

**3.2 Program structure and objectives including course/module titles, descriptions, contact or equivalent hours, required and elective courses, prerequisites, and expected course progression.**

The Post-Baccalaureate Certificate in Aerospace Engineering will be targeted towards recent engineering graduates who are seeking continuing education in the aerospace industry. This certificate will be of direct relevance to their productivity within the organization and will have direct applicability to their jobs. The focus of the training will be to provide a combination of hands-on practical and advanced engineering analysis. There

is no set sequencing of courses (aside from Machine Shop Practice II to follow Machine Shop Practice I) and no elective/required course balance. It is expected that the companies, depending on their specific training needs will determine the course emphasis/balance in conjunction with the students.

### 3.2.1 Program objectives:

- To provide engineers with experience in practical, hands-on skills so that they may better understand and work with the related trades/technicians
- To give aerospace engineers industry-specific training which is not offered on a wide-scale, systematic basis
- To provide engineers with advanced technical training in aerospace

### 3.2.2 Course descriptions and contact hours

The courses in this program are to be offered through both Red River College and the University of Manitoba Faculty of Engineering. RRC will make use of the Stevenson Aviation and Aerospace Training Centre and be responsible for the first 5 courses, as well as the Gas Turbine Overhaul course and, possibly Advanced Engineering (Composites). Students will be required to complete 180 contact hours (minimum) and take at least 50% of the course offerings (that is a minimum of 90 contact hours) from the U of M Engineering Faculty.

#### **Precision Measurement Systems: 36 hours (RRC)**

This course is designed to provide engineering graduates with an in-depth, practical background of precision measurement systems and their use in modern manufacturing. A multitude of precision measuring equipment will be examined; vernier calipers, height gages, as well as outside, point, groove, inside, three-point, tubular inside, and depth micrometers. The students will be taught how to obtain repeatable and precise measure distances to within 1/1000 inch, using either imperial or metric scales. Emphasis will be placed on selecting the appropriate measurement tool, and understanding the basics of calibration. The course will also cover the basics of understanding and interpreting Coordinate Measuring Machine results.

#### **Blueprint Reading and Interpretation: 36 hours (RRC)**

This course is designed to provide engineering graduates with a background in blueprint reading. A basic coverage of Geometric Dimensioning and Tolerancing will allow the student to identify standard sheet layouts, understand blueprint nomenclature, identify special features such as datums, chamfers, undercuts, threads, bearings, gears and splines, and material specifications. Course coverage will trace the development of the GD&T philosophy, pros and cons, modifiers, position/size relationships, gauging, and inspection constraints.

#### **Machine Shop Practice I: 36 hours (RRC)**

This course is designed to provide hands-on practical machine shop practice for engineering graduates. Students will be taught basic machining practices for milling, turning and shaping parts as well as how to hold a machine part to maintain required tolerances. Arc and gas welding will also be covered.

#### **Machine Shop Practice II: 36 hours (RRC)**

This course is designed to provide extended coverage of Machine Shop Practice I to examine the theory and practice of computer numerical controlled machining.

**Airworthiness Regulations: 36 hours (RRC/Stevenson)**

This course is designed to provide an in-depth coverage of the airworthiness regulations and practices. Coverage will focus on the Canadian Aviation Regulations (CARs) with specific emphasis on the sections that relate to Approved Maintenance Organizations and their authority. Coverage will include the American, FAA, and European, JAA, regulations and their relationship with Transport Canada. The students will learn how to navigate through both the CARs and Federal Aviation Regulations (FARs), understand the Type Certification and Supplemental Type Certification processes, use the FAA 8110 forms, relate regulatory requirements of an aircraft's Design Requirements and objectives, and understand ongoing airworthiness requirements. Emphasis will be placed on the sections of both CARs and FARs most relevant to Winnipeg's Aerospace industry.

**Advanced Engineering Materials (Metals): 36 hours (U of M)**

This course will cover the common uses and applications of metals such as aluminum alloys, stainless steels, steel, magnesium, and magnesium alloys in the Aerospace Industry. There will be an emphasis on why these materials are selected based on strength, weight, corrosion resistance, weldability, machinability and cost. The coverage will include process handling, machining, cleaning and resultant complications. Related processes such as; plating, stress relieving, shot peening, carburizing, nitrating, and hydrogen embrittlement will be covered in detail.

**Advanced Engineering Materials (Composites): 36 hours (U of M)**

This course will cover the material science behind the properties of composites. Coverage will include the application of advanced high modulus composite materials in thermal, sonic, environmental and other demanding applications. Comparisons of different materials options for weight, cost, and structural performance will assist in justifying a material selection decision. Basic manufacturing techniques used in fabrication will be presented.

**Vibrations and Acoustics - 36 hours (existing course from the U of M calendar 25.342)**

Vibrations and computer simulations of single-degree-of-freedom systems, viscous and frictional damping, MD of systems and modal analysis, measurement and sources of noise, noise control.

**Advanced Vibration Diagnosis and Analysis: 36 hours (U of M)**

This course will provide the necessary high-level theoretical background associated with rotor balancing, with hands on demonstrations. Coverage will include; unbalance causes, effects and correction methods; balancing theory with specific reference to centrifugal force imbalance; balancing machines, soft- vs. hard bearing, single- vs. two plane, plane separation and setup; the need for index balancing and its principle of operation; angle splitting; and balancing machine calibration.

**Analysis of Aerospace Structures: 36 hours (U of M)**

This course will provide an understanding of the analysis of aerospace structures capable of meeting the design requirements and objectives. It will cover; elements of the preliminary aircraft design process; preliminary performance and configuration selection fundamentals, how external and internal loads are generated, how static and dynamic loads are applied to a structure using hand FEA calculations, how to complete a Strength Check Note Report, and design of testing programs for product certification.

**Design of Aerospace Structures: 36 hours****(U of M)**

This course will cover the design process used to develop aerospace structures. It will cover the creation process from initial layouts, aerodynamics and resultant loads through to structures capable of meeting the Design Requirements and Objectives. The coverage will explore the connections between the elements of the aircraft creation process. Discussion will cover the different design options for weight, cost, structural performance, and durability. A focus will be given to the justification of a design decision.

**Gas Turbine Propulsion Systems: 36 hours (existing course from the U of M calendar 25.420)**

Gas turbine systems, shaft power cycles, gas turbine propulsion cycles, centrifugal compressors, axial flow compressors, combustion systems, design performance predictions, off-design operations and transient behavior of gas turbines.

**Gas Turbine Overhaul: 36 hours****(RRC/Stevenson)**

This course will provide graduate engineers with the gas turbine overhaul process. The course will examine the process of accepting, tearing down, repairing and returning a gas turbine engine. The course will have a strong hands-on practical focus.

**3.3 Requirements, prerequisites and course progression**

Graduation from an accredited degree program in Engineering is the necessary requirement for admission to the program.

**3.4 Rationale for the program structure and objectives outlined above. Explain how, and to what extent, it addresses the needs of the intended audience and obstacles to participation.**

Previously described. See section 2.1 and 2.2.3.

**3.5 Teaching methods and delivery format. Use of flexible study methods and why such methods are/are not selected**

Currently, the courses use conventional adult education instructional methods. Accordingly, the program will likely have a combination of lecture, case study and lab work. Teaching methods need to be tuned to the needs of industry. Flexibility will be necessary in the course time offerings in order to maximize convenience of employees.

**3.6 Location where the program will be delivered**

The courses will be delivered at RRC, the Stevenson Aviation and Aerospace Training Centre, The University of Manitoba and sites proximate to the aerospace employers.

**3.7 Existing courses available elsewhere in the Division or University that could be used, or modified for use, in the program.**

Vibrations and Acoustics (25.342) and Gas Turbine Propulsion Systems (25.420) are existing courses which will be adapted.

**3.7.1 Similar programs at other Canadian universities. Attach to the proposal the web page or calendar description of these programs.**

This program is unique. The narrowness and specificity of the training make it tailored to the Manitoba Aerospace community. Aspects of it can be found elsewhere but not in the entirety presented here. For example, the University of Toronto's Rotman School of Management offers an Aerospace Certificate program catered to executives and senior managers in the aerospace industry with a specific emphasis on management concepts.

- 3.8 Course outlines for any existing courses offered by the University that will be accepted for credit in this program**  
Vibrations and Acoustics and Gas Turbine Propulsion Systems. Outlines are attached.

#### **4.0 RESOURCES**

- 4.1 Teaching personnel required in the program and their availability**  
There will be a Red River College component to the teaching personnel, as well as University of Manitoba professors and industry specialists. The role of industry specialists will be particularly strong because of their expertise.
- 4.2 Provisions for orientation, training, and instructor development**  
The standard practice for orienting sessional instructors will be adopted.
- 4.3 Library resources to support the program**  
The companies involved in this training have resources and journals on site that students are expected to utilize. In many cases, these companies would be prepared to buy course materials and books for students. It is expected that the University of Manitoba Engineering library will play a minor role in program support.
- 4.4 Instructional media resources required to support the program**  
No additional requirements are created by the certificate program.
- 4.5 Laboratory or field placement facilities required to support the program**  
No laboratory or placement facilities are required.
- 4.6 Counseling or student advising not normally provided by the Faculty of Engineering**  
No additional advising services are required.
- 4.7 Additional resources required for program delivery**  
None.

#### **5.0 OPERATIONS AND MANAGEMENT**

##### **5.1 Advisory / Program Committee**

###### **5.1.1 Membership and representation**

The advisory committee shall consist of:

- members designated by MAHRCC
- program director from the Faculty of Engineering responsible for the certificate
- a Red River College representative,
- an additional representative from the Faculty of Engineering
- a program director for Management and Professional and Community Programs (Continuing Education Division).

###### **5.1.2 Terms of reference.**

See Appendix A.

- 5.2 Conditions for admission, including selection criteria, selection process, and the authority to approve admission decisions.**  
The admission requirements will consist of registration as an Engineer in Training (E.I.T.) or professional engineer. The authority to approve admission and challenge for credit rests with the Program Director and students will be admitted on a first-come, first-serve basis.

**5.3 Transfer credit arrangements negotiated during the development stage and variance from Faculty transfer policies.**

None of the courses in the program will be eligible for credit in other Faculty of Engineering programs, except those which currently exist in the undergraduate program.

**5.3.1 Challenge for credit option.**

The standard University of Manitoba challenge for credit policies and procedures will apply.

**5.4 Expected frequency of course offerings**

Courses will be offered in a pre-determined manner. They will be offered at least once in a 3 year cycle.

**5.5 Minimum and maximum times for completing the program**

Given scheduling of course, students would typically complete the program in a 2-3 year time frame. Maximum time for completion is 6 years, unless a time extension is approved.

**6.0 STUDENT ASSESSMENT**

**6.1 Type of student assessment**

Students will be assessed using a variety of techniques including papers, projects, exams, and class assignments. Academic assessment will adhere to the regulations and requirements stated in the University's Responsibilities of Academic Staff to Student Policy.

**6.2 Grading system to be used**

The University letter grade system will be used for the courses in the certificate.

**6.2.1 Criteria for successful completion of the program.**

The requirement for successful completion of this certificate is a grade of C or better in all courses in the student's program.

**7.0 PROGRAM EVALUATION**

**7.1 Method of course and instructor evaluation to be used**

The SEEQ course evaluation will be used for all University of Manitoba courses in the Certificate.

**7.2 Frequency of course and program evaluations**

Evaluation would take place after the first full cycle, then on a periodic basis thereafter.

**8.0 FINANCIAL PLAN**

Assumptions:

- Students will take 2 courses (approx. 30% of the program) from RRC
- Minimum of 10 students needed to offer the courses at U of M
- Tuition = \$700.00 per course (lab fees excluded)
- Instructional stipend = \$5100.00
- Registration fee to CED = \$75 per student/course

CED Start-up fee for training U of M staff = \$500.00 (first year only)

**Proposed Budget**

Revenue = tuition x # of students x # of courses

		2004-05	2005-06	2006-07
<b>Revenue:</b>		2 courses offered	4 courses offered	4 courses offered
Tuition per course	\$800.00	16,000.00	32,000.00	32,000.00
10 students (minimum) per course				
<b>Total Revenue</b>		<b>\$16,000.00</b>	<b>\$32,000.00</b>	<b>\$32,000.00</b>
<b>Expenses:</b>				
Instructional	\$5,100.00 per course	\$10,200.00	\$20,400.00	\$20,400.00
Marketing/Overhead	\$1500.00	\$1500.00	\$1500.00	\$1500.00
C.E.D. Registration Fee	\$75.00 per student/course	\$1500.00	\$3000.00	\$3000.00
Start up Fee	\$500.00 first year only	\$500.00	_____	_____
<b>Total Expenses</b>		<b>\$13,700.00</b>	<b>\$24,900.00</b>	<b>\$24,900.00</b>
<b>Net Profit</b>		<b>\$2,300.00</b>	<b>\$7,100.00</b>	<b>\$7,100.00</b>

**9.0 MARKET PLAN**

Effective marketing will require MAHRCC's active participation. Methods will include conventional advertisements, flyers, brochures, presentations at MAHRCC events, and events for aerospace engineers in Winnipeg.

Typical promotional materials and activities are:

- Program flyers for relevant workplace sites;
- Information sessions;
- Information distributed through MAAHRCC and other associations recommended by the advisory committee;
- Web pages of the University of Manitoba, Continuing Education Division, MAHRCC, Faculty of Engineering, RRC

Approved by Engineering Academic and Regulations Committee on August 31, 2004

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

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**Preamble**

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are found in Section 8.21 of the *Senate Handbook*. SCCC is "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula or courses".
2. Since last reporting to Senate, the Senate Committee on Curriculum and Course Changes (SCCCC) met on October 7, 8, 14 and 22, 2004 to consider curriculum and course changes from Faculties and Schools.

**Observations**

1. **General**

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

2. **Faculty of Agricultural and Food Sciences**

**035.2XY Nutritional Toxicology**, a 1.5 credit hour course, is being introduced to replace **035.311 Principles of Nutritional Toxicology** a 3 credit hour course which is being deleted in the Department of Animal Science. The Principles of Toxicology currently are covered in a 1.5 credit hour course 065.219 Toxicology Principles and the course 035.2XY is being introduced as a 1.5 credit hour course dealing only with the components related to Nutritional Toxicology.

**035.4XY Advanced Applied Animal Nutrition** is being introduced to enrich the Animal Systems program.

**038.436/039.436 Principles of Pest Management** is proposed for deletion effective in 06R in the Departments of Entomology and Plant Science respectively.

The prerequisite of 038.205 Introductory Entomology is being deleted in course 038.432 Pollination Biology to allow a greater range of students to have access to the course.

**078.1XY Food Safety Today and Tomorrow** is being introduced in the Department of Food Science and will give an introductory exposure to the importance of food safety in

the everyday activities of individuals. The course will be offered at the University 1 level which should maximize benefits for a large and important group of students often unaware of best practices to assure safety of the meals they prepare.

The course Food Safety Today and Tomorrow will be included in the Food Science Program as a Group 1 restrictive elective.

Modification of the Plant Systems Program to Plant Biotechnology Program within the B.Sc. (Agriculture) Degree is being recommended by Faculty Council. Three new courses are being recommended with this modification.

**040.350 Landscapes and Biophysical Processes** and **040.351 Fundamentals of Soils and Landscapes** are proposed for deletion in the Department of Soil Science. These two courses are being replaced by a new course **040.3XX Soils and Landscapes in Our Environment** to improve efficiencies in course offerings. **040.3XX Soils and Landscapes in our Environment** will replace 040.350 Landscapes and Biophysical Processes in the Agroecology Program and 040.351 Fundamentals of Soils and Landscapes in the Agronomy Program.

A request to add **039.082 Organic Crop Production on the Prairies** to the restricted elective group in the Crop Management Option and in the General Agriculture Option of the Diploma Program was considered and recommended by Faculty Council.

The faculty proposes that minors from other faculties taken by Agriculture students to meet their degree requirements be recognized on student transcripts.

### 3. Faculty of Architecture

As the courses have not been offered for many years but are still on the system, Environmental Design is requesting deletion of the following courses: **050.109 ARCH DRAWING 1**, **050.111 INTRODUCTION**, **050.116 DESIGN 1**, **050.122 GRAPH PRES1**, **050.200 SUMMER WORK 1**, **050.217 WORKSHOP 2 A & B**, **050.718 THEORY OF METHS**, **050.219 PRAXIOLOGY**, **050.200 TECHNOLOGY**, **050.223 IDEOLOGY**, **050.224 ELECTIVES**, **050.230 SPECIAL DESIGN**, **050.319 ARCH DESIGN**, **050.320 THESIS**, **050.332 HISTORY OF ART**, **050.432 HIST OF ART 2**, **050.500 SUMMER WORK**, **050.502 B ARCH THESIS**, **050.504 DESIGN 5A**, **050.511 DESIGN SEM**, **050.523 GRAPHIC PRES 1**, **050.531 HIST FINE ART**, **050.533 HIST OF ART 3**, **050.542 ARCH ACOUSTICS**, **050.543 STRUCT PLANNING**, **050.574 MUTATIONS**, **050.582 PROF EXPRESSION**, **050.583 PROF PRACTICE 2**.

### 4. Faculty of Arts

#### Canadian Studies

Course title of **151.373 Canadian Identity in the 20<sup>th</sup> Century: An Interdisciplinary Approach** is being modified by removing "in the 20<sup>th</sup> Century." The new course title will be "Canadian Identity: An interdisciplinary Approach." The list of approved courses in Canadian Studies is being modified to include additional courses in native Studies and

political Studies.

### Central and European Studies

Department has submitted modifications to the Honours Double program and list B. These changes are a reflection of course changes being made in Slavic Studies.

### Global Political Economy

The Global Political Economy General Major and Advanced Major program modification adds a course from another department to increase the program's flexibility for students. The list of suggested electives is moving a sociology course in the program rotation, and making changes to the list of courses available for Global Political Economy, based on course changes in other departments.

### Women's Studies

The Women's Studies program proposes the addition of the course **054.211 Women and Art** as part of the List A of courses acceptable for credit in Women's Studies.

### Anthropology

The department is proposing the deletion of the 6 credit hour **076.120 Introductory Anthropology (A)** as students will be covering the material in two 3 credit hour courses already being offered. The department also proposes a modification of the Advanced Major Program requiring a specific number of courses at a particular level as they progress through the degree. The restrictions and prerequisites of courses affected by the deletion of 076.120, also require modification.

### Economics

The department is proposing the deletion of **018.342 Industrial Organization** and replacement with **018.3XX Economics of Industry**. Modifications are required in four other courses to accommodate changes in the Department of Native Studies and Labour Studies.

### English

The Department of English is proposing the addition of three courses **004.3XX Studies in British Literature since 1900**, **004.3YY Studies in Critical Theory** and **004.3XZ Studies in Sixteenth-Century Literature**. These three follow last year's addition of many other specialized three credit hour courses at the 300 level.

### French, Spanish and Italian

The department is proposing the addition of two courses **044.3XX Short Fiction in Spanish** and **044.3XY Latin American Cinema and Society**.

### German and Slavic Studies

The department is proposing the deletion of the German Advanced Major Programs (Options 1, 2 and 3) due to the lack of enrolment in these programs. Three courses **008.2XX Special Topics in German 1**, **008.2XY Special Topics in German 2**, and **008.3XX Special Topics in German** are being added to increase the flexibility within the program. The proposed modifications to courses **008.320 Deutsche Sprachpraxis 1** and **008.321 Business German** deal with prerequisites and course restrictions.

The department is proposing the deletion of the Advanced Major Programs in Russian and Ukrainian. The Department is replacing **052.267 Ukrainian Civilization 1** and **052.268 Ukrainian Civilization 2** with **052.2XY Ukrainian Culture 1** and **052.2XZ Ukrainian Culture 2** to better reflect the content of the course. The department is proposing the deletion of **052.255 Introduction to Ukrainian Literature** and **052.261 Russian Literature: Medieval to Modern**. The department proposes to replace **052.223 Language Seminar in Ukraine 2** with **052.2XX Ukrainian Culture Seminar Abroad**. **052.384 Ukrainian Novel**, **052.385 Ukrainian Short Story** and **052.367 Contemporary Ukrainian Literature** are being modified to no longer require the 052.255 prerequisite. **052.391 Shevchenko** will require 052.131 as a prerequisite, as students require some background in Ukrainian. **052.123 language Seminar in Ukraine 1** is being modified to better reflect course content. The department is proposing the addition of **052.3XX Chekhov**. The Program chart notes are being modified to reflect course changes in the department.

### Native Studies

The department is proposing the introduction of two new courses **032.4AA Exploring Aboriginal Economic Perspectives** and **032.4AB Aboriginal Economic Leadership** these courses were previously offered in another faculty but are now being moved to Native Studies.

### Political Studies

The department is proposing the deletion of **019.266 Human Rights and Civil Liberties** to be replaced by two 3 credit hour courses **019.3XX Human Rights and Civil Liberties** and **019.3XY The Canadian Charter of Rights and Freedoms**. **019.368 Canadian Defence Policy** will be deleted without replacement. Modifications are proposed to accommodate changes in prerequisites in the following courses: **019.310**, **019.320**, **019.322**, **019.325**, **019.352**, **019.360**, **019.364**, **019.384**, **019.388**, **019.392**, **019.395**, and **019.396**.

### Psychology

The Department is proposing the introduction of course **017.2XX Brian and Behaviour** and is modifying **017.343 Sensory Processes**. Modification is being made to footnote 2 of the program chart to include **017.2XX**.

## Religion

In an effort to reorganize their courses the department of religion is proposing to separate many 6 credit hour courses into 3 credit hour courses to allow for greater flexibility for students in the program, and professors to take advantage of a 6 month research leave in stead of 12. **020.221 Psychology of Religion** will be replaced by **020.2XA Psychology and Religion** and **020.2XD Religion and Violence**, **020.228 Makers of Modern Christianity** will be replaced by **020.2XB Early Modern/Modern Christianity** and **020.2XC Modern and Contemporary Christianity**, **020.325 Religion and Modern Thought** will be replaced by **020.3XD Religion and Modern Thought** and **020.3XE Religion and Postmodern Thought**, **020.352 Religion in American Culture** will be replaced by **020.3XI Religion in American Culture** and **020.3XH Eastern Religions in the West**, **020.374 Studies in Asian Religions: Texts, Major Figures, Schools of Thought**, will be replaced by **020.3XF Buddhism in East Asia**, and **020.3XG Tibetan Religious Traditions**, **020.381 Religion and the Foundations of Bioethics** will be replaced by **020.3XA Rituals of Death and Mourning** and **020.3XC Religion and Bioethics**, **020.441 Masters of Spiritual Life** will be replaced by **020.4XK Advanced Studies in Islam** and **020.4XN Advanced Studies in Hinduism**, **020.442 Religion and Philosophy** will be replaced by **020.4XI Religion and Philosophy** and **020.4XD Studies In Religion and Cultural Memory**, **020.445 Topics in Comparative Religion** will be replaced by **020.4XJ Seminar in Comparative Religious Ethics** and **020.4XA Critical Theory and Religion**, **020.446 The Religious Thought of St. Augustine and John Calvin** will be replaced by **020.4XF Calvin and the Rise of Anglicanism** and **020.4XE Augustine**, **020.448 Martin Luther and the Rise of Anabaptism** will be replaced by **020.4XH The Religious Thought of St. Thomas/Aquinas and the Study of Religion** and **020.4XG Luther and the Rise of Anabaptism**, **020.453 Seminar in Comparative Religious Ethics** will be replaced by **020.4XB Advanced Studies in Early Modern Christianity** and **020.4XC Advanced Studies in Buddhism**. The department is also prosing the deletion of **020.280 The Makers of Modern Judaism** and **020.366 Christian Thought in an Age of Skepticism and Faith**. The department is adding three courses **020.2XE Indigenous World Religions**, **020.2XF Sikhism** and **020.3XB Issues in the Study of Religion and Evil**.

## Sociology

With the addition of a new professor, the department is proposing a new course **077.3XX Restorative Justice**. There will be modifications in **077.370 Sociology of Law** to provide a more accurate description. The Sociology General Major and Advanced Major programs are being modified to include **077.222** as a required course.

## Mathematics

The department is modifying the General and Advanced Major Programs to reflect changes in the numbering and naming of three courses: **136.270** to **136.2XX**, **136.271** to **136.2XY** and **136.375** to **136.3XX**.

## St. Boniface College - English

The English courses are being brought in line with the changes in the English curriculum that were approved at the Fort Garry campus a year ago. This involves the deletion of the following courses: **004.126 Twentieth-Century Literature in English, 004.210 English Literature of the Sixteenth Century, 004.215 English Literature of the Seventeenth Century, 004.285 British Literature of the Twentieth Century, 004.297 Drama 2, 004.310 Studies in Shakespeare, 004.316 Studies in Milton, 004.329 Studies in the Victorians and 004.388 Studies in Canadian Literature.** The following courses are proposed for introduction: **004.130 Literature since 1900, 004.207 Literature of the Sixteenth Century, 004.209 Literature of the Seventeenth Century, 004.216 British Literature since 1900, 004.301 Shakespeare, 004.302 Milton, 004.314 Studies in the Victorians, 004.327 Studies in Canadian Literature, 004.396 Drama 2.**

#### **St. Boniface College - German and Slavic Studies**

There are two proposed modifications in this department at St. Boniface College in **008.320F Deutsche sprachpraxis 1** and **008.321F Cours d'allemand commercial** to reflect changes in the program at the Fort Garry Campus.

#### **5. Faculty of Education**

The Faculty of Education is proposing an increase in the number of 100 level courses that a student in the Post-Baccalaureate Diploma in Education may take outside of the Faculty provided they are in the same language.

The Faculty is also formalizing the arrangement of transferring credit for courses taken in the Certificate in Adult and Continuing Education towards receiving individual course credit in the Post-Baccalaureate Diploma in Education. The courses are: **129.157, 129.158, 129.156, and 129.159.**

The Faculty is also introducing **132.1XX Practical Work in School Science, 129.5XY Focus on Exceptionality: Gifted and Talented** and **129.5XX Focus on Exceptionality: An Ecological Approach to FAS/E.**

#### **6. Faculty of Engineering**

The Faculty is proposing **130.142 Engineering Processes for Non-Engineering Students** to give management students a perspective of what engineering is.

#### **Biosystems Engineering**

**034.2BE Biology for Engineers** is being introduced to replace 071.201 Biosystems for Engineers to simplify teaching arrangements for students in Biosystems Engineering.

The department is proposing the integration of **130.201 Technical Communications** into the Design Trilogy Courses: **034.258 Biosystems Engineering Design Trilogy 1, 034.258 Biosystems Engineering Design Trilogy 2 and 034.258 Biosystems Engineering Design Trilogy 3.**

### Civil Engineering

The faculty proposes the deletion of **023.281 Surveying and GIS Applications** and the introduction of **023.2GE Fundamentals of Geomatics Engineering**.

### Electrical & Computer Engineering

The department is proposes the replacement of **024.400 Graduation Thesis** with **024.4XX Group Design Project**. The replacement of **024.440 Biomedical Engineering** with **024.4XX Biomedical instrumentation and Signal Processing** is proposed.

### Environmental Option

The department is proposing the deletion of **040.450 Remediation of Contaminated Land** from the environmental option and allowing it to be replaced with a technical elective.

### Mechanical and Industrial Engineering

The department proposes the deletion of the 4<sup>th</sup> Co-op Work Term Option. **025.4XX Design for Manufacturing** is proposed to be introduced.

The Faculty revised their policy for second degrees in Manufacturing, Mechanical Engineering and the Aerospace option. These changes incorporate minor changes made to the various programs.

## 7. Faculty of Environment, Earth, and Resources

### Environmental Science/Environmental Studies Programs

The Faculty proposes that Major and Honours students in the Bachelor of Environmental Science and Bachelor of Environmental Studies programs, be permitted to declare and complete minors in other departments if they choose.

### Geography Programs

As it has not been offered in several years and the expertise to teach it is no longer available, **053.379 Geography of Russia** is proposed for deletion.

To enhance course offerings in Geography, the Faculty proposes the introduction of **053.4XX Geographies of Health and Health Care**. This course, while listed at the 400-level, would be open to students taking courses in their second and third years as well.

There are a series of course modifications proposed to the prerequisite requirements which will better reflect the sequencing of courses and registration approvals for students intending to participate in the courses. Accordingly, modifications are

proposed for 053.221 Economic Geography, 053.241 Geography of Tourism and Recreation, 053.255 Geomorphology, 053.263 Geography of Culture and Environment, 053.264 Geography of Culture and Inequality, 053.358W Landforms and 053.374 Field Studies in Geography. Additionally, Native Studies course 032.426 Sacred Lands, will be cross-listed as **053.4AB Sacred Lands**.

Changes are also proposed to regulations and programs in the undergraduate Geography programs, as outlined in the recommendations section of this report.

## 8. Faculty of Human Ecology

### Core Courses in Human Ecology

The Faculty is proposing **028.103W Human Ecology: Perspectives and Communication** be deleted and re-introduced as **028.2AAW** as students usually take this course after leaving University 1. Accordingly it is proposed that 028.103W be changed to 028.2AAW in the pre-requisites for 028.205 and 028.310, and that the degree requirement of **028.408 Current Issues in Human Ecology** be deleted. It is also proposed that the 3 credit hours that were formerly specified as 028.403 be allocated as 3 credit hours of free electives of the degree requirements for B.Sc. (Human Nutritional Sciences) and B. H. Ecol. (Clothing and Textiles); that the 3 credit hours that were formerly specified as 028.403 be allocated as 3 credit hours of Faculty electives at the 300 or 400 level for the degree requirements for B. H. Ecol. (Family Social Sciences) and that the 3 credit hours that were formerly specified as 028.403 be allocated as 3 credit hours of Faculty electives for the degree requirements for B. H. Ecol (General).

### Family Social Sciences Program

The faculty proposes that **062.114 Family Studies: Relationships** be deleted and replaced by **062.1AA Family Issues Across the Lifespan**, and the necessary changes be made in the prerequisites affected.

The faculty proposes that the pre-requisite for **062.445 Family Economic Resources and Functions** be changed from **062.345** to **062.207** and **018.120** or **018.121** or **018.122**. The Faculty in an effort to allow students to build more depth in particular areas, proposes modifications to the electives in the **Family Resource Management Option**.

### Human Ecology Program

The faculty has submitted a list of modifications to the degree requirements for the Human Ecology program to better serve the needs of those wanting a degree from the faculty which integrates all three areas of departmental study within the faculty.

## 9. Faculty of Law

The Faculty of Law is proposing the deletion of one course, **045.329 Natural Resource**

Administration and Law, and the modification of 045.268 Legal Negotiation from a pass/fail to a graded course.

10. **Faculty of Management**

The Faculty is proposing prerequisite changes for the Warren Centre for Actuarial Studies for courses: **010.212 Interest Theory, 010.333 Actuarial Models 3, 010.353 Actuarial Models 4, 010.400 Advanced Actuarial Topics and 010.415 Pension Math.**

The Faculty is proposing the deletion of the Basic and Advanced Actuarial Diploma Programs.

The Department of Supply Chain Management is proposing the addition of the following courses: **164.2XX Introduction to Supply Chain Management, 164.3XX Global Supply Chains and 164.4XX Policy and Regulation in Supply Chain Management.** The department also proposes prefix changes for the courses transferring from the Departments of Business Administration and Marketing into the Department of Supply Chain Management. The department proposes that the Logistics and Supply Chain Management Major change from **164.221, 164.222, 027.463 and 118.336** to **164.221, 164.2XX, 164.3XY** plus one of the following: **164.222, 164.4XY, 164.3XX or 164.4XX.**

The Faculty is also recommending an amendment to the Human Resources Management/Industrial relations major in the B. Comm. (Honours) program.

11. **School of Medical Rehabilitation**

The School of Medical Rehabilitation is proposing the deletion of the 8 credit hour course **167.174**, and the introduction of the 7 credit hour **167.1AB Cardiorespiratory Clinical Education.** Faculty members believe that a reduction in the number of patient contact hours will have the added benefit of lightening the workload on clinical partners in the health care facilities.

12. **School of Music**

The School is proposing the introduction of **033.2XX Minor Practical Study.** The school is also proposing the replacement of **033.372 Classroom Instruments** with **033.362 Independent Study** in the B.Mus. B.Ed. Integrated program. **033.238 From Ragtime to Rock: A History of Popular Music** is being deleted and **033.3XX From Ragtime to Rock'n'Roll: A History of Popular Music in the 20<sup>th</sup> Century** and **033.3XX From Rock to Rap and Beyond: A History of Music in the Later 20<sup>th</sup> Century** are being introduced, as the material will be more fully be covered in two courses.

13. **Faculty of Pharmacy**

The Faculty of Pharmacy is proposing the introduction of **046.3XX Principles of Biotechnology in Pharmacy** and the deletion of the 4 credit hour **046.310 Pharmacy Skills Lab 3**, and the introduction of the 2 credit hour **046.3XY Pharmacy Skills Lab 3.**

#### 14. Faculty of Science

##### Actuarial Mathematics

The Professional Actuarial Exam has made changes in the material students are examined on, and as a result the department is proposing the deletion of courses **010.202** and **010.221**. As a partial replacement there is a proposal to introduce **005.305** in year 3 of the program. **005.312** is deleted as an alternate to **005.347** in year 4 because it is also taught at the honours level. **010.400** is added as an alternative to **010.424** because it is not taught every year.

As a result of the Faculty of Science's new honours regulations the department is proposing a minimum GPA of 2.50 for entrance and continuation, and is requiring 24 credit hours as the minimum for full-time study in each regular session.

##### Chemistry

**002.286** is a new biochemistry course for honours and majors students. A modification is required to stipulate that it may not be held for credit with **002.277 Elements of Biochemistry 1**.

There is a proposed program change in the number of math courses required in the first year of the Honours and Major Chemistry program requiring **136.150** and **136.170** to be taken in first year and one of **136.120** or **136.130** in the second year. Honours and Major students will also be required to take **002.286**.

##### Computer Science

The Department is proposing the deletion of **074.222 Introduction to Assembler Language Programming** to be replaced with **074.2CS Introduction to Computer Systems**, the deletion of **074.223 Introduction to Digital Logic** and the replacement of **074.430 Computer Networks** with **074.3CN Computer Networks 1** and **074.4CN Computer Networks 2** as there is too much new information to be covered in the original course. The department is also proposing the addition of **074.4AD Advanced Databases**.

There are several modifications in the department altering the prerequisites for **074.214**, **074.216**, **074.335**, **074.329**, **074.337** and **074.343**.

**074.222** and **074.223** are proposed to be deleted from Year 2 the Honours and Major programs, with the addition of **074.2CS** and **074.216** and **074.337** in Year 3. The Major program will require 21 credit hours of 300 or 400 level Computer Science courses to allow more flexibility for the students as **074.337** is added to Year 3 of Major.

The Mathematics Joint program is proposing similar changes: **074.222** and **074.223** deleted from Year 2, with the addition of **074.2CS** and **074.216**.

In the department's Physics and Astronomy Joint Honours Program **074.222** is deleted

from Year 2, with the addition of **074.2CS** and **074.216**. **074.219** is added to Year 3 with "6 hours of 300 and 400 level courses from Computer Science."

### Ecology

The department is adding **001.415 Plant Interactions** to the Approved Options List for the Ecology Major and Honours Program.

### Mathematics

In order to facilitate a change of courses titles **136.270 Calculus 3A**, **136.270F Calcul 3A**, **136.271 Calculus 3B**, **136.271F Calcul 3B** and **136.375 Calculus 4** are being replaced by **136.2XX Multivariable Calculus**, **136.2XXF Calcul à plusieurs variables**, **136.2XY Sequences and Series**, **136.2XYF Suites et séries** and **136.3XX Methods of Advanced Calculus**. And therefore all programs in the Faculty of Science that include the courses will be modified to reflect this. The department is proposing the addition of **136.1XY** to first be offered in 2006-07.

The department is formally deleting the following courses which have not been offered in several years: **013.133**, **013.221**, **013.236**, **013.242**, **013.331**, **013.343**, **013.344**, **013.356**, **013.444**, **013.446**, **013.449** and **013.461**.

The Actuarial Mathematics Joint Program is replacing **010.221** with **005.305** in Year 2 of the Joint Honours program. **010.202** is deleted in Year 4 and the 9 credit hours of approved electives are changed to 12 credit hours.

In the Economics Joint Honours Program modifications are proposed such that students may take **018.121** or **018.122** in the place of **018.120**. In Years 3 and 4, 24 credit hours of approved Economics course are required.

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### Microbiology

The new course **002.286** may not be held with **060.277**.

The addition of **060.341** is proposed in the requirements for entrance to the Cooperative Option and completion of all first and second year requirements of the program.

### Physics and Astronomy

New faculty in the department has allowed for 3 new proposed courses: **016.1XX General Astronomy 1: Light Stars and Planets** and **016.1YY General Astronomy 2: Exotic Stars, Galaxies and Cosmology**, both 3 credit hours, to take the place of the six credit hour **016.180** and **016.1ZZ Perspective on the Universe**. There is a prerequisite modification in **016.207**.

### Psychology

017.2XX Brain and Behaviour is added to the list of Psychology courses.

### Statistics

Accommodations are proposed to deal with the proposed changes in Actuarial Math.

### Zoology

The department is formally deleting several courses that have not been offer for a long time. 022.101, 022.110, 022.111, 022.120, 022.122, 022.131, 022.250 (English only), 022.255, 022.331, 022.335, 022.336, 022.447, 022.450, 022.474.

### Courses offered in other faculties and schools acceptable for credit in the Faculty of Science

Proposed course changes in the Faculty of Human Ecology, and the Faculty of Agricultural and Food Science necessitate modifications to the list of courses offered in other faculties and schools acceptable for credit in the Faculty of Science.

### Proposed Changes to Honours Regulations

The faculty's objective in the proposed changes is to allow part-time honours by reducing the minimum number of credit hours to 18 during each regular session. There are also changes to the entrance and continuation and graduation requirements with a GPA of 2.5.

#### 15. Faculty of Social Work

The faculty is proposing a calendar description change for 047.420 Fields Focus of Social Work Practice.

#### 16. University 1

University 1 is proposing the deletion of 064.122 Dynamics of the Fashion Industry and 062.114 Family Studies: Relationships from the University 1 course list. The following courses are proposed as additions: 064.1AA Textiles for Living, 064.1BB Textiles, Products, and Consumers, 062.1AA Family Issues Across the Lifespan and 078.1XX Food Safety Today and Tomorrow.

### Recommendations

The Senate Committee on Curriculum and Course Changes recommends that curriculum and course changes from the units listed below be approved by Senate:

#### Faculty of Agricultural and Food Sciences

#### Faculty of Architecture

#### Faculty of Arts

#### Faculty of Education

#### Faculty of Engineering

#### Faculty of Environment, Earth, and Resources

Faculty of Human Ecology  
Faculty of Law  
Faculty of Management  
School of Medical Rehabilitation  
School of Music  
Faculty of Pharmacy  
Faculty of Science  
Faculty of Social Work  
University 1

Respectfully submitted,

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

/jml

**Faculty of Agricultural and Food Sciences**

Department of Animal Science

Courses to be deleted:

035.311 Principles of Nutritional Toxicology (3)

Courses to be introduced:

035.2XY Nutritional Toxicology (1.5)

The Science of dietary toxins and their interrelationships with nutrition: mode of action and metabolism of toxic chemicals that occur in food and animal feedstuffs. Prerequisite 065.219.

035.4XY Advanced Applied Animal Nutrition (3)

An advanced study of the theoretical and applied aspects of monogastric and ruminant nutrition. A laboratory component will provide training in current techniques in feed analyses and computer modeling. Offered in 2005-2006 and alternate year thereafter.

**NET CHANGE IN CREDIT HOURS: +1.5 HOURS**

Department of Entomology

Courses to be deleted:

038.436 Principles of Pest Management (3)

Courses to be modified:

038.432 Pollination Biology (3)

The biology, ecology of social, semisocial and solitary insect pollinators and their ecological interactions with entomophilous plants. Offered 2005-06 and alternate years thereafter.

**NET CHANGE IN CREDIT HOURS: 0 HOURS**

Department of Food Science

Courses to be introduced:

**078.1XY Food Safety Today and Tomorrow (3)**

A contemporary examination of the safety of the food supply - where, how and why problems may arise and what is and can be done to consistently achieve high quality, safe food. Controversial issues (residues, organic, biotechnology, irradiation) will be discussed in a balanced manner, and prospects for the future presented.

**NET CHANGE IN CREDIT HOURS: +3 HOURS**

Department of Plant Science

Courses to be deleted:

**039.436 Principles of Pest Management (3)**

Courses to be introduced:

**039.3XX Fundamentals of Plant Pathology (3)**

An introduction to the science of plant pathology. Topics include causal agents of diseases symptoms and diagnoses, modes of infection and spread, effects of the environment on disease development, and methods of disease control. This course is a prerequisite for more advanced courses in plant pathology.

Prerequisite: 001.221.

**039.4XY Research Methods in Plant Pathology (3)**

Course will provide practical training in plant pathology and will cover plant disease diagnosis, pathogen isolation, identification, inoculation and storage. The laboratory component aims at preparing students for a professional career in plant protection.

Prerequisite: 39.3XX or consent of the instructor.

**139.4XZ Molecular Plant-Microbe Interactions (3)**

Course will cover general principles and mechanisms related to plant-pathogen interactions, such as in gene-for-gene and toxin models. Emphasis will be on biochemical/molecular mechanisms of plant-microbe recognition, pathogenesis, and plant reactions to infection. Both beneficial and deleterious associations will be covered.

Prerequisite: 039.3XX

The Plant Biotechnology Program will be as follows:

	Name	CHR	Comments
First Year			
002.130	University 1 Chemistry	3	
002.131/132	University 1 Chemistry	3	
018.120	Principles of Economics	6	
065.150	Natural Resources and		

065.151	Primary Agricultural Production Production, Distribution, and Utilization of Agricultural Products	3 3	
071.125	Biology B	6	
136.168M	Math for Agriculture and Related Science	6	
Second year			
001.201	Plant Structure and Function I	3	
001.221	Biology of Fungi and Lichens	3	New to program
002.277	Elements of Biochemistry I	3	
002.278	Elements of Biochemistry II	3	
022.228	Cell Biology	3	New to program
039.252	Genetics	3	
039.253	Plant Biotechnology	3	Previously a restrictive elective in Plant Systems
065.203W	Technical Communications Plus 2 free and/or restrictive elective	3	
Third Year			
005.100M	Basic Statistical Analysis I	3	
039.350	Plant Physiology	3	
060.210	General Microbiology A	3	
065.237	Principles of Ecology	3	
061.100	Introduction to AgriBusiness Management Plus 5 free and restrictive electives	3	
Fourth Year			
039.4ZZ	Issues in Biotechnology(capstone course) * Plus 9 free and restrictive electives	3	Will be new to program

\* A new course will be introduced but 39.351 Cropping Systems, will be retained as a transitional capstone for students completing the Plant Systems Program.

#### Restrictive Electives

Genetics, Physiology and Pathology Group (Select 5 courses)			Comments
Genetics		CHR	
039.352	Principles of Plant Improvement	3	
039.433	Intermediate Genetics	3	
039.454	Plant Genomics	3	New to program
Physiology			
039.452	Crop Physiology	3	
039.455	Developmental Plant Biology	3	New to program
039.456	Secondary Plant Metabolism	3	Modified from previous course
Pathology			
039.3XX	Fundamentals of Plant Pathology	3	New to program
039.4XY	Research Methods in Plant Pathology	3	New to program
039.4XZ	Molecular Plant-Microbe Interactions	3	New to program

#### Applied Agriculture Group (Select 2 courses)

039.250	Crop Production	3	In program core of Plant Systems
039.251	Fundamentals of Horticulture	3	
038.317	Crop Protection Entomology	3	
035.250	Animal Production	3	In program core of Plant Systems
Ethics Group (Select 1 course)			
015.129	Critical Thinking	3	
015.274	Ethics and Biomedicine	3	
015.275	Ethics and the Environment	3	
015.283	Business Ethics	3	

**NET CHANGE IN CREDIT HOURS: +6 HOURS**

Department of Soil Science

Courses to be deleted:

040.350 Landscapes and Biophysical Processes (3)  
040.351 Fundamentals of Soils and Landscapes (3)

Courses to be introduced:

040.3XX Soils and Landscapes in Our Environment (3)  
Discover why soil is an essential resource. Explore the roles of soils and landscapes within natural and agricultural ecosystems by learning the fundamental biological, chemical and physical properties and processes; soil and landscape classification and evaluation. Not to be held with 040.350 or 040.351.

**NET CHANGE IN CREDIT HOURS: -3 HOURS**

Faculty of Architecture

Environmental Design Program

Courses to be formally deleted:

050.109, 050.111, 050.116, 050.122, 050.200, 050.217, 050.718, 050.219, 050.200, 050.223, 050.224, 050.230, 050.319, 050.320, 050.332, 050.432, 050.500, 050.502, 050.504, 050.511, 050.523, 050.531, 050.533, 050.542, 050.543, 050.574, 050.582 and 050.583.

Faculty of Arts

Canadian Studies

Course to be modified:

151.373 Canadian Identity: An Interdisciplinary Approach (3)  
An interdisciplinary Lecture/Seminar (art, economics, history, literature) course which will explore Canadian identity. Themes to be studied include the Aboriginal past,

French/British colonization, Land/regions and Ethnic diversity.

032.129 Introductory Inuktitut, 032.242 Inuit Literature in Translation, 032.337 Political Development in the North, 032.338 Cultural Constructions of Gender in Canadian Aboriginal Studies, 032.428 Missionaries, Colonialism and Aboriginal Peoples and 019.3XY The Canadian Charter of Rights and Freedoms are added to the list of approved courses in Canadian Studies.

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

Central and East European Studies

052.2XY Ukrainian Culture 1 and 052.2XZ Ukrainian Culture 2 are added to the list of approved courses in Central and East European Studies.

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

Global Political Economy

018.339 Development Economics, 019.204 introduction of International Relations, 077.381 Sociology Perspectives on Gender and Sexuality, 019.207 Introduction to Canadian Government, 019.207F Introduction au système gouvernemental and 019.320 International Security and Conflict Management are added to the list of approved courses in Global Political Economy.

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

Labour and Workplace Studies

153.1XX Introduction to the Canadian Labour Movement and 153.3XX Workers' Self Management are added to the list of approved courses in Labour and Workplace Studies.

Courses to be deleted:

153.128	Introduction to Labour Institutions and Problems	(3)
153.308	Workers' Self-Management	(6)
153.481	Labour and Workplace Studies Work Experience Seminar	(3)
153.482	Labour and Workplace Studies Work Experience	(6)

Courses to be introduced:

153.1XX Introduction to the Canadian Labour Movement (3)  
An introduction to the development of the contemporary working-class movement in Canada and to workplace issues today. Students may not hold credit for both 153.1XX and the former 153.128 or 099.128.

**153.3XX Workers' Self-Management (3)**

An examination of historical and contemporary examples of self- managed workplaces and the theory of a participatory economy based on workers' self-management. Students may not hold credit for both 153.3XX and the former 153.308. Prerequisite: a grade of "C" or better in 153.351 (or 018.351) or written permission of instructor.

Courses to be modified:

**153.127 Introduction to the Political Economy of Labour (3)**

An introduction to how working for wages has changed the lives of ordinary people, how labour is produced and reproduced, and the dynamics of labour markets, work organization and class conflict in capitalist societies. Students may not hold credit for both 153.127 and the former 099.127.

**153.242 Economics of the Labour Process and Labour Relations (6)**

An examination of theoretical approaches to paid and unpaid work, the organization of labour processes, the production and reproduction of labour, and labour markets in Canada today, as well as possible alternatives. Students may not hold credit for both 153.242 and 018.242. Prerequisite: a grade of "C" or better in both 153.127 (the former 099.127) and 153.1XX (the former 099.128 or 153.128), or 018.120, or both 018.121 and 018.122.

**153.313 Employment Legislation and the Protection of Workers (3)**

An examination of the legal rights and obligations of workers and employers, and the enforcement mechanisms for the non-unionized work place, over the course of the employment relationship from hiring through to termination or retirement. Special emphasis will be placed on statutory and common law, personal employment contracts, wrongful and constructive dismissal, human rights legislation and jurisprudence. Students may not hold credit for both 153.313 and the former 099.313. Prerequisite: a grade of "C" or better in both 153.127 (the former 099.127) and 153.1XX (the former 099.128 or 153.128), or written consent of the Labour and Workplace Studies coordinator.

Modification of prerequisites of courses affected by the deletion of **153.128** and introduction of **153.1XX**.

Modification of General Major, Advanced Major and Minor program charts.

Modification of core courses for Labour and Workplace Studies.

**NET CHANGE IN CREDIT HOURS: -12 HOURS**

Women's Studies

054.211 is added to the list of approved courses in Women's Studies.

## NET CHANGE IN CREDIT HOURS: +0 HOURS

### Anthropology

Courses to be deleted:

076.120      Introductory Anthropology (A)      (6)

## NET CHANGE IN CREDIT HOURS: -6 HOURS

### Economics

Courses to be deleted:

018.342      Industrial Organization      (6)

Courses to be introduced:

018.3XX Economics of Industry (6)

A study of the business sector, its organization and performance, with a view to public policy issues in a Canadian and global setting. Students may not hold credit for both 018.3XX and the former 018.342. Prerequisite: A grade of "C" or better in 018.245 (or 018.270).

Courses to be modified:

018.235 Community Economic Development (3)

A study of the economic development problems of northern and native communities in Manitoba. Students may not hold credit for both 018.235 and 032.4AA. Prerequisite: none.

018.242 Economics of the Labour Process and Labour Relations (6)

An examination of theoretical approaches to paid and unpaid work, the organization of labour processes, the production and reproduction of labour, and labour markets in Canada today, as well as possible alternatives. Students may not hold credit for both 018.242 and 153.242. Prerequisite: a grade of "C" or better in 018.120, or both 018.121 and 018.122, or both 153.127 (the former 099.127) and 153.1XX (the former 099.128 or 153.128).

018.250 Labour and Technology (3)

Examination of the relationship between technological changes and levels of employment, organization/quality of work and division of labour. Same as Labour and Workplace Studies 153.245 Labour and Technology (3). Students may not hold credit for both 018.250 and 153.245 (the former 099.245). Prerequisite: a grade of "C" or better in 018.120, or both 018.121 and 018.122, or 153.127 (the former 099.127) and 153.1XX (the former 099.128 or 153.128), or written consent of the department head.

018.351 Industrial Relations (6)

A study of comparative employer-employee relationships in Canada and other selected countries as affected by market forces, social traditions, and government action. Students may not hold credit for both 018.351 and 153.351. Prerequisite: a grade of "C" or better in one of the following:

018.120; 018.121 and 018.122; 153.127 (the former 099.127) and 153.1XX (the former 099.128 or 153.128).

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

English

Courses to be introduced:

004.3XX Studies in British Literature since 1900(3)

Prerequisite: a grade of "C" or better in six hours of English at the 200 level.

004.3YY Studies in Critical Theory (3)

Prerequisite: a grade of "C" or better in six hours of English at the 200 level.

004.3XZ Studies in Sixteenth-Century Literature (3)

Prerequisite: a grade of "C" or better in six hours of English at the 200 level.

**NET CHANGE IN CREDIT HOURS: +9 HOURS**

French, Spanish and Italian

Courses to be introduced:

044.3XX Short Fiction in Spanish (3)

A study of short narrative fiction as a genre in Spain and Latin America through the close reading of representative works. Prerequisite: a grade of "C" or better in any 200-level Spanish course or written consent of department head.

044.3XY Latin American Cinema and Society (3)

A survey of contemporary Latin American Society through its cinema. The course will be taught in Spanish. All class readings, movies and examinations are in Spanish.

Prerequisite: a grade of "C" or better in any 200-level Spanish course or written consent of department head.

**NET CHANGE IN CREDIT HOURS: +6 HOURS**

German and Slavic Studies - German

Program to be deleted:

German Advanced Major Programs (Options 1, 2 and 3)

Courses to be introduced:

008.2XX Special Topics in German 1 (3)

Topics dealing with German literature and culture. Course content will vary from year to year depending on the interests and needs of students and staff. Prerequisite: a grade of "C" or better in 008.210 (the former 008.120) or 008.211 (the former 008.123) or written consent of department head.

008.2XY Special Topics in German 2 (3)

Topics dealing with German literature and culture. Course content will vary from year to year depending on the interests and needs of students and staff. Prerequisite: a grade of "C" or better in 008.210 (the former 008.120) or 008.211 (the former 008.123) or written consent of department head.

008.3XX Special Topics in German (3)

Topics dealing with German literature and culture. Course content will vary from year to year depending on the interests and needs of students and staff. Prerequisite: a grade of "C" or better in 008.210 (the former 008.120) or 008.211 (the former 008.123) or written consent of department head.

Courses to be modified:

008.320 Deutsche Sprachpraxis 1(6)

Modern German usage through conversation, translation (English-German) and practical exercises; study of contemporary fictional and non-fictional texts. Emphasis on vocabulary and basic structural and stylistic problems. Prerequisite: a grade of "C" or better in 008.210 (the former 008.120) or 008.211 (the former 008.123).

008.321 Business German (6)

Exercises in oral and written German and translation designed to improve the student's vocabulary and ability to understand the language of economics and commerce. A review of grammar is included, but the main emphasis of the course is on the development of practical language skills. Prerequisite: a grade of "C" or better in 008.210 (the former 008.120) or 008.211 (the former 008.123) or written consent of department head.

**NET CHANGE IN CREDIT HOURS: +9 HOURS**

German and Slavic Studies - Slavic Studies

Courses to be deleted:

052.223	Language Seminar in Ukraine 2	(3)
052.255	Introduction to Ukrainian Literature	(6)
052.261	Russian Literature: Medieval to Modern	(6)
052.267	Ukrainian Civilization 1	(3)

052.268 Ukrainian Civilization 2 (3)  
• Russian and Ukrainian Advanced Major Programs

Courses to be introduced:

052.2XX Ukrainian Culture Seminar Abroad (3)

This course is offered as part of the Summer Session. It is a study experience in Ukraine. The course features extensive exploration of contemporary Ukrainian culture. The course is taught in English. Students are given the maximum individual attention. Mornings are spent in class. Excursions are planned in Kyiv and neighboring sites. Students may not hold credit for both 052.2XX and the former 052.223. Prerequisite: a grade of "C" or better in 052.131 or its equivalent and written consent of the department head.

052.2XY Ukrainian Culture 1(3)

A survey that examines the Ukrainian Culture Heritage from the pre-Christian era, through medieval times and the baroque to the end of the 19th century. Issues in mythology, religion, the arts and literature are discussed. Lectures in English. Readings are available in both English translation and the original.

052.2XZ Ukrainian Culture 2(3)

Major trends in thought, the visual arts, film and literature from the end of the 19<sup>th</sup> century to the present day. Lectures in English. Readings are available in both English translation and Ukrainian.

052.3XX Chekhov (3) The study of selected short stories and plays. Lectures in English. Readings are available in both Russian and English translation.

Courses to be modified:

052.123 Language Seminar in Ukraine 1(3)

The study of Ukrainian language at an intensive language school in Ukraine. The course is designed for students aiming at near-native fluency. Prerequisite: a grade of "C" or better in 052.131 or its equivalent and written consent of department head.

052.367 Contemporary Ukrainian Literature (3)

A study of poetry, prose, drama and essays from the 1960s to the present. Lectures in English Readings in the original or in English.

052.384 Ukrainian Novel (3)

A study of representative novels of the 19th and 20th centuries. The course begins with the Romantic period and ends with contemporary writing. Lectures in English. Readings in the original or in English.

052.385 Ukrainian Short Story (3)

A study of representative short stories which begins with the ethnographic concerns of early 19th-century writers and ends with the formal experimentation of contemporaries.

Lectures in English. Readings in the original and in English.

052.391 Shevchenko (3)

A study of the greatest works, focusing on the writer's intellectual and artistic development. References to his art and the imperial context. Lectures in English. Readings in the original. Prerequisite: a grade of "C" or better in 052.131 or written consent of department head.

- Russian and Ukrainian Program Chart - Notes

## **NET CHANGE IN CREDIT HOURS: -9 HOURS**

### History

Courses to be introduced:

011.3AA History of the United States from 1877 to 1939 (A) (6)

This course will trace the political, social, economic, and cultural history of the United States from the period of Reconstruction to the start of the Second World War. Prerequisite: a grade of "C" or better in six credit hours of history or written consent of department head.

011.3BB History of American Consumer Culture (A) (3)

This course will trace the development of American consumer society from the colonial era to the present. Topics addressed include the histories of: branding, mass distribution, department stores, advertising, mass-market magazines, consumer organizing, and consumer protest. Prerequisite: a grade of "C" or better in six credit hours of history or written consent of department head.

011 .3XX The Margins of the Middle Ages (D) (3)

A study of groups and movements situated on the periphery of European society between 1100 and 1500. Prerequisite: a grade of "C" or better in 011.242 or written consent of the department head.

## **NET CHANGE IN CREDIT HOURS: +12 HOURS**

### Native Studies

Courses to be introduced:

032.4AA Exploring Aboriginal Economic Perspectives (3)

Explore the impact of legal, constitutional and governance issues on the internal and external operating environment affecting economic development by Aboriginal peoples. Current strategies for successful partnerships between industry and Aboriginal peoples will also be examined. Students may not hold credit for both 032.4AA and 018.235 or the former 098.300. Prerequisite: a grade of "C" or better in 032.120, or 032.122 and

032.124, or written consent of instructor.

**032.4AB Aboriginal Economic Leadership (3)**

An analysis of current leadership strengths and challenges facing Aboriginal organizations. Out of this analysis will come understanding of strategies for working effectively with Aboriginal organizations. Students may not hold credit for both 032.4AB and the former 098.409. Prerequisite: a grade of "C" or better in 032.120, or 032.122 and 032.124, or written consent of instructor.

**NET CHANGE IN CREDIT HOURS: +6 HOURS**

Political Studies

Courses to be deleted:

019.266 Human Rights and Civil Liberties (6)  
019.368 Canadian Defence Policy (3)

Courses to be introduced:

019.3XX Human Rights and Civil Liberties (3)  
An examination of the foundations of modern human rights systems in liberal democracies. Topics addressed include the main philosophical arguments on human rights, dominant legal theories of rights, and international conventions and systems of human rights protection. Students may not hold credit for both 019.3XX and the former 019.266. Prerequisite: a grade of "C" or better in 019.251 or written consent of instructor or department head.

019.3XY The Canadian Charter of Rights and Freedoms (3)  
A systematic examination of the rights and freedoms contained in the Charter through Supreme Court decisions. Additional topics addressed include the historical, political and intellectual sources of rights protection in Canada and a review of Canadian human rights legislation. Students may not hold credit for both 019.3XY and the former 019.266. Prerequisite: a grade of "C" or better in 019.207 or written consent of instructor or department head.

Courses to be modified:

019.310 Gender and Politics in Canada (3)  
This course introduces the principle themes in the study of gender and politics in Canada. Topics may include women's political organizing and activism, representation in political institutions, the gendered division of labour in the private and public spheres, gender and public policy, and the gendered nature of political behaviour. Prerequisite: a grade of "C" or better in 019.207 or the former 019.156 or written consent of instructor or department head.

019.320 International Security and Conflict Management (6)

A study of contemporary world conflict, conflict management, and issues of global security. Students may not hold credit for both 019.320 and the former 019.273. Prerequisite: a grade of "C" or better in 019.204 or the former 019.153 or written consent of instructor or department head.

**019.322 Globalization and the World Economy (3)**

An exploration of issues relating to globalization, including regionalism, economic structures and regimes, multinational corporations, global debt, problems in the developing world, and the future for leadership in the international system. Students may not hold credit for both 019.322 and the former 019.383. Prerequisite: a grade of "C" or better in 019.204 or the former 019.153 or written consent of instructor or department head.

**019.325 International Political Economy (3)**

A survey of the relationship between political authority and the production and distribution of global wealth. Emphasis is placed on the historical development of international political economy, its fundamentals, as well as major theoretical perspectives. Students may not hold credit for both 019.325 and the former 019.383. Prerequisite: a grade of "C" or better in 019.204 or the former 019.153 or written consent of instructor or department head.

**019.352 Canadian Foreign and Defence Policy (6)**

An examination of Canadian foreign and defence policy, with attention to contemporary events and issues. The course is designed to examine both foreign and defence policies as interdependent issues for Canadian interests. The course will assess the evolution and changing priorities of Canadian foreign and defence issues, with particular attention to Canada's relations with the United States, Europe, Asian and the Third Worlds. Students may not hold credit for both 019.352 and 019.356 or the former 019.368. Prerequisite: a grade of "C" or better in 019.204 or the former 019.153 or written consent of instructor or department head.

**019.360 Political Concepts (3)**

An exposition and analysis of the role and meaning of terms central to political discourse. Among concepts to be studied are power, community, justice, freedom, equality and obligation. Prerequisite: a grade of "C" or better in 019.251 or the former 019.151 or written consent of instructor or department head.

**019.364 Comparative Defence Policy (3)**

The examination within a comparative framework of the factors determining the making and implementation of the defence policies of a number of representative and significant countries. Prerequisite: a grade of "C" or better in 019.204 or the former 019.153 or written consent of instructor or department head.

**019.384 Approaches to the Study of International Relations (3)**

An overview of the various competing theoretical approaches used in the analysis of international relations, as well as the methodologies used by international politics analysts. Prerequisite: a grade of "C" or better in 019.204 or the former 019.153 or

written consent of instructor or department head.

**019.388 Comparative Foreign Policy (3)**

A comparative study of the factors affecting foreign policy in selected countries including, but not limited to, Canada, the United States, Russia, China, Japan, Great Britain, France, and Germany. The course also includes an examination of international, regional, and domestic factors affecting the creation of foreign policy by states.

Prerequisite: a grade of "C" or better in 019.204 or the former 019.153 or written consent of instructor or department head.

**019.392 American Politics (6)**

An examination of institutions, processes, public policies, and current public affairs in the United States. Prerequisite: a grade of "C" or better in 019.200 or written consent of instructor or department head.

**019.395 Research Methods in the Study of Politics (3)**

An introduction to the major quantitative and qualitative research strategies employed in the study of politics. The topics addressed include interviewing, content analysis, comparative studies, survey design, sampling, research ethics and basic statistical analysis. Students may not hold credit for both 019.395 and the former 019.390.

Prerequisite: a grade of "C" or better in six credit hours of Political Studies at the 200 level or written consent of instructor or department head.

**019.396 Canadian Politics (6)**

An examination of recurrent issues and problems in the Canadian political culture including the evolution of parties and ideologies, and issues such as regionalism, dualism, continentalism, civil liberties and the interventionist state. Prerequisite: a grade "C" or better in 019.207 or the former 019.156 or written consent of instructor or department head.

**NET CHANGE IN CREDIT HOURS: -3 HOURS**

Psychology

Courses to be introduced:

**017.2XX Brain and Behaviour (3)**

This course explores the relationship between brain and behaviour. The student will first learn about the fundamental elements of the nervous system. Lectures will integrate these elements into discussions of systems responsible for sensation, motor control, emotion, sleep, learning and memory. Clinical scenarios will be used to illuminate function. Students may not hold credit for 017.2XX and either of 017.353 or 017.354 when titled Brain and Behaviour. Prerequisite: a grade of "C" or better in 017.120 or both 017.121 and 017.122 or written consent of the department head.

Courses to be modified:

017.343 Sensory Processes (3)

A review of the structure and function of biological receptor systems and how they mediate information about the environment. It includes such topics as receptor transduction, neural correlates of sensation, and neural models of sensory discrimination. Prerequisite: A grade of 'C' or better in 017.120 or both 017.121 and 017.122, and one of the following: 017.2XX, 017.333, 071.125, or 022.253.

- Psychology program chart - footnote 2

**NET CHANGE IN CREDIT HOURS: +3 HOURS**

Religion

Courses to be deleted:

020.221	Psychology of Religion (C)	(6)
020.228	Makers of Modern Christianity (A)	(6)
020.280	The Makers of Modern Judaism (A)	(6)
020.325	Religion and Modern Thought (C)	(6)
020.352	Religion in American Culture (C)	(6)
020.366	Christian Thought in an Age of Skepticism and Faith (A)	(6)
020.374	Studies in Asian Religions: Texts, Major Figures, Schools of Thought (B)	(6)
020.381	Religion and the Foundations of Bioethics (C)	(6)
020.441	Masters of Spiritual Life (B)	(6)
020.442	Religion and Philosophy (C)	(6)
020.445	Topics in Comparative Religion (B)	(6)
020.446	The Religious Thought of St. Augustine and John Calvin (A)	(6)
020.448	Martin Luther and the Rise of Anabaptism (A)	(6)
020.453	Seminar in Comparative Religious Ethics (C)	(6)

Courses to be introduced:

020.2XA Psychology and Religion (C) (3)

An examination of selected modern and contemporary psychology and religion interactions. Students may not hold credit for both 020.2XA and the former 020.221.

020.2XB Early Modern/Modern Christianity (A) (3)

A chronological survey of Christian practices and teachings from 1500-1900. This course examines dimensions of the 'modernization' of Western Christianity, giving particular emphasis to the Protestant and Catholic Reformations, including changes in ritual practice, major theological and other doctrinal disputes, social formations, 'elite' and 'popular' religion, institutional developments, artistic and literary production. These will be considered in the larger context of the development of 'national' churches and the complicated role of Christian ideas and institutions in colonial enterprises, with attention given both to the propagation of Western Christianity and its establishment as a 'world

religion,' and to particular local varieties and conditions of Western Christianity. Students may not hold credit for both 020.2XB and the former 020.228.

**020.2XC Modern and Contemporary Christianity (A) (3)**

A survey of 20<sup>th</sup> century Christianity. The course will include an examination of the changing religious, social, and political practices and Institutional forms of Christianity since 1900. Students may not hold credit for 020.2XC and the former 020.228.

**020.2XD Religion and Violence (C) (3)**

Violence of many kinds — physical and non-physical, by and against individuals, within and amongst religious groups — plays an integral role in all religious traditions and systems. This course explores this role within the framework of an historical approach to world religions. Themes covered may include: theories of religion and violence; sacrifice; martyrdom; symbolic violence; iconoclasm; blasphemy; heterodoxy and discipline; religious toleration; religious warfare; religion and cultural resistance; religion and domestic violence; religion and non-violence.

**020.2XE Indigenous World Religions (B) (6)**

This course surveys the complex category 'indigenous world religions'. The course includes historical and critical study of the category 'indigenous religion,' consideration of various developments that have brought the category to the forefront of the scholarly study of world religions, and survey of methodologies currently available for the study of indigenous traditions. The course addresses a number of themes — oral traditions, myth and social formation, shamanic practices, colonization and religious aspects of resistance, religion and postcolonial identities — approaching these themes through study of indigenous traditions of North and South America, Africa, Asia, Oceania, and Europe.

**020.2XF Sikhism (B) (3)**

An examination of the history and texts of Sikhism, its central figures and practices, and its role in the modern world.

**020.3XA Rituals of Death and Mourning (C) (3)**

An exploration of the ritual dimensions of death and mourning in selected religious traditions, including such topics as: burial rites, cremation, funeral ceremonies, gender and mourning, grave goods and grave markers, lamentation and social protest, mortuary practices.

**020.3XB Issues in the Study of Religion and Evil (C) (3)**

An examination of the construction of evil in discourse and ritual, including such topics as: purity and pollution; social boundaries and identity; norms of conformity and non-conformity; institutions of power and authority; morality and evil.

**020.3XC Religion and Bioethics (C) (3)**

An examination of theoretical and practical bioethical issues and how these are engaged by various religious traditions. Students may not hold credit for both 020.3XC and the former 020.381.

**020.3XD Religion and Modern Thought (C) (3)**

The idea that religions is a distinct and unique aspect of human activity is a defining feature of modern thought. This course explores aspects of this understanding of religion in various modern intellectual movements from the sixteenth century to the nineteenth century, considering these movements in their particular historical contexts. Topics covered may include: skepticism, northern humanism, religion and European expansion, atheism, religion and the nation state, religion and early modern science, enlightenment, religion and bourgeoisie, imperialism, religion and revolution, religion and evolution. Students may not hold credit for both 020.3XD and the former 020.325.

**020.3XE Religion and Postmodern Thought (C) (3)**

A study of various so-called 'postmodern' movements, particularly as these relate to the understanding and study of religion. Students may not hold credit for both 020.3XE and the former 020.325.

**020.3XF Buddhism in East Asia (B) (3)**

An examination of the history and teachings of Buddhism in China and Japan, giving particular attention to processes of adaptation and transformation within the East Asian context. Students may not hold credit for both 020.3XF and the former 020.374.

**020.3XG Tibetan Religious Traditions (B) (3)**

A study of the religious traditions, particularly Buddhism that have developed from antiquity in Tibet. Students may not hold credit for both 020.3XG and the former 020.374.

**020.3XH Eastern Religions in the West (B) (3)**

This course considers historical Western interactions with, and representations of, Asian religious traditions. Students may not hold credit for both 020.3XH and the former 020.374.

**020.3XI Religion in American Culture (C) (3)**

An examination of the role of religion in American culture from the colonial to the contemporary periods. Students may not hold credit for both 020.3XI and the former 020.352.

**020.4XA Critical Theory and Religion (C) (3)**

An examination of the work of the Frankfurt School (Theodor Adorno, Max Horkheimer, and Herbert Marcuse) and Jurgen Habermas as it relates to the study of religion. Topics will include: the nature and scope of reason and enlightenment, disenchantment and modernity, ideology and ideology critique, and the separation of science, morality, and art. Prerequisite: written consent of Department head.

**020.4XB Advanced Studies in Early Modern Christianity (A) (3)**

An in-depth study of selected topics pertaining to institutional and ideological developments in Western Christianity 1500-1700. Prerequisite: written consent of Department head.

020.4XC Advanced Studies in Buddhism (B) (3)

An in-depth study of selected topics from the wide cultural and historical range of Buddhist traditions. Prerequisite: written consent of Department head.

020.4XD Studies in Religion and Cultural Memory (C) (3)

An examination of selected cultural memory and religion topics. Prerequisite: written consent of Department head.

020.4XE Augustine (A) (3)

A contextual overview and analysis of the religious thought of Augustine of Hippo, giving attention to Manichean and Neo-Platonist influences and to Augustine's creative concerns with God, Trinity, Scriptures, and grace, and his view of symbolism, time, history, and just war. Both Roman Catholic and Protestant perspectives on Augustine will be considered. Special attention will be given to Augustine's shaping of medieval Roman Catholic understandings of church, priesthood, merit, asceticism, and monasticism; as well as Protestant views of grace, freedom, conversion, pre-destination, and sacraments. Prerequisite: written consent of Department Head.

020.4XF Calvin and the Rise of Anglicanism (A) (3)

An advanced study of the major religious insights of John Calvin in relation to the rise of Anglicanism in the 16<sup>th</sup> century. Prerequisite: written consent of Department Head.

020.4XG Luther and the Rise of Anabaptism (A) (3)

The course explores the exclusive commitment to the Bible and the notable distance from Rome which Martin Luther and the evangelical Anabaptists shared; the course also explores their mutual differences. Traditional Catholic beliefs held by Luther after his break with Rome will be examined (such as his doctrines of infant baptism and just war theory), as will his radical views of grace, justification by faith, and priesthood. Alongside Luther, the course approaches the teachings of evangelical Anabaptism, considering its views on tolerance, freedom from state oppression, congregation-based authority, infant baptism, the real presence, traditional ordination, and the hierarchical structure of the church. Prerequisite: written consent of Department Head.

020.4XH The Religious Thought of St. Thomas/Aquinas and the Study of Religion (A)(3)

This seminar interprets the religious thought of St. Thomas Aquinas and assesses his significance for the academic study of religion. Prerequisite: written consent of Department Head.

020.4XI Religion and Philosophy (C) (3)

An examination of the relation between philosophical and religious thought through in-depth study of a selected thinker. Students may not hold credit for 020.4XI and the former 020.442. Prerequisite: written consent of Department Head.

020.4XJ Seminar in Comparative Religious Ethics (C) (3)

An examination of selected topics in comparative religious ethics. Prerequisite: written consent of Department Head..

020.4XK Advanced Studies in Islam (B) (3)

An in-depth study of selected topics in Islamic philosophy and tradition. Prerequisite: written consent of Department Head.

020.4XN Advanced Studies in Hinduism (B) (3)

An in-depth study of selected topics in the philosophy, history, literature, and practices of Hinduism. Prerequisite: written consent of Department Head.

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

Sociology

Courses to be introduced:

077.3XX Restorative Justice (3)

A general introduction to the social theory and practice of restorative justice.

Prerequisite: a grade of "C" or better in 77.251 or written consent of department head.

Courses to be modified:

077.370 Sociology of Law (3)

The aim of this course is to gain an understanding of the law-society relationship.

Different theoretical approaches will be used to investigate substantive issues that pertain to the role of law in (re)producing social inequalities and its potential for

alleviating them. Prerequisite: a grade of "C" or better in 077.251 or written consent of department head.

- Sociology General Major and Advanced Major Programs

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**NET CHANGE IN CREDIT HOURS: +3 HOURS**

Mathematics

Program to be modified:

- General Major and Advanced Major Programs

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

St. Boniface College - English

Courses to be deleted:

004.126	Twentieth-Century Literature in English	(6)	
004.210	English Literature of the Sixteenth Century	(3)	
004.215	English Literature of the Seventeenth Century	(3)	(3)
004.285	British Literature of the Twentieth Century	(3)	

004.297	Drama 2	(3)
004.310	Studies in Shakespeare	(6)
004.316	Studies in Milton	(6)
004.329	Studies in the Victorians	(6)
004.388	Studies in Canadian Literature	(6)

Courses to be introduced:

004.130 Literature since 1900 (6)

An introduction to the study of literature, with emphasis on the development of reading and writing skills. Poetry, prose and drama from Canada, Britain, the United States and other countries. Texts for each section will be announced. Students may not hold for credit both 004.130 and the former 004.126. English 40S or the former English 300 are strongly recommended, but English 40G or the former 301 or 305 will also be accepted.

004.207 Literature of the Sixteenth Century (6)

A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold for credit both 004.207 and the former 004.210. Prerequisite: a grade of "C" or better in 004.120 or 004.130 (or the former 004.126) or both 004.131 and 004.134.

004.209 Literature of the Seventeenth Century (6)

A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold for credit both 004.209 and the former 004.215. Prerequisite: a grade of "C" or better in 004.120 or 004.130 (or the former 004.126) or both 004.131 and 004.134.

004.216 British Literature since 1900 (6)

A survey of poetry, prose and drama by major and minor writers in historical context. Students may not hold for credit both 004.216 and the former 004.285. Prerequisite: a grade of "C" or better in 004.120 or 004.130 (or the former 004.126) or both 004.131 and 004.134.

004.301 Shakespeare (6)

Critical study of the works of this author, including historical context. Students may not hold for credit both 004.301 and the former 004.310. Prerequisite: a grade of "C" or better in six hours of English at the 200 level.

004.302 Milton (6)

Critical study of the works of this author, including historical context. Students may not hold for credit both 004.302 and the former 004.316. Prerequisite: a grade of "C" or better in six hours of English at the 200 level.

004.314 Studies in the Victorians (3)

Students may not hold for credit both 004.314 and the former 004.329. Prerequisite: a grade of "C" or better in six hours of English at the 200 level.

004.327 Studies in Canadian Literature (3)

Students may not hold for credit both 004.327 and the former 004.388. Prerequisite: a grade of "C" or better in six hours of English at the 200 level.

004.396 Drama 2 (3)

Advanced study of selected topics. Students may not hold for credit both 004.396 and the former 004.297. Prerequisite: a grade of "C" or better in six hours of English at the 200 level.

**NET CHANGE IN CREDIT HOURS: +3 HOURS**

St. Boniface College - German and Slavic Studies - German

Courses to be modified:

008.320F Deutsche Sprachpraxis 1 (6)

Approfondissement, au moyen d'exercices pratiques, de la conversation et de la traduction (français - allemand), de l'allemand parlé et écrit, à l'aide de textes variés. L'accent sera mis sur l'étude du vocabulaire et des particularités de structure et de style. Donné au Collège universitaire de Saint-Boniface. Préalable: une note minimale de C dans le 008.210 (l'ancien 008.120) ou le 008.211 (l'ancien 008.123).

008.321F Cours d'allemand commercial (6)

Initiation, au moyen d'exercices oraux et écrits, au vocabulaire commercial et aux techniques d'écriture dans le domaine des affaires. Une révision de la grammaire allemande est prévue mais l'accent sera mis sur la composition et la conversation appliquées au domaine commercial. Donné au Collège universitaire de Saint-Boniface. Préalable: une note minimale de "C" dans le 008.210 (l'ancien 008.120), ou 008.211 (l'ancien 008.123) ou l'approbation écrite du professeur ou de la professeure.

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

St. Boniface College - Political Studies

Courses to be introduced:

019.2XX F Introduction aux relations internationales (6)

Introduction à l'analyse des actions et des interactions politiques internationales. Le cours examine la manière dont les politiques étrangères des États sont formulées; les conflits, les compétitions et les coopérations produites par les interactions étatiques. On ne peut se faire créditer le 019.207 et l'ancien 019.153. Donné au Collège universitaire de Saint-Boniface.

019.3XX F Sujets particuliers en politique 1 (3)

Le contenu du cours variera. Contacter le secteur pour une description de cours. Donné au Collège universitaire de Saint-Boniface. Préalable: consentement écrit du professeur ou chef de département.

019.3XY F Sujets particuliers en politique 2 (3)

Le contenu du cours variera. Contacter le secteur pour une description de cours. Donné au Collège universitaire de Saint-Boniface. Préalable: consentement écrit du professeur ou chef de département

019.3YY F La prise de décisions en politique Étrangère (6)

Analyse et construction d'un certain nombre de modèles théoriques. Les études de cas font surtout référence à la politique étrangère américaine (mais pas exclusivement). Donné au Collège universitaire de Saint-Boniface.

Courses to be modified:

019.356F Politique étrangère canadienne (6)

Une analyse de la tradition canadienne en politique étrangère, le développement de la politique étrangère pendant la Guerre Froide et es perspectives pour l'avenir en ce qui a trait à Alliance Atlantique, les Etats-Unis et le Tiers-Monde. Donné au Collège universitaire de Saint Boniface. L'étudiant(e) ne peut se faire créditer à la fois les cours 019.356 et 019.352 et l'ancien 019.368. Preadable: une note minimale de C dans le 019.150 ou l'autorisation écrite du professeur.

**NET CHANGE IN CREDIT HOURS: +18 HOURS**

**Faculty of Education**

**Curriculum, Teaching and Learning**

Courses to be introduced:

132.1XX Practical Work in School Science (3)

This course, which is appropriate for early, middle and senior teacher candidates, will critically examine the role of practical work in the teaching and learning of school science. Topics will include: demonstrations, experiments, investigations, field experiences, simulations, data collections and interpretation, new educational technologies, assessment and laboratory safety.

**NET CHANGE IN CREDIT HOURS: +3 HOURS**

**Educational Administration, Foundations and Psychology**

129.5XY Focus on Exceptionality: Gifted and Talented (3)

Students will be introduced to various topics and issues in the realm of gifted education, including theoretical models, relevant research, and appropriate teaching and assessment practices.

129.5XX Focus on Exceptionality: An Ecological Approach to FAS/E (3)

Students will be introduced to an ecological or multidisciplinary approach regarding children with FAS/E. Theoretical frameworks and evidence based assessment and instructional practices will be covered.

**NET CHANGE IN CREDIT HOURS: +6 HOURS**

Regulation Changes: Post Baccalaureate Diploma in Education

1. A maximum of 18 credit hours may be taken outside of the Faculty of Education at the introductory or higher level of which six credit hours may be taken at the 100 level. In the case of language study other than English or French, a maximum of twelve credit hours may be taken at the 100 level provided all twelve credit hours are in the same language

2. Students who complete the following CACE courses are eligible for PBDE transfer credit as follows:

<u>CACE course</u>	<u>PBDE transfer</u>
43001 Foundations of Adult Education	129.157 Foundations of Adult Education
43002 Program Planning in Adult Education	129.158 Program Planning in Adult Education
43003 Adult Learning and Development	129.156 Adult Learning and Development
43004 Facilitating Adult Education	129.159 Facilitating Adult Education

Faculty of Engineering

Courses to be introduced:

130.142 Engineering Processes for Non-Engineering Students (3)

Develops a basic understanding of the engineering profession with emphasis on basic technical principles, Systems Engineering, and Project Management. Special emphasis will be placed upon the interface between management and engineering and the role management plays in the conduct of technical projects and manufacturing.

NOTE: This course is not available for credit to students registered in the Faculty of Engineering.

**NET CHANGE IN CREDIT HOURS: +3 HOURS**

Biosystems Engineering

Courses to be deleted:

071.201 Biosystems for Engineers (3)

Courses to be introduced:

034.2BE Biology For Engineers (3)

Provide theories and principles of Biology to engineering students and present applications of biological principles to engineering problems. Fundamental theories involved in cell structure and function, metabolism, genetics and heredity, bacteria and virus structure and function, plant and animal structure and function are covered. An introduction to animal and plant physiology is also provided. Laboratory sessions and

term assignments focus on the engineering applications of these basic theories and principles to provide a good understanding of the role of Biology in Engineering.

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

Civil Engineering

Courses to be deleted:

023.281 Surveying and GIS Applications (4)  
023.378 Solid Mechanics 2

Courses to be introduced:

23.2GE Fundamentals of Geomatics Engineering (4)  
Geomatics in civil engineering, map-making map-reading, computerized maps; leveling; distance measurement; angles, directions, traverses; coordinate geometry; electronic survey instruments; global positioning system; geographic information systems; digital photogrammetric methods and data; aspects of route surveying. Not to held with the former 23.281.

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

Electrical and Computer

Courses to be deleted:

024.400 Graduation Thesis (6)  
024.400 Biomedical Engineering (4)

Courses to be introduced:

024.4XX Design Project (6)  
The engineering curriculum must culminate in a significant design experience which is based on the knowledge and skills acquired in earlier coursework and which gives students an exposure to the concepts of teamwork and project management.  
Prerequisites: 130.201 and completion of the program within 16 months.

024.4XX Biomedical Instrumentation and Signal Processing (4)  
Special problems and requirements for the measurement and analysis of biological signals from human subjects: safety considerations, signal conditioning and the anatomy of the physiological systems. Prerequisites: 024.378

**NET CHANGE IN CREDIT HOURS: +0 HOURS**

Mechanical and Industrial Engineering

Courses to be introduced:

**025.4XX Design for Manufacturing (4)**

Identification of product opportunity, product development process, concurrent engineering concepts, design for assembly, design for injection molding, design for stamping, design for die casting and other processes, design of experiments (DOE), and optimization. Systematic product design methods and tools will be taught along with real design practices. (Prerequisite: 025.229 Manufacturing Engineering).

The 4<sup>th</sup> co-op work term option is deleted

**NET CHANGE IN CREDIT HOURS: +4 HOURS**

**Faculty of Environment, Earth, and Resources**

**Environmental Science/Environmental Studies Programs**

Students in the B.Env. Sc. and B.Env.St. Major and Honours programs may, if they wish, declare and complete a Minor from departments and interdisciplinary programs in which a Minor is offered.

**Geography Programs**

Courses to be deleted:

053.379 Geography of Russia (HS) (6)

Courses to be introduced:

**053.4XX Geographies of Health and Health care (3)**

This course provides a critical overview of geographies of health and health care. The course focuses on two intersecting areas: 1) the role of space, place and geographic scale in shaping health, with emphasis on the relationships between place, culture and health; 2) the role of space, place, distance, rural-urban differences and geographic scale in shaping inequities in health and healthcare, and their influence on individual and population health.

**053.4AB Sacred Lands (3)**

Students will increase their understanding of the importance and significance of Sacred Lands and Sacred Spaces to International Indigenous Peoples. Experiential learning, seminars, and a field component may be included depending on instructor. This course is taught as 053.4AB in the Department of Environment and Geography and as 032.426 in the Department of Native Studies. Consult with either unit for details. Students may not hold credit for both 053.4AB and 032.426. Prerequisite: permission of the department head.

Courses to be modified:

053.221 Economic Geography (HS) (6)

Change prerequisite from  
"a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.  
to:  
"053.120 or 053.128, or permission of the instructor."

053.241 Geography of Tourism and Recreation (HS) (6)

Change prerequisite from  
"a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head.  
to:  
"053.120 or 053.128, or permission of the department head."

053.255 Geomorphology (PS) (3)

Change prerequisite from  
"a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head."  
to:  
053.120 or 053.129, or permission of the department head.

053.263 Geography of Culture and Environment (HS) (3)

Change prerequisite from  
"a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level or written consent of department head."  
to:  
"one of 053.120 or 053.128, or permission of the department head."

053.264 Geography of Culture and Inequality (HS) (3)

Change prerequisite from  
"a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level or written consent of department head."  
to:  
"053.120 or 053.128, or permission of the department head."

053.356W Landforms (PS) (6)

Change prerequisite from  
"a grade of "C" or better in one of 053.120, 053.129, 053.255, (or the former 053.121 or 053.251) or written consent of the department head."  
to:  
"053.255 or permission of the department head."

053.374 Field Studies in Geography (A, TS) (6)

Change prerequisite from  
"a grade of "C" or better in a minimum of three credit hours from Geography courses numbered at the 100 level, or written consent of department head."  
to:  
"permission of the department head."

**GEOGRAPHY PROGRAMS  
Regulation Changes  
2005-2006**

<b>B.A. Geography: Entry Requirements</b>					
<b>B.A. Degree Program in Geography</b>	<b>Minimum Number of Credit Hours</b>	<b>Minimum Cumulative Grade Point Average</b>	<b>Maximum Credit Hours of Repeated/ Failed courses</b>	<b>Subject Fields (min 6 credit hours in each).</b>	<b>Additional Entrance Requirements</b>
General	24	2.00 <sup>2</sup>	48	Geography (053.120 or both 053.128 & 053.129)	grade(s) of "C" in 053.120 (or 053.128 and 053.129) <sup>1</sup>
Advanced	24	2.00	18	Geography plus 3 other subject fields	
Honours	24	3.00	18		grade(s) of "B" in 053.120 (or 053.128 and 053.129) or 3.00 or better in all Geography courses

<sup>1</sup>For those students who have taken additional courses in Geography beyond 53.120 (or 053.128 and 053.129), entry requires a minimum 2.00 Grade Point Average or better on all Geography courses.

<sup>2</sup>Minimum cumulative Grade Point Average for entry into the General degree program is calculated using a Minimum Performance Table. For a student applying for entry with 24 credit hours of completed university courses, the Grade Point Average calculation is based on the best 12 credit hours.

**Proposed Change:**

- Delete Note 1 in which the requirement for 2.00 GPA or better on all Geography courses for entry when additional Geography courses have been completed.

**Proposed Continuation and Graduation Requirements**

<b>Degree Program (Cr. Hrs.)</b>	<b>Minimum Performance Requirements</b>			<b>Graduation Requirements</b>	
	<b>Minimum Cumulative Grade Point Average (GPA)</b>	<b>Maximum Cr. Hrs. Failures/ Repeated Courses</b>	<b>Minimum Cumulative GPA in Geography Courses<sup>4</sup></b>	<b>Geography Courses Cr. Hr. Requirement</b>	<b>Residency Requirement (Cr. Hrs.)</b>
General <sup>1,2,3</sup> (90)	2.00; see 5.2.2	48	2.00	30	48 cr. hrs. total or the final 30 cr. hrs.
Advanced <sup>1,2</sup> (120)	2.00	18	2.00	54	60
Honours <sup>2</sup> (120)	3.00	18	3.00	<u>69</u>	60

<sup>1</sup>General and Advanced degree students must declare a Minor by the time they have completed 51 credit hours of course work. The prerequisite grades for the Minor are "C".

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

<sup>3</sup>Within 60 credit hours of courses, General degree students must have completed 6 credit hours

in each of 5 subject fields totaling 30 credit hours.

\*General and Advanced degree students are required to maintain a cumulative Grade Point Average of 2.00 on the courses defining their Geography Major. Failures are excluded in this calculation and only the higher grade of repeated courses are included. Note: Students must complete all prerequisite courses with minimum "C" grades.

**Proposed Changes**

1. Change the timing when Advanced students must declare a Minor from the point of entry to 51 credit hours. This will make the Advanced and General degree programs in Geography consistent.
2. Delete the credit hour limit in which students must complete the degree requirements. Students are permitted to complete additional courses provided they do not exceed 48 credit hours of failures or repeats in the General; 18 credit hours of attempts in the Advanced and Honours degree programs.
3. Delete the restriction in the number of credit hours which can be completed in any one department or combination of departments. The proposed regulations will require students to meet the minimum requirements of the Major (as defined in the program charts for Geography as 30 cr hrs for the General; 54 credit hours for the Advanced and 72 credit hours for the Honours) and Minor (defined by the department and comprised of a minimum of 18 credit hours).

**Proposed Undergraduate Program Chart**

B.A. Geography, Program Code: 053		UNIVERSITY 1	
<b>HONOURS<sup>1</sup> 120 CREDIT HOURS (72 credit hours in Geography)</b>		<b>ADVANCED<sup>1</sup> 120 CREDIT HOURS (54 credit hours in Geography)</b>	
053.120 (or 053.128 and 053.129)	053.222, 053.220, 053.225, 053.253	053.368	053.368
Plus 6 credit hours from the Faculty of Science <sup>5</sup>	9 credit hours in Geography courses numbered at the 200 or 300 level;	Plus 18 credit hours in Geography courses numbered at the 200 or 300 level <sup>4</sup>	12 credit hours in ancillary options <sup>3</sup>
Plus 6 credit hours from the Faculties of Arts or Science <sup>5</sup>	12 credit hours in ancillary options <sup>3</sup>	6 credit hours in ancillary options <sup>3</sup>	6 credit hours in ancillary options <sup>3</sup>
It is recommended that students complete the "W" course in University 1 or Year 2.			
<b>HONOURS<sup>1</sup> 120 CREDIT HOURS (72 credit hours in Geography)</b>		<b>ADVANCED<sup>1</sup> 120 CREDIT HOURS (54 credit hours in Geography)</b>	
053.120 (or 053.128 and 053.129)	053.222, 053.220, 053.225, 053.253	053.368	053.368
Plus 6 credit hours from the Faculty of Science <sup>5</sup>	9 credit hours in Geography courses numbered at the 200 or 300 level;	Plus 18 credit hours in Geography courses numbered at the 200 or 300 level <sup>4</sup>	12 credit hours in ancillary options <sup>3</sup>
Plus 6 credit hours from the Faculties of Arts or Science <sup>5</sup>	12 credit hours in ancillary options <sup>3</sup>	6 credit hours in ancillary options <sup>3</sup>	6 credit hours in ancillary options <sup>3</sup>
It is recommended that students complete the "W" course in University 1 or Year 2.			
<b>HONOURS<sup>1</sup> 120 CREDIT HOURS (72 credit hours in Geography)</b>		<b>ADVANCED<sup>1</sup> 120 CREDIT HOURS (54 credit hours in Geography)</b>	
053.120 (or 053.128 and 053.129)	053.222, 053.220, 053.225, 053.253	053.368	053.368
Plus 6 credit hours from the Faculty of Science <sup>5</sup>	9 credit hours in Geography courses numbered at the 200 or 300 level;	Plus 18 credit hours in Geography courses numbered at the 200 or 300 level <sup>4</sup>	12 credit hours in ancillary options <sup>3</sup>
Plus 6 credit hours from the Faculties of Arts or Science <sup>5</sup>	12 credit hours in ancillary options <sup>3</sup>	6 credit hours in ancillary options <sup>3</sup>	6 credit hours in ancillary options <sup>3</sup>
It is recommended that students complete the "W" course in University 1 or Year 2.			

GENERAL <sup>2</sup>	90 CREDIT HOURS (30 credit hours in Geography)	
053.120 (or 053.128 and 053.129)	12 credit hours in Geography courses numbered at the 200 level <sup>5</sup>	12 credit hours in Geography courses numbered at the 300 and/or 400 level

Plus 6 credit hours from the Faculty of Science<sup>5</sup>

Plus 6 credit hours from the Faculties of Arts or Science<sup>6</sup>

It is recommended that students complete the "W" and "M" courses in University 1 or Year 2.

Note: 30 credit hours, with 6 credit hours in each of 5 subject fields, must be completed in the first 60 credit hours.

**NOTES:**

<sup>1</sup>entry into the Honours and Advanced degree programs is summarized in xxx. The courses required in this program will satisfy "the university" mathematics requirement.

<sup>2</sup>entry into the General degree program is summarized in xxx and xxx.

<sup>3</sup>Ancillary options are chosen in consultation with the department.

<sup>4</sup>Among the 200 and 300 level courses, at least 6 of the 18 credit hours must be systematic and at least 6 must be area studies. Systematic courses and area studies courses are listed below (see Other, Note 1).

<sup>5</sup>Among the 200 and 300 level courses, at least 12 credit hours must be systematic and at least 6 must be area studies. Systematic courses and area studies courses are listed below (see Other, Note 1). Students wishing to transfer from the General to the Advanced degree program are permitted to take either 053.2aa and 053.2ab or 053.253 in either third or fourth year.

<sup>6</sup>Introductory courses offered by the Faculty of Environment in Geography (053) and Geological Sciences (007) may be used to meet this component of the University 1 program if taken prior to September 1, 2006.

**Proposed Changes:**

1. Honours degree program will increase from 114 credit hours to 120 credit hours. The additional credit hours are assigned to 400-level courses in Geography.
2. 400-level Geography courses also count toward the General major requirement.
3. 053.222 is replaced with 053.220 and 053.225 consistent with the B.Sc. in Physical Geography program approved by Senate May 12, 2004.
4. Geological Sciences courses are identified as "Science" courses for University 1 students seeking courses which meet this requirement.

**NET CHANGE IN CREDIT HOURS: 0**

## Faculty of Human Ecology

### Human Ecology Program

Courses to be deleted

028.103W Human Ecology: Perspectives and Communication -3

Courses to be introduced:

028.2AA W Human Ecology: Perspectives and Communication (3)

Theory and practice of written and oral communication set within the context of the subject matter of areas of human ecology. Students may not hold credit for 028.2AAW and the former 028.103W or the former 028.101 or the former 028.204.

Courses to be modified

028.205 Introduction to Research in Human Ecology (3)

A general introduction to research issues in natural and social sciences and their application in the various subject areas in human ecology. Prerequisites: 028.103W or the former 028.101 and the former 028.204, and 005.100M.

028.310 Communication for Professional Practice (3)

Advanced communication skills as applied to professional practice in the fields of human ecology. Students may not hold credit for 028.310 and the former 028.204. Prerequisites: 54 credit hours in the Human Ecology program and 028.103W.

### Program Changes

That the 3 credit hours that were formerly specified as 028.408 be allocated as 3 credit hours of free electives for the degree requirements of the B.Sc. (Human Nutritional Sciences) and B.H.Ecol. (Clothing and Textiles).

That the 3 credit hours that were formerly specified as 028.408 be allocated as 3 credit hours of Faculty electives at the 300 or 400 level for the degree requirements of the B.H.Ecol. (Family Social Sciences).

That the 3 credit hours that were formerly specified as 028.408 be allocated as 3 credit hours of Faculty electives for the degree requirements of the B.H.Ecol.

NET CHANGE IN CREDIT HOURS: 0

### Family Social Sciences

Course to be deleted:

062.114 Family Studies: Relationships -3

Course to be introduced:

062.1AA Family Issues Across the Lifespan (3)

Introduction to contemporary issues involving families across the lifespan. Topics include mate selection, marriage, parenthood, divorce, lone-parent families, work-family balance, family violence, families and older persons, and poverty in families. Not to be held with the former 062.114.

Courses to be modified:

062.235	Multicultural Family issues
062.280	Family Violence
062.322	Death and the Family
062.324	Families in the Later Years
062.333	Parenting and Developmental Health
062.380	Conflict Resolution in the Family
062.433	Management of Family Stress

In each course, the prerequisites will be modified by replacing 062.114 with 062.1AA.

062.445 Family Economic Resources and Functions (3)

Principles, major problems, and trends concerning the family economic situation in relation to the Canadian economy. Prerequisite: 062.207 and 018.120 or 018.121 or 018.122.

The electives in the Family Resource Management Option are modified by:

- a) the deletion of 077.351 Population Dynamics and Change, and 077.387 Social Inequality.
- b) the addition of 032.124 Native Peoples of Canada, Part 2, 053.128 Introduction to Human Geography, and 053.221 Economic Geography. And
- c) the requirement that at least 3 credit hours must be selected from courses numbered 300-400.

NET CHANGE IN CREDIT HOURS: 0

Human Ecology Program

The Human Ecology Program will be as follows:

Faculty Core: 028.2AAW, 028.205 and 028.310 (9 credit hours)

Arts/Science courses:

- 017.120 or 077.120 Psychology or Sociology (6)
- 018.121 and 018.122 Economics (6)
- 6 credits from 018.228, 231

239, 240, 254, 255    Economics (6)  
 005.100                Statistics (3)  
 XXXXX                 Science course (as defined by the Faculty of Science) (3)  
 032.120 or 032.122  
 &032.124              Native Studies (6)  
(30 credit hours)

**Required Human Ecology Courses:**

030.120            Food: Facts and Fallacies  
 030.121            Nutrition for Health and Changing Lifestyles  
 030.213            Nutrition through the Life Cycle  
 062.1AA            Family Issues Across the Lifespan  
 6 credit hours from 062.101, 062.190, or 062.142  
 062.235            Multicultural Family Issues  
 064.1AA            Textiles for Living  
 064.1BB            Dynamics of the Textiles Supply Chain  
(27 Credit hours)

**Faculty (Human Ecology) Electives:**

(at least 9 credit hours at 300 or 400 level)

028.409            Practicum in Human Ecology (strongly recommended)  
(24 Credit hours)

**Minor/Option:**

*Recommended Minors/Options:*  
 Canadian Studies  
 Family Social Sciences  
 Human Nutrition and Metabolism  
 Native Studies  
 Labour and Workplace Studies  
 Management  
 Option in Aging  
 Political Studies  
 Sociology  
 Urban Studies  
 Women's Studies

(18 Credit hours)

**Free Electives:**

(12 Credit hours)

**Faculty of Law**

**Courses to be deleted:**

045.329 Natural Resource Administration and Law (3)

**Courses to be modified:**

045.268 Legal Negotiation (3)

This course is modified from a pass/fail to a graded course.

**NET CHANGE IN CREDIT HOURS: -3 HOURS**

**Faculty of Management**

Warren Centre for Actuarial Studies

Discontinuation of the Basic and Advanced Actuarial Diploma Programs...

Courses to be modified:

010.212 Interest Theory (3)

The application of calculus and probability to discrete and continuous interest functions. Key topics are the measurement of interest, present and accumulated values, and annuities.

May not be held with the former 010.232 or 010.332. Prerequisite: 136.170 (B) or 136.171 (B) or 136.169 (B). Corequisites: 136.275 (or former 013.234) or 136.270 (or former 013.239) or 136.271 (or former 013.249), and 005.200.

010.133 Actuarial Models (3)

Frequency and Severity Models, Compound Distribution Models, Ruin Models. May not be held with the former 010.448 Topic Risk Theory. Prerequisite: 010.313 (C+). Corequisites: 010.333.

010.353 Actuarial Models 4 (3)

Survival Models, Stochastic Process Models, and Simulation Models.

May not be held with the former 010.447. Prerequisite: 010.313 (C+). Corequisite: 010.323.

010.400 Advanced Actuarial Topics 2 (3)

A selection of advanced topics of current actuarial interest.

Prerequisite: 010.323 (C+)

010.415 Pension Mathematics (3)

Actuarial applications for defined benefit pension plans. Actuarial cost methods, funding levels, operation of pension plans from an actuarial perspective.

Students may not hold credit with 010.755. Prerequisite: 010.323 (C+).

**Supply Chain Management**

Courses to be introduced:

164.2XX Introduction to Supply Chain Management (3)

An examination of the management activities that are necessary to ensure an efficient flow of materials, funds, and information among the various organizations in supply chains, from the acquisition of raw materials to the delivery of the finished product to the end user.

164.3XX Global Supply Chains (3)

The course provides a global orientation to supply chain management, with a particular emphasis on the global linkages between organizations in international supply chains. Supply chain management practices in selected countries are also examined.

Prerequisite: 164.2XX or 118.336 or Consent of instructor

**164.4XX Policy and Regulation in Supply Chain Management (3)**

An analysis of the process of policy development of supply chain regulation, a review of the legislation that regulates supply chains, and an assessment of the impact of such legislation on supply chain management activities. Prerequisite: 164.2XX or consent of instructor.

**Modifications:**

The prefix changes for the courses transferring in from the Departments of Business Administration and Marketing.

Old Course #	New Course #	Course Name	Credit Hours
027.215	164.215	Introduction to Management Science	3
027.215F	164.215F	Introduction aux sciences de la gestion	3
027.260	164.260	Fundamentals of Production and Operations Management	3
027.260F	164.260F	Principes de gestion des operations et de la production	3
027.340	164.340	Intermediate Management Science	3
027.340F	164.340F	Sciences de la gestion 2	3
027.363	164.363	Simulations Models for Operation Management (Currently not offered)	3
027.364	164.364	Project Planning and Control (Currently not offered)	3
027.365	164.365	Management of Quality and Reliability Operations Management in Service	3
027.366	164.366	Organizations (Currently not offered)	3
027.367	164.367	POM Project in Industry (Currently not offered)	3
027.420	164.420	Topics in Management Science	3
027.422	164.422	Management Science Models in Business and Industry (Currently not offered)	3
027.423	164.423	Simulation Models in Management Science	3
027.462	164.462	Production Management Seminar	3
027.463	164.463	Production and Inventory Systems: Planning and Control	3
118.336	164.336	Supply Chain Logistics	3

**Supply Chain Management Major:**

- 164.221 Transportation Principles
- 164.2XX Introduction to Supply Chain Management
- 164. 3XY Supply Chain Logistics (prefix change only - was 118.366)
- plus one course from the following list
- 164.222 Selected Topics in Logistics and Transportation
- 164.4XY Production and Inventory Systems (prefix change only - was 27.463)
- 164.3XX Global Supply Chains,
- 164.4XX Policy and Regulation of Supply Chains

**NET CHANGE IN CREDIT HOURS: +9 HOURS**

The Human Resources Management / Industrial Relations Major shall be changed from:

027.345 plus any three of the following: 027.343, 027.441, 027.422, 027.488 or 027.452.

To:

027.345 plus three of the following: 027.441, 027.442, 027.448 and 027.452 OR 027.345 and two of the following : 027.441, 027.442, 027.448, and 027.452 plus one of the following: 027.343, 153.301, 153.306, 153.307, 153.313, and 153.314.

**School of Medical Rehabilitation**

Course to be deleted:

068.174 Cardiorespiratory Clinical Education (8)

Courses to be introduced:

167.1AB Cardiorespiratory Clinical Education (7)

Consists of an introductory period of clinical practice and specific practice related to the management of cardiorespiratory conditions. Course evaluated on a pass/fail basis. 245 hours.

**NET CHANGE IN CREDIT HOURS: -1 HOUR**

**School of Music**

Courses to be deleted:

033.372 Classroom Instruments (3)

033.328 From Ragtime to Rock: A History of Popular Music (3)

Courses to be introduced:

033.2XX Minor Practical study (3)

Individual instruction in an area other than that selected for 033.240. Normally a continuation of 033.146. Written consent from the School of Music is required to register.

033.3XX From Rock to Rap and Beyond: A History of Popular Music in the Later 20th Century (3) A survey of popular music in North America and Britain from the mid—sixties to the present, beginning with the two foremost bands of the British Invasion, the Beatles and Stones, and the development of folk rock and psychedelic rock. Coverage of the seventies consists of a survey of the various genres of mainstream and Album Oriented Rock, while coverage of the eighties juxtaposes the superstars of MTV with radial developments in rap/hip hop and punk/new wave. The nineties focuses on the continual mainstreaming of music on the edge of rap, alternative

and world beat.

033.3XX From Ragtime to Rock'n'Roll: A History of Popular Music in the 20th Century (3)  
A survey of popular music in North America from the ragtime craze and Tin Pan Alley tradition through the development of blues and country to the emergence rhythm and blues and rock'n'roll to the beginnings of the "British Invasion".

Courses to be modified:

033.362 Independent study 1 (3)  
Will be added to the list of courses in the integrated B.Ed./B.Mus. Program.

**NET CHANGE IN CREDIT HOURS: +3 HOURS**

**Faculty of Pharmacy**

Courses to be deleted:

046.310 Pharmacy Skills Lab 3 (4)

Courses to be introduced:

046.3XX Principles of Biotechnology in Pharmacy (3)  
Introduction of biotechnology in pharmaceutical sciences and pharmacy. Students will be introduced to concepts from molecular biology, immunology, biotechnology, and pharmacogenomics.

046.3XX Pharmacy Skills Lab 3 (2)  
The course develops essential skills required for pharmacy practice. The focus is on interaction with patients and other health care professionals and the application of essential knowledge, skills, and values required for the provision of pharmaceutical care.

**NET CHANGE IN CREDIT HOURS: +1 HOUR**

**Faculty of Science**

Actuarial Mathematics:

Revised Program Chart as follows:

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**4.1.2 Actuarial Mathematics, Department Code: 010**

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UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
<b>HONOURS ACTUARIAL<sup>2</sup> 120 CREDIT HOURS</b>			

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136.169 (B), (or 136.150 <sup>1</sup> and 136.170 <sup>1</sup> (B)), 136.130 <sup>1</sup> (B), and 005.100 Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course	010.212, 005.200 <sup>3</sup> , 136.275 (or 136.270 and 136.271), 027.215 <sup>5</sup>	010.313, 010.323, 010.333, 010.353, 005.305, 005.350 <sup>6</sup> , 005.360 <sup>6</sup> , 136.370	010.414, 010.415, 010.424 or 010.400, 010.434, 005.347 <sup>4</sup> , 005.349 <sup>4</sup> , 136.230 <sup>5</sup>
30 Hours	30 Hours	30 Hours	30 Hours

**JOINT MATHEMATICS-ACTUARIAL MATHEMATICS HONOURS:** See Section 4.12, Mathematics

**JOINT STATISTICS-ACTUARIAL MATHEMATICS HONOURS:** See Section 4.16, Statistics

**NOTES:**

1 136.151, 136.152 or 136.153 may be taken instead of 136.150; 136.131 may be taken instead of 136.130; 136.171 or 136.173 may be taken instead of 136.170.

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

3 005.200 may be taken in University 1 or Year 2.

4 005.347 and (or) 005.349 may be taken in Year 3 or 4.

5 136.230 and 027.215 may be taken in Year 2, 3 or 4.

6 005.350 and 005.360 may be taken in Year 2 or 3.

(Letters in brackets indicate minimum prerequisite standing for further study.)

The changes are:

- 010.202 and 010.221 are deleted in Year 2 as they will no longer be offered.
- 005.305 is added to Year 3.
- 005.312 is deleted as an alternate to 005.347 in Year 4.
- 010.400 is added as an alternate to 010.424

**Program Changes:**

As the Faculty of Science regulations for Honours programs are changing, the Actuarial Mathematics program will conform to the new faculty minimum of 2.50 GPA for entrance and continuation. In addition, 24 credit hours will continue to be required as the minimum for full-time study in each Regular Session.

Chemistry:

Courses to be modified:

002.277 Elements of Biochemistry 1 (3)L

Restriction:

"Not to be held with 002.236 (060.236) (or the former 002.235, 002.240, 060.235) or 060.277 (or the former 060.240), or 002.286."

Revised Program Chart as follows:

**4.6.3<sup>4</sup> Chemistry, Department Code: 002**

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
<b>HONOURS 123 CREDIT HOURS</b>			
002.130(B), 002.131(B), 016.105(C) (or 016.102(C+)) and 016.107(C), 136.150 <sup>1</sup> (C), 136.170 <sup>1</sup> (C)	002.286  At least 12 credit hours from: 002.221, 002.222, 002.228, 002.229, 002.237 (060.237) <sup>2</sup> , 002.238, 002.247  136.120, 136.130 <sup>1</sup>	At least 18 credit hours from: any of 002.221, 002.222, 002.228, 002.229, 002.237 (060.237), 002.238, 002.247, not yet taken, and 002.336, 002.337, 002.338, 002.339, 002.358, 002.457, 002.468, 002.469	002.460 and 002.471  Plus sufficient credit hours from Chemistry courses not yet taken <sup>6</sup> to total a minimum of 63 credit hours  Plus sufficient electives <sup>5</sup> to total a minimum of 33 credit hours
Plus 6 credit hours of electives <sup>2</sup>	Plus 9 credit hours of electives <sup>5</sup> which may include 6 credit hours of Chemistry <sup>6</sup>	Plus 12 credit hours of electives <sup>5</sup> which may include 6 credit hours of Chemistry <sup>6</sup>	
In University 1 or Year 2 the following must be completed:			

6 credit hours from the Faculty of Arts, which should  
include the required "W" course.

30 Hours	30 Hours	30 Hours	33 Hours
<b>FOUR YEAR MAJOR 120 CREDIT HOURS</b>			
002.130(C+), 002.131(C+), 016.105 (or 016.102) and 016.107, 136.150 <sup>1</sup> , 136.170 <sup>1</sup>	002.286  At least 12 credit hours from: 002.221, 002.222, 002.228, 002.229, 002.237 (060.237) <sup>2</sup> , 002.238, 002.247  136.120, 136.130 <sup>1</sup>  Plus 9 credit hours of electives <sup>5</sup> which may include 6 credit hours of Chemistry <sup>6</sup>	At least 18 credit hours from: any of 002.221, 002.222, 002.228, 002.229, 002.237 (060.237), 002.238, 002.247, not yet taken, and 002.336, 002.337, 002.338, 002.339, 002.358, 002.457, 002.468, 002.469  Plus 12 credit hours of electives <sup>5</sup> which may include 6 credit hours of Chemistry.	002.460  Sufficient credit hours from Chemistry courses not yet taken <sup>6</sup> to total a minimum of 57 credit hours  Plus sufficient electives <sup>5</sup> to total a minimum of 30 credit hours
In University 1 or Year 2 the following must be completed:			
6 credit hours from the Faculty of Arts, which should include the required "W" course.			

The changes are:

1. The Mathematics course requirements for Year 1 in the Honours program be changed from 136.150 (C), 135.170 (C) plus one of 136.120, 136.130, with a grade of (C) to: 136.150 and 136.170, each with a grade of (C), as 016.105 and 016.107 are now required, and have

respectively 136.150 and 136.170 as corequisites.

2. The Mathematics course requirements for Year 1 in the Major program be changed from 136.150, 136.170 plus one of 136.120, 136.130 to: 136.150 and 136.170

3. The Mathematics course requirement for Year 2 in the Honours and Major program, be changed from whichever of 136.120, 136.130, not yet taken to: 136.120, 136.130.

4. The requirement of 002.236 (060.236) changes to 002.286 the new Biochemistry course, Chemistry of Biomolecules, which is specifically for students in Chemistry programs. As a result, FOOTNOTE 2 "Students should note that Biology 071.125 is a prerequisite of 002.236 and 002.237 (060.236 and 060.237)", is deleted.

### Computer Science Program

Courses to be deleted:

074.222	Introduction to Assembler Language Programming	3L
074.223	Introduction to Digital Logic	3L
074.430	Computer Networks	3L

Courses to be introduced:

074.2CS Introduction to Computer Systems 3  
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  
*Prerequisites:* 074.214 and 074.216.

074.3CN Computer Networks 1 3L  
This courses examines the principles of computer networks, including network architectures, algorithms, and performance. Not to be held with the former 074.430. *Prerequisites:* 074.214 and 074.2CS

074.4CN Computer Networks 2 3  
This courses examines advanced topics in computer networks, including network security, network management, performance, and multimedia networking. *Prerequisite:* 074.3CN (or the former 074.430).  
*Corequisite:* 074.343.

074.4AD Advanced Databases 3  
Parallel, distributed, object-oriented, object-relational, and XML databases; other emerging database technologies. *Prerequisite:* 074.338

Courses to be modified:

074.214 Data Structures and Algorithms 3L  
Change prerequisites from:  
"074.102 (or the former 074.123) 'C', and a 'C' average in one of 136.130 or 136.131 (or the former 013.146) and one of

136.150, 136.151, 136.152, 136.153 or 136.169 (or the former 006.125, 013.139, or 013.159)."

to:

"074.102 (or the former 074.123) 'C'."

074.216 Programming Practices 3L

Change prerequisite from:

"074.214 (or the former 074.206) 'C' or 074.206F 'C'."

to:

"074.102 (or the former 074.123) 'C'."

074.335 Software Engineering 3

Change prerequisites from:

"074.215 'C' or 074.206F (or the former 074.206) 'C', and 074.213 'C'."

to:

"074.215 'C' or 074.206F (or the former 074.206) 'C'."

074.329 Introduction to Compiler Construction 3

Change prerequisites from:

"074.214 (or the former 074.206) 'C' or 074.206F 'C' and 074.222 (or the former 074.240) 'C'. 074.216 is recommended."

to:

"074.214 (or the former 074.206) 'C' or 074.206F 'C' and 074.2CS (or the former 074.222 or 074.240) 'C'. 074.216 is recommended."

074.337 Computer Organization 3

Change prerequisites from:

"074.222 'C' and 074.223 (or the former 074.240) 'C'."

to:

"074.2CS 'C' (or the former 074.222) 'C'."

074.343 Operating Systems 3L

Change prerequisites from:

"074.214 (or the former 074.206) 'C' or 074.206F 'C' and 074.222 (or the former 074.240) 'C'. 074.216 is recommended."

to:

"074.214 (or the former 074.206) 'C' or 074.206F 'C' and 074.2CS (or the former 074.222 or 074.240) 'C'. 074.216 is recommended."

Revised Program Chart as follows:

**4.7.3 Computer Science, Department Code: 074**

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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**HONOURS 4,5, 8 120 CREDIT HOURS**

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074.101 and 074.102 (B) Plus 136.130 <sup>1</sup> and 136.150 <sup>1</sup> , with a (C) average	074.208, 074.213, 074.214, 074.215, 074.216, 074.2CS	074.303, 074.317, 074.335, 074.337, 074.343 Plus 3 credit hours of 300 level Computer Science courses	21 credit hours of 400 level Computer Science courses
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In University 1 or Year 2 the following must be completed:

005.100 (C)<sup>2</sup>

6 credit hours from the Faculty of Arts, which should include the required "W" course.

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30 Hours	30 Hours	30 Hours	30 Hours
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**HONOURS COOPERATIVE OPTION 3,4,5,8 120 CREDIT HOURS**

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074.101 and 074.102(B) 136.130 <sup>1</sup> and 136.150 <sup>1</sup> , with a (C) average	074.208, 074.213, 074.214, 074.215, 074.216, 074.2CS	074.303, 074.317, 074.335, 074.337, 074.343 Plus 3 credit hours of 300 level Computer Science courses	21 credit hours of 400 level Computer Science courses
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In University 1 or Year 2 the following must be completed:

005.100 (C)<sup>2</sup>

6 credit hours from the Faculty of Arts, which should include the required "W" course.

074.298, 074.398, 074.498 must be completed prior to the last academic term

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30 Hours	30 Hours	30 Hours	30 Hours
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**FOUR YEAR MAJOR 4,5,7,8 120 CREDIT HOURS**

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074.101 and 074.102(C+) 136.130 <sup>1</sup> and 136.150 <sup>1</sup> , with a (C) average <sup>4</sup>	074.208, 074.213, 074.214, 074.215, 074.216, 074.2CS	074.335, 074.337, 074.343 Plus 21 credit hours of 300 or 400 level Computer Science courses of which 6 credit hours must be at the 400 level
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Plus 9 credit hours approved by the department<sup>a</sup>

In University 1 or Year 2 the following must be completed: 005.100(C)

6 credit hours from the Faculty of Arts, which should include the required "W" course.

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### MAJOR COOPERATIVE OPTION 3,4,5,7,8 120 CREDIT HOURS

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074.101 and 074.102(C+)	074.208, 074.213, 074.214, 074.215, 074.216, 074.2CS	074.335, 074.337, 074.343
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Plus 136.130<sup>1</sup> and 136.150<sup>1</sup>, with a (C) average<sup>4</sup>

Plus 21 credit hours of 300 or 400 level Computer Science courses of which 6 credit hours must be at the 400 level

074.298, 074.398, 074.498 must be completed prior to the last academic term

Plus 9 credit hours approved by the department<sup>a</sup>

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In University 1 or Year 2 the following must be completed: 005.100 (C)

6 credit hours from the Faculty of Arts, which should include the required "W" course.

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The changes are:

1. 074.222 and 074.223 are deleted from Year 2 of the Honours and Major programs.
2. 074.2CS is added to Year 2 of the Honours and Major programs.
3. 074.216 is added to Year 2 of the Honours and Major programs.
4. 074.337 is added to Year 3 of the Major programs.
5. The "24 credit hours of 300 or 400 level Computer Science courses" changes to "21 credit hours of 300 or 400 level Computer Science courses" for the Major programs.

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Computer Science - Mathematics Joint Program Revised Program Chart as follows:

#### 4.7.4 Computer Science - Mathematics Joint Program, Department Code: 074M

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

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UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
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### JOINT HONOURS<sup>2</sup> 120 CREDIT HOURS

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074.101 and 074.102(B), 136.130 <sup>1</sup> (B), 136.169 (B), (or 074.2CS 136.150 <sup>1</sup> and 136.170 <sup>1</sup> (B)),	074.208 <sup>4</sup> , 074.214, 074.216, 074.2CS, 136.220, 136.235,	074.303, 074.317, 074.337, 074.343, 074.430, 074.431 (or 074.442)
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005.100(C) Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course <sup>3</sup>	136.275 plus one of 136.260 or 136.280	Two of 074.302, 074.329, 074.335, 074.338 One of 074.402, 074.405, 074.429, 074.435, 074.438 Plus an additional 3 credit hours of 300 or 400 level Computer Science <sup>6</sup> 136.375 or 136.376, 136.335 (or 136.330 and 136.331), 136.340, which ever of 136.260 or 136.280 not yet taken Plus 12 credit hours of 300 or 400 level Mathematics courses, of which 3 credit hours must be at the 400 level
30 Hours	30 Hours	30 Hours

**JOINT HONOURS COOPERATIVE OPTION2 120 CREDIT HOURS**

074.101 and 074.102 (B), 136.130 <sup>1</sup> (B), 136.169 (B), (or 136.150 <sup>1</sup> and 136.170 <sup>1</sup> (B), 005.100 (C) Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course <sup>3</sup>	074.208 <sup>4</sup> , 074.214, 074.2CS, 074.216, 136.220, 136.235, 136.275 plus one of 136.260 or 136.280	074.303, 074.317, 074.337, 074.343, 074.430, 074.431 (or 074.442) Two of 074.302, 074.329, 074.335, 074.338 One of 074.402, 074.405, 074.429, 074.435, 074.438 Plus an additional 3 credit hours of 300 or 400 level Computer Science <sup>6</sup> 136.375 or 136.376, 136.335 (or 136.330 and 136.331), 136.340, which ever of 136.260 or 136.280 not yet taken Plus 12 credit hours of 300 or 400 level Mathematics courses, of which 3 credit hours must be at the 400 level 074.298, 074.398, 074.498 must be completed prior to the last academic term
30 Hours	30 Hours	30 Hours

The changes are:

1. 074.222 and 074.223 are deleted from Year 2 of the Joint Honours programs.
2. 074.2CS and 074.216 are added to Year 2 of the Joint Honours programs.

Computer Science –Physics and Astronomy Joint Program Revised Program Chart as follows:

**4.7.6 Computer Science – Physics & Astronomy Joint Program Department Code: 074P**

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
<b>JOINT HONOURS<sup>1</sup> 120 CREDIT HOURS</b>			
016.105 (B) (or 016.102 (B+)) and 016.107 <sup>2</sup> (B), 136.130 <sup>3</sup> (B), 136.153 <sup>3</sup> (B), 136.173 <sup>3</sup> (B), 074.101, 074.102 (B)	016.226, 016.237, 016.238, 016.265 <sup>5</sup> , 074.208, 074.213, 074.214, 074.216, 074.2CS	016.260, 016.261, 016.341, 016.338, 074.219, 074.317, 074.343  Plus 6 credit hours of 300 and 400 level courses from Computer Science	15 credit hours of 300 and 400 level Honours Physics courses, with at least 6 credit hours at the 400 level  Plus 12 credit hours of 300 or 400 level courses from Computer Science, with at least 9 credit hours at the 400 level by the end of Year 4  Plus 3 credit hours of electives
Plus 6 credit hours from the Faculty of Arts, which must include the required "W" course <sup>4</sup>			
Plus 3 credit hours of electives			
30 Hours	30 Hours	30 Hours	30 Hours

**NOTES:**

- 1 The courses required in this program will satisfy the University mathematics requirement.
- 2 016.103 is not suitable for entry to the Honours and four year Major program. Students must also take 016.107 if they have already taken 016.103.  
Students can hold credit for both 016.103 and 016.107.
- 3 136.131 may be taken in place of 136.130; 136.150, 136.151 or 136.152 may be taken in place of 136.153; 136.170 or 136.171 may be taken in place of 136.173; 136.169 may be taken in place of 136.153 and 136.173.
- 4 As there are no electives in Year 2 of the program, students should complete the University written English requirement in University 1. If not completed in University 1, a "W" course must be completed prior to Year 3 in addition to the required Year 2 courses.
- 5 The corequisite of 136.270 is waived for students in this program.

The changes are:

1. 074.222 is deleted from Year 2 of the Joint Honours program.
2. 74.216 and 074.2CS are added to Year 2 of the Joint Honours program.
3. 074.219 is added to Year 3 and "9 hours of 300 and 400 level courses from Computer Science" is changed to "6 hours of 300 and 400 level courses from Computer Science."

Ecology

Changes to the Approved Options List

The approved optional courses for both the four year Major and Honours programs are:

001.211, 001.218, 001.221, 001.229, 001.325, 001.326, 001.327 001.358, 001.401, 001.404, 001.405, 001.412, 001.415, 001.421, 001.465, 001.480, 001.488, 002.238, 002.247, 002.255, 002.355, 002.455, 005.312, 005.313, 007.239, 007.331, 007.431, 007.463, 022.215, 022.218, 022.310, 022.338, 022.346, 022.350, 022.358, 022.361, 022.417, 022.420, 022.421, 022.422, 022.423, 022.424, 022.425, 022.428, 022.471, 022.472, 022.480, 022.481, 022.482, 022.484, 022.488, 038.205, 038.425, 038.428, 038.436, 038.450, 038.452, 040.351, 039.354, 039.427, 039.436, 039.441, 040.306, 040.350, 040.352, 040.406, 040.409, 040.412, 040.413, 040.450, 040.451, 053.373, 060.210, 060.211, 060.223, 060.228, 060.344, 060.348, 060.432, 065.218, 065.250, 128.218, 128.255, 128.311, 128.325, 128.355, 128.411, 128.455.

The change is:

1. Course 001.415 Plant Interactions, is added to the Approved Options List for the Ecology Major and Honours programs.

Mathematics

Courses to be deleted:

136.270	Calculus 3A	(3)
136.270F	Calcul 3A	(3)
136.271	Calculus 3B	(3)
136.271F	Calcul 3B	(3)
136.375	Calculus 4	(6)

Old courses to be formally deleted:

013.133	CALC GEOM TRIG	6
013.221	MODERN TOPICS 1	6
013.236	LINEAR ALGEBRA	UNKNOWN
013.242	LINEAR ALGEBRA	6
013.331	MODERN TOPICS 2	6
013.343	VECTOR ANALYSIS	3
013.344	VECTOR ANALYSIS	3
013.356	ADV MATHEMATICS	3
013.444	ADV VECTOR ANAL	6
013.446	HIGHER ALGEBRA	3
013.449	ADV VECTOR ANAL	3
013.461	TOP IN APP MATH	6

Courses to be introduced:

136.2XX Multivariable Calculus (3)

Calculus of several variables. Not to beheld with 136.275 or the former 136.270, 013.234, 006.227, 006.228, 006.243, or 013.239. Prerequisites 136.130 (or 136.131 (or the former 013.146) and one of 136.169, 136.170, 136.171, 136.173 (or the

former 013.149, 013.159, or 006.126).

136.2XXF Calcul à plusieurs variables (3)

Calcul des variables multiples. On ne peut se faire créditer le 136.275 ou les anciens 136.270, 006.227, 006.228, 006.243, 013.237 ou 013.234. Préalables le 136.130 (ou 136.131 ou l'ancien 013.146) et un des 136.169, 136.170, 136.171 ou 136.173 (ou les anciens 013.149, 013.159, ou 006.126).

136.2XY Sequences and Series (3)

Introductory analysis, sequences and series. Not to be held with 136.275 or the former 136.271, 013.234, 006.237, 006.238, or 013.249. Prerequisites one of 136.169, 136.170, 136.171, 136.173 (or the former 013.149, 013.159, or 006.126). Corequisite: 136.130 or 136.131 (or the former 013.146).

136.2XYF Suites et séries (3)

Analyse, suites et séries L'étudiant ne peut recevoir de crédits pour plus d'un des cours suivants: 136.275 ou les anciens 136.271, 006.237, 006.238, 006.244, 013.249 ou 013.234. Préalables: un des 136.169, 136.170, 136.171 ou 136.173 (ou les anciens 013.149, 013.159, ou 006.126), et un des 136.120 ou 136.220. Concomitant: le 136.130 ou le 136.131 (ou l'ancien 013.146).

136.3XX Methods of Advanced Calculus (6)

Uniform convergences of series and integrals. Transformations, inverse and implicit function theorems. Vector analysis including Green's and Stokes' theorems. May not be used in an Honours program. Not to be held with 136.376 (or the former 013.340), or the former 136.375 or 013.332. Prerequisites: 136.230 (or the former 013.246), 136.2XX (or the former 136.270 or 013.239), 136.2XY (or the former 136.271 or 013.249), or consent of the department.

136.1XY Techniques of Classical and Linear Algebra 3L

To introduce a variety of practical algebraic concepts and skills necessary for the study of calculus and advanced engineering mathematics. The emphasis of this course is in the development of methodology and algebraic skill necessary for successful completion of subsequent engineering mathematics courses. This course is intended for engineering and Geophysics students only. Not to be held with 136.120, 136.130 or 136.131 (or the former 006.120, 006.144, 006.147 or 006.121, 013.128, 013.129 or 013.146). Prerequisites: a minimum grade of 60 per cent in Pre-calculus Mathematics 40S or the former Mathematics 40S (300), or a grade of "C" or better in the Mathematical Skills course taught by the Continuing Education Division.

For 2005-2006, this course will be for Engineering and Geophysics students only.

Courses to be modified:

Mathematics - Actuarial Mathematics Joint Program Revised Program Chart as follows:

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**4.12.4 Mathematics - Actuarial Mathematics Joint Program, Department Code: 136M**

The Department of Mathematics and the Warren Centre for Actuarial Studies and Research offer a joint Honours program for students wishing in-depth study in both Mathematics and Actuarial Mathematics.

[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
136.169 (B) (or 136.150 <sup>1</sup> and 136.170 <sup>1</sup> (B)), 136.130 <sup>1</sup> (B), 005.100, 005.200 (B) Plus 6 credit hours from the Faculty of Arts, which should include the required "W" course Plus 9 credit hours of electives	010.212, 005.305, 005.350 005.360, 136.220, 136.235, 136.275, 136.280	010.313, 010.323, 010.333, 010.353, 136.323, 136.371, 136.376, Plus 6 credit hours of approved electives	010.414, 136.335, 136.340, 136.475 Plus 12 credit hours of approved electives
30 Hours	30 Hours	30 Hours	30 Hours

**NOTES:**

1 136.131 may be taken in place of 136.130; 136.151, 136.152 or 136.153 may be taken in place of 136.150; 136.171 or 136.173 may be taken in place of 136.170.

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

(Letters in brackets indicate minimum prerequisite standing for further study.)

**Honours Requirements**

To enter the Honours program in Mathematics-Actuarial Mathematics, a student must have satisfied the Faculty of Science requirements for entry to the program, and have completed 005.100, 005.200, 136.130<sup>1</sup>, and either 136.169 or 136.150<sup>1</sup> and 136.170<sup>1</sup> with a minimum grade of B in each of 005.200, 136.130<sup>1</sup> and 136.169 or 136.170<sup>1</sup>.

**Recommended Electives:**

Actuarial 010.424, 010.434; Accounting and Finance 009.110, 009.220; Computer Science 074.101, 074.126; Economics 018.120, 018.245; Statistics 005.347, 005.349.

The change is:

1. 010.221 is replaced with 005.305 in Year 2 of the Joint Honours program.

2. 010.202 is deleted in Year 4 and the 9 hours of approved electives are changed to 12 credit hours.

Mathematics - Economics Joint Honours Program

**MATHEMATICS – ECONOMICS JOINT HONOURS PROGRAM** , Department Code 136E

The departments of Mathematics and Economics offer a joint Honours program for students wishing in depth study in Mathematics and Economics.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
<b>JOINT HONOURS 120 CREDIT HOURS</b>			
018.120, (or 018.121 and 018.270, 018.280, 018.122) 136.130 <sup>1</sup> , 136.150 <sup>1,2</sup> , 136.170 <sup>1,2</sup> , 005.100 <sup>3</sup> , 074.101 <sup>3</sup>  Plus 9 credit hours of electives <sup>6</sup> , which should include the required "W" course	136.220, 136.235, 136.275, 136.280  Plus 6 credit hours of approved electives <sup>6</sup>	018.370, 018.380, 018.318 <sup>7</sup> (or 005.200) <sup>3</sup> , 136.260 <sup>3</sup> , 136.323, 136.330 <sup>5</sup> , 136.340, 136.370 (or 136.371), 136.375 (or 136.376)  Plus 24 credit hours of approved Economics courses <sup>4</sup>	Plus 6 credit hours of Mathematics courses at the 300 or 400 level, which must include at least one of 136.350, 136.351, 136.360, 136.381, 136.382, or any Mathematics course at the 400 level.
30 Hours	30 Hours	30 Hours	30 Hours

**NOTES:**

<sup>1</sup> 136.131 may be taken in place of 136.130; 136.151, 136.152 or 136.153 may be taken in place of 136.150; 136.171 or 136.173 may be taken in place 136.170.

<sup>2</sup>The combination of 136.150<sup>1</sup> and 136.170<sup>1</sup> may be replaced by 136.169.

<sup>3</sup> Some courses may be taken in a different year than indicated; 005.100, 074.101, 136.260 and 018.318 (or 005.200) may be taken in Year 2.

<sup>4</sup> Of the 18 credit hours of electives in Economics in Years 3 and 4, no more than 6 credit hours may be at the 200 level (with the exception of 018.253) and at least 6 credit hours must be at the 400 level.

<sup>5</sup> 136.330, plus 3 of the 6 unallocated credit hours in Mathematics in Years 3 and 4, may be replaced by 136.335.

<sup>6</sup> Student are encouraged to consider useful courses in Computer Science and Statistics as electives.

<sup>7</sup> The prerequisite of 018.317 is waived for students in this program.

The Council on Post-Secondary Education (COPSE) has fully approved this program.

The changes are:

1. In Year 1, Economics 018.121 and 018.122 may be taken in place of 018.120.
2. FOOTNOTE 7 has been added to reflect that prerequisite course 018.317 will be waived for courses 018.318 in Year 3 or 4.
3. In Years 3 and 4, the 18 credit hours of approved Economics courses and the 6 credit hours of approved electives have been changed to 24 credit hours of approved Economics courses.

Program Changes:

Due to the renumbering and renaming of 136.270, 136.271 and 136.375 to 136.2XX, 136.2XY and 136.3XX, which was approved at the February meeting, the following programs

will be modified to reflect this change:

Actuarial Mathematics Honours program  
Biochemistry Honours and Major  
Biotechnology Honours  
Computer Science - Mathematics Joint Honours program  
Mathematics Honours and Major programs  
Applied Mathematics Major programs  
Mathematics - Actuarial Mathematics Joint Honours program  
Physics and Astronomy Honours and Major programs  
Statistics Honours and Major programs  
Statistics - Actuarial Mathematics Joint Honours program  
Statistics - Mathematics Joint Honours program

### Microbiology

Courses to be modified:

060.277 Elements of Biochemistry 1 (3)L

Change restriction from:

"Not to be held with 002.277, 060.236 (002.236) (or the former 060.235, 002.235, 060.240 or 002.240)."

to:

"Not to be held with 002.277, 060.236 (002.236)(or the former 060.235, 002.235, 060.240 or 002.240) or 002.286."

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### Honours Cooperative Option

The course and grade requirements for entry to this option are the same as those required for entry to the regular Honours program, as indicated in the chart. Students are required to complete the first and second year requirements of the program and 060.341 before they begin their first employment term. Students should refer to the general faculty regulations for B.Sc. (Honours) Cooperative Options in Section 3.6.

### Four Year Major Cooperative Option

The course and grade requirements for entry to this option are the same as those required for entry to the regular Major program. In this program, 060.301 and 060.341 are required in Year 3. Students are required to complete the first and second year requirements of the program and 060.341 before they begin their first employment term. See the general faculty regulations for B.Sc. (Major) Cooperative Option in Section 3.4.

The changes are:

1. Students are required to complete the first and second year requirements of the

program and 060.341 before they begin their first employment term.

### Physics and Astronomy

Courses to be deleted:

016.180            General Astronomy            6L

Courses to be introduced:

016.1XX            General Astronomy 1: Light, Stars and Planets            3L

The topics covered in this course outline the properties of stars and planets that can be observed and the physics necessary to interpret these observations. It includes a brief introduction to galaxies and cosmology. Using lectures and laboratory sections, it provides an astronomy background and introduction to the scientific method. It ranges from introductory physical background to considering current research problems. This course is mainly descriptive, taught at a qualitative level, with simple arithmetic and trigonometry used frequently. Not to be held with the former 016.180 or 013.121.

016.1YY    General Astronomy 2: Exotic Stars, Galaxies and Cosmology            3L

This course extends the material from General Astronomy 1, increasing the student's physical understanding of topics like black holes, galaxies, and the expanding universe. Topics range from the Big Bang to the formation of neutron stars. A significant amount of simple arithmetic and trigonometry is used to provide the insights into physical background and to illuminate current research problems. Labs and observing sessions are used to teach scientific method. Not to be held with the former 016.180 or 013.121. *Prerequisites:* Pre-calculus Mathematics 40S or equivalent, and 016.1XX, or consent of department.

016.1ZZ    Perspective on the Universe            3L

This general interest course is a qualitative course on the concepts and discoveries in astronomy. Topics may vary from year to year and could include "Life on Other Worlds" or "Astronomy in the News". These themes are used to give the student a qualitative Astronomy background ranging from planets and stars to galaxies and cosmology. A few special sessions at Glenlea Observatory and the Lockhart Planetarium introduce the student to scientific method. Although simple arithmetic and trigonometry will be used occasionally, this is a descriptive course.

Courses to be modified:

016.207    Observational Astronomy            6L

Change prerequisites from:

"016.103(B) or 016.107(C)."

to:

"016.103(B) or 016.107(C), or one of 016.1XX or 016.1ZZ."

### Statistics

Statistics - Actuarial Mathematics Joint Program Revised Program Chart as follows:

**4.16.4 Statistics - Actuarial Mathematics Joint Program, Department Code: 005A**

The Department of Statistics and the Warren Centre for Actuarial Studies and Research offer a joint Hon for students wishing in depth study in Statistics and Actuarial Mathematics.

<b>Entry Requirements:</b>	<b>Recommended Electives:</b>
To enter the Honours program students must have satisfied the Faculty of Science requirements for entry to the program, and have completed 005.100, 136.130 and either 136.169, or 136.150 and 136.170 or any equivalent with a minimum grade of "B" in each of 005.100 and 136.169 (or a "B" average in 136.150 and 136.170).	010.353, 010.405, 010.406, Accounting and Finance 009.110, 009.220, 009.341; Business Administration 027.200; Economics 018.120, 018.245.

UNIVERSITY 1	YEAR 2	YEAR 3	YEAR 4
<b>JOINT HONOURS<sup>3</sup> 120 CREDIT HOURS</b>			

136.169 (or 136.150 <sup>1</sup> and 136.170 <sup>1</sup> ), 136.130 <sup>1</sup> Plus 9 credit hours of electives	005.200 <sup>4</sup> , 010.212, 136.275 (or 136.270 and 136.271), 136.230 <sup>5</sup> Plus 15 approved credit hours	005.305, 005.347 and 005.348 (or 005.312 and 005.313 <sup>6</sup> ), 005.350, 005.360, 010.313, 010.323, 010.333, 010.353 Plus 3 approved credit hours	005.349, 005.414, 005.452, 005.453, 010.414, 010.415, 010.424 or 010.400, 010.434, 027.215, 074.126
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The following courses must be taken in University 1 or Year 2

074.1012, 005.100 (B)

6 credit hours from the Faculty of Arts, which should include the required "W" course

30 Hours	30 Hours	30 Hours	30 Hours
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**NOTES:**

1 136.131 may be taken in place of 136.130; 136.151, 136.152 or 136.153 may be taken in place of 136.150; 136.171 or 136.173 may be taken in place of 136.170.

2 074.101 may be taken in University 1 or later in the program.

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

4 005.200 may be taken in University 1 or Year 2.

5 136.235 may be taken in place of 136.230.

6 005.312 and 005.313, with an average grade of "B" and a minimum grade of "C+" on each course, may be used in lieu of 005.347 and 005.348.

(Letters in brackets indicate minimum prerequisite standing for further study.)

The changes are:

1. 010.221 and 010.202 are deleted from Year 2 and the number of additional approved credit hours is increased to 15 credit hours.
2. 010.353 is added to Year 3 and the number of additional approved credit hours is reduced to 3 credit hours.
3. 010.415 is added to Year 4 and the additional approved credit hours required are deleted.
4. 010.400 is added as an alternative to 010.424 in Year 4.
5. 010.353 and 010.415 are deleted as recommended electives in the program.

#### Zoology

Old courses to be formally deleted:

022.101, 022.110, 022.111, 022.120, 022.122, 022.131, 022.250, 022.255, 022.331, 022.335, 022.336, 022.447, 022.450, 022.474

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

Faculty of Human Ecology – Department of Clothing and Textiles

#### DELETIONS:

064.329 Evolution of Western Dress (3)

064.332 History of Textiles (3)

This course will be renumbered as 200-level course 064.2HH (the former 064.332).

The content will not change and students in the Faculty of Science will continue to be able to hold it for credit.

064.436 History of Canadian Dress (3)

064.122 Dynamics of the Fashion Industry (3)

#### ADDITIONS:

064.1AA Textiles for Living (3)L

This course covers the fundamental knowledge of textiles in a product development context. It includes properties of fibers, yarns, and fabrics; characteristics of natural and manufactured fibers; chemical structure of the most commonly used natural and manufactured fibers for apparel and non-apparel end uses; woven, knitted, and non-woven structures; and dyeing and printing. Not to be held with the former 064.102

064.1BB Textiles, Products, and Consumers (3)

This course covers the structure and characteristics of the natural fiber sectors; the manufactured fiber sectors; downstream industries which transform natural or manufactured fibers into intermediate goods; the manufacturing industry which

transforms intermediate supplies to final products; and the retailing industry which distributes final textile products to consumers or organizational buyers. Not to be held with the former 064.122

064.2BB Textiles for Non-Apparel End Uses (3)L

Product development theories from the perspectives of the engineering and management professions will form the basis for examining the process of developing textile fibers, fabrics and products for the industrial, home furnishings, and healthcare sectors. Industrial uses of textiles will include the automotive industry, the military, and geotextiles. End uses for the home furnishings sector will include textiles for interiors of residential homes and commercial buildings. End uses for the healthcare sector will include textiles or textile products for rehabilitation, protection from bacteria, healing of wounds, and implantable textiles. Assessment of selected fabric properties such as strength, flammability, colourfastness and air permeability will be introduced.

*Prerequisites:* a minimum grade of "C" in 064.1AA, 064.1BB, and 3 credit hours of 100-level chemistry. Not to be held with the former 064.102 and 064.122

Effective for the 2006 - 2007 Regular Session.

064.3PP Textiles for the Healthcare Sector (3)L

This course covers the recent developments of a range of technical textiles for the healthcare sector, including implantable textiles, barrier fabrics, and smart textiles.

*Prerequisites:* 064.2BB, 028.205 (or any 200 or 300 level research methods course) and 002.222.

Effective for the 2007 – 2008 Regular Session.

Department of Family Social Sciences:

DELETION:

062.114 Family Social Sciences: Relationships (3)

ADDITION:

062.XXX Family Issues Across the Lifespan (3)

The above course is being renamed and renumbered, but the course content will not change

Faculty of Agricultural and Food Sciences – Department of Plant Science

ADDITIONS

039.454	Plant Genomics	(3)L
039.3XX	Principles of Plant Pathology	(3)L
039.4XY	Research Methods in Plant Pathology	(3)L
039.4YZ	Molecular Plant-Microbe Interactions	(3)L

The above courses have been introduced (039.454) or are being proposed for introduction in the Department of Plant Science. They are being added to the list of courses acceptable for credit in the Faculty of Science at the request of the Department of Plant Science and the Department of Botany.

Course Change

## Biology 071.111 Health and Health Professions

At the request of University 1, and based on favourable SEEQ results, 071.111 will be added to the list of courses offered regularly by the Faculty of Science.

### Honours Regulations

#### Proposed Regulations

2005-2006

3.5 Four Year Honours Degree:

B.Sc. (Honours) and B.C.Sc. (Honours)

The Honours programs in the Faculty of Science are the most heavily concentrated programs offered. These programs lead most directly to graduate study and are in most cases prescribed extensively by the departments. A student is required to pursue this degree full-time and may be required to achieve higher grade standards than in other degree programs. The programs are regarded as professional training.

Students graduating from the Honours program in Computer Science receive the degree designation Bachelor of Computer Science (Honours), also noted as B.C.Sc. (Honours).

A student electing an Honours program will normally begin Honours work in second year and must meet the entrance requirements set out below. Honours work will consist of three years of study in prescribed courses beyond the first year and will lead to the B.Sc. (Honours) or the B.C.Sc. (Honours).

To be eligible for any award granted exclusively on the basis of academic performance, a student normally must be enrolled in 100% of a full program as defined by the department. See Honours Cooperative Option, for additional regulations.

Students must complete the university written English and Mathematics requirement as described in the chapter, General Academic Regulations and Requirements, of this Calendar.

As of the 1999-2000 regular session, students admitted to Honours programs must complete six credit hours from the Faculty of Arts. Because many Honours programs in the Faculty of Science do not have room for electives in Years 2, 3 and 4 of the programs, these six credit hours, including the three credit hours of written English, should be completed in University 1.

#### **Entrance to Honours**

To enter an Honours degree program in Year 2, a student must have a grade of "B" or better in at least one introductory course designated by the department(s), **and a GPA of not less than 2.5 on all courses completed at the end of Year 1 (minimum of 24 hours).**

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

#### Continuation in Honours

A minimum Grade Point Average of **2.50** is required **each assessment period (once per year each May)**. Students must meet all individual course prerequisites for further study. Departments may designate courses within the Honours program in which students are required to obtain a grade above "C".

**NOTE:**

The continuation requirements of the Honours programs in Biochemistry, Biotechnology, Botany, Chemistry, Computer Science, Ecology, Genetics, Microbiology, Physics and Astronomy, Statistics and Zoology differ somewhat from above. See the sections of these departments in this chapter for applicable regulations.

Students who do not meet the minimum requirement will be required to withdraw from the Honours program.

**Students who accumulate more than 6 credit hours of "F's" per regular session (or 3 credit hours per Coop term) or more than a maximum of 18 credit hours of "F's", including "F's" prior to entry, will be required to withdraw from Honours.**

Honours students must complete a minimum of **18 credit hours** during each regular session. (**9 credit hours per Coop term**).

**Program Approval**

The department must approve a student's Honours program each session. Students must also obtain departmental approval for any and all revisions to their program.

**Residence Requirement for Honours Students**

A student must successfully complete a minimum of 60 credit hours (10 full courses) at the University of Manitoba. The courses used to satisfy the requirement must be acceptable for credit in the Faculty of Science. Residency requirements apply both to first and second degree students.

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To graduate with an Honours degree, a student must obtain a sessional Grade Point Average of **2.50** or higher in Year 4. Also, to qualify for the Honours degree, a student must have a minimum **2.50** Cumulative Grade Point Average at the point of graduation, that is, on all courses taken in the degree.

**NOTE:**

The graduation requirements of the Honours program in Biochemistry, Biotechnology, Botany, Chemistry, Computer Science, Ecology, Genetics, Microbiology, Physics and Astronomy, Statistics and Zoology differ from the above. See the departmental sections of this chapter for clarification.

**Withdrawal from Honours**

A student who deletes a course or courses from the Honours program will be reverted to the four year Major program or a General degree program unless the Honours department has authorized the student's continuation in Honours. All Honours programs must contain a minimum of **18 credit hours** during each regular session.

Honours students reverting to an alternative degree program must fulfil all academic requirements of that degree.

## Recognition of Academic Merit

### Dean's Honour List

Students enrolled in 24 credit hours or more who achieve a sessional Grade Point Average of 3.50 or higher during a regular session will be placed on the Dean's Honour List. Where the standard department program specifies a number of credit hours in excess of 30, the assessment for the Dean's Honour List shall be based on completion of at least 80 per cent of that specified number of credit hours during the regular session. See Regulations Applicable to all Programs.

### First Class Honours

To graduate with First Class Honours students must achieve a final cumulative grade point average of 3.5.

The term "First Class Honours" will appear on both the parchment and the student's transcript of marks.

### Double Honours Programs

Double Honours programs may be available as specified under departmental headings. Other programs may be arranged in consultation with the departments concerned.

## Faculty of Social Work

Courses to be modified:

### 047.420 Fields Focus of Social Work Practice (6)

A seminar for critical examination of social work theory, values, policy and skills in the context of a field of focus of practice. The course integrates policy with practice at micro, meso and macro levels.

Students must select two seminars from several which are offered. These may vary from year to year and are organized to cover various fields or focus of practice. For students admitted after 1993-1994.

Prerequisites: 047.131, 047.208, 047.209 and 047.314; 6 credit hours corequisite with 047.315 and an additional 6 credit hours corequisite with 047.412. Students cannot hold credit for both 047.415 and 047.420.

## **NET CHANGE IN CREDIT HOURS: 0 HOURS**

### University 1

Courses to be deleted: from the University 1 course list:

064.122	Dynamics of the Fashion Industry	(3)
062.1 14	Family Studies: Relationships	(3)

Courses to be added to the University 1 course list:

064.1AA	Textiles for Living	(3)L
064.1BB	Textiles, Products, and Consumers	(3)
062.1AA	Family Issues Across the Lifespan	(3)
076.1XX	Food Safety Today and Tomorrow	(3)

## By-Election of a Senate Representative to the Board of Governors

### General

Dean Anthony Secco, an elected Senate member of the Board of Governors, has tendered his resignation from the Board, effective December 7, 2004. An election is required for a representative to complete his term, which will end on May 31, 2006.

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

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

### Election of Senate Representatives to the Board of Governors

1. The following resolution was approved by Senate on June 4, 1997: "*That Senate rescind its resolution of March 9, 1976 reserving one of its seats on the Board of Governors for a student Senator*".
2. The following resolution was approved by Senate on June 4, 1997: "*That in the future, as openings occur, Senate assure itself that at least one of the three individuals who represent it on the Board of Governors has no administrative responsibilities greater than those of department head at the time of election*".
3. Members-at-large

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

4. Students and *Ex Officio* Members

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

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

5. Present Senate representatives on the Board:

Professor H. W. Duckworth (Science)	2005
Professor A. Secco (Graduate Studies)	2006
Professor J. Hoskins (St. John's College)	2007
6. Not eligible for election are: the Chancellor; the President; and the Board representative on Senate, Mr. G. Lane.
7. Terms of Senate representatives on the Board are normally for three years. In this case the term will end on May 31, 2006.

**Procedures**

1. Nominations for the position shall be received from the floor.
2. Senators shall vote for no more than one candidate on the ballot provided.
3. The candidate receiving the largest number of votes shall be declared elected for a term ending May 31, 2006.
4. In the event of a tie, the question shall be resolved by another ballot involving those candidates who have tied.

/jml

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**ACCREDITATION  
REPORT  
2004**

Program Accredited/Eligible for Accreditation	Locales Included	Accrediting Agency	Jurisdiction of Accrediting agency	Status of Accrediting Agency	Start Date of Present Accreditation	End Date of Present Accreditation	Status of Accreditation (full or provisional)	Costs	Agency Paying
<b>AGRICULTURAL AND FOOD SCIENCES</b>									
Biosystems Eng	U of M	Canadian Engineering Accreditation Board, Canadian Council of Professional Engineers	Canada: reciprocal agreement with USA	Professional		2007	full		
Food Science	U of M	International Food Technologists (USA)	Canada and USA	Professional		2003 extended pending review	full (5 years) Curriculum submitted for review- accreditation visit Fall 2004		International Food Technologists
Food Science	U of M	Canadian Institute of Food Science and Technology, Ottawa	Canada	voluntary association: Incorporated under Federal Legislation		open ended	full		
B.Sc. Agriculture (degree) Majors -Agronomy -Animal Systems -Plant Systems	U of M	Agricultural Institute of Canada	Canada	Professional		2009	Charter accredited 1998 full/2002		
B.Sc. Agribusiness (degree) - Majors -Agribusiness -Agricultural Ec.	U of M	Agricultural Institute of Canada	Canada	Professional		2009	full		
B.Sc. Agroecology (degree)	U of M	Agricultural Institute of Canada	Canada	Professional		2009	full		
B.Sc. Biosystems Eng (degree)	U of M	Agricultural Institute of Canada	Canada	Professional		2005	provisional		
B.Sc. Food Science	U of M	Agricultural Institute of Canada	Canada	Professional		2009	full		

Programs Accredited/eligible for Accreditation	Locales Included	Accrediting Agency	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Present Accreditation	End Date of Present Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>ARCHITECTURE</b>									
M.Arch. Program (Dept. of Architecture)	U of M	Canadian Arch. Certification Board (CACB)	National and International Reciprocity with NAAB (USA)	National Membership responsible for certification and accreditation		2009	full 5 years	\$500 annual mtce, on-site costs of visiting team \$15,000	U of M
City Planning	U of M	Cdn Institute of Planners (CIP)	National, Provincial & International	Mandatory Professional Association		2006	full	\$100 annual fee & site costs of approx. \$4000 for visiting team every 5 yrs.	U of M
Landscape Architecture **	U of M	Cdn. Society of Landscape Arch.	National & International**	Mandatory National Membership through Licensing Registration		2005	full	\$1000 every year, plus site visit costs of \$15,000	U of M
Interior Design	U of M	Fdn. For Interior Design Education Research	International	Foundation recognized by U.S. Dept. Education	Interim accreditation 2003 for MID program	2006	full 5 years + site visit	\$1,500 U.S. annual fee \$400 application fee \$7,500 U.S. site visit costs (plus \$7,000 to mount the accreditation)	U of M

\*\* reciprocal recognition by LA AB (a part of ASLA) giving right after 3 years experience to take LARE exam

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Present Accreditation	End Date of Present Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>ARTS</b>									
Clinical Psychology	U of M	American Psychological Association (APA)	International	Professional	2002	2007	full	\$1,000 US Funds	U of M
		Canadian Psychological Association (CPA)	National	Professional	2001-02	2006-7	full	\$2,172 + GST (site visit amount isn't included until the next site visit in 2006-07 approx.)	U of M

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Present Accreditation	End Date of Present Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>DENTISTRY</b>									
Undergraduate	U of M	Commission on Dental Accreditation of Canada	National	federal legislation		2008	full	\$ <sup>1</sup>	U of M
Periodontology	U of M	Commission on Dental Accreditation of Canada	National	federal legislation		2008	full		U of M
Orthodontics	U of M	Commission on Dental Accreditation of Canada	National	federal legislation		2008	full		U of M
Oral Surgery	U of M	Commission on Dental Accreditation of Canada	National	federal legislation		2008	full		U of M
Dental Internship Program	H Sc	Commission on Dental Accreditation of Canada	National	federal legislation		2008	full		H S
School of Dental Hygiene	U of M	Commission on Dental Accreditation of Canada	National	federal legislation		2008	full		U of M
Graduate Programs Prosthodontics	U of M	Commission on Dental Accreditation of Canada	National			1986	not currently offered		

In January, 2003 we are expecting accreditation approval without further reporting requirements.

<sup>1</sup>Total cost is \$3,782 annually on a 7-year accreditation site visit cycle.  
 Note: Accreditation follows a 7-year cycle except for the Dental Internship Program that follows a 5-year cycle  
 Note: A 1-year extension for accreditation requested and received from Canadian Dental Association

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Date to Which Program Is Accredited	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>EDUCATION</b>								
"Accreditation" is by way of regulations specified by Manitoba Education, Citizenship and Youth								

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Present Accreditation	End Date of Present Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>ENGINEERING</b>									
Civil Eng. Electrical Eng. Mechanical Eng. Biosystems Eng. Computer Eng. Manufacturing Eng.	U of M	Canadian Engineering Accreditation Board Cdn Council of Prof. Engineers	National	Professional	July 1, 2001	June 30, 2007	full 6 years	no direct	U of M and Canadian Council of Professional Engineers

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agency	Status of Accrediting Agency	Jurisdiction of Accrediting Agency	Start Date of Present Accreditation	End Date of Present Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>HUMAN ECOLOGY</b>									
Human Nutritional Sciences - Dietetics Program	U of M	Dietitians of Canada	Professional <sup>2</sup>	National	June 2002	2009	full	\$650 (listing fee)	U of M
Family Studies-Child Studies Concentration	U of M	Child Care Education Program Approval Committee (CCEPAC)	Provincial	Provincial		2005	full	no cost	
B. H. Ecology - all program	U of M	Manitoba Association of Home Economists Box 582 Winnipeg, MB	Professional	Provincial (Chepter H70 Professional Home Economists Act)	March 1990	no end date	full	no cost	

<sup>2</sup>The dietitians of Canada (DC) accredits all dietetic internship programs in Canada; successful completion of an internship is required for members in the DC and in all provincial associations. The provincial associations and the rights to practice are governed by provincial acts. The DC prescribes academic qualifications for admission to an accredited internship program. The Professional Standards Council of the DC regularly reviews the university programs in dietetics and provides the institutions offering internships with a list of the universities and colleges whose graduates meet the academic qualifications.

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agency	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Accreditation	End Date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
LAW									
Undergraduate curriculum, term, length, resources	U of M	Law Society of Upper Canada & Law Societies (or equiv.) in all other provinces and territories on basis of standards approved by L.S.U.C. and the National Federation of Law Societies of Canada	In each province or territory	statutory governing body of the profession (usually called a "Law Society")		Indefinite	full	nil	nil

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Accreditation	End Date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>ASPER SCHOOL OF BUSINESS</b>									
Management (voluntarily requested))	U of M	AACSB International - The Association to Advance Collegiate Schools of Business	International	Professional	1999	2009	full	\$9,000 US	U of M
Asper Business School B.Comm (Hons) Accg. Major	U of M	CMA Canada The Society of Management Accountants of Canada	National	Professional/ educational	2001	2006	full	n/a	n/a

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Accreditation	End Date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>MEDICINE</b>									
Undergraduate Curriculum	U of M	Liaison Committee on Medical Education, AMA/AAMC	International	voluntary		2003-2004 (Will receive formal accreditation results in October/ November 2004)	full		Accred. Agency
Family Practice Residency Program	U of M & teaching hospitals	College of Family Physicians of Canada	National	voluntary		2008	full		Accred. Agency
Postgraduate Programs	U of M & teaching hospitals	Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008			Accred. Agency
Anesthesia		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full		
Clin. Immunology & Allergy (Adult) (Pediatric)		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full full		
Community Medicine		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full		
Geriatric Medicine		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full/inactive		
Hematology (Adult) (Pediatric)		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full/reactivated full		
Infectious Disease (Adult) Infectious Disease (Pediatrics)		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full full/inactive		
Internal Medicine		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	provisional	Waiting outcome of special survey	
Neurology (Adult)		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	provisional	Waiting outcome of special survey	

Palliative Medicine (conjoint with CFP/RCPPSC Program)		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Nuclear Medicine		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Provisional	
Physical Med. & Rehabilitation		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Psychiatry		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Pediatrics		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Respiratory Medicine - Adult		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Anatomical Pathology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
General Pathology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Medical Microbiology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Medical Oncology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full/reactivated	
Neonatal - Perinatal Med.		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
General Surgery		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Obstetrics & Gynecology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Orthopedic Surgery		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Plastic Surgery		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	provisional	

Urology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full	
Radiation Oncology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full	
Cardiac Surgery		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full	
Thoracic Surgery		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full	
Neurosurgery		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Provisional	Waiting results of special survey
Vascular Surgery		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full	
Diagnostic Radiology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full	
Adult Cardiology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	provisional	
Rheumatology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full	
Nephrology - Adult		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full	
Endocrinology & Metabolism (Adult)		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Otolaryngology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Gynecologic Oncology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Maternal Fetal Medicine		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Critical Care Medicine		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	
Medical Genetics		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Full	

Emergency Medicine		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	Provisional- waiting for results of special survey		
Gastroenterology		Royal College of Physicians & Surgeons of Canada	National	Federal Charter		2008	full		
Fellowships in Clinical Genetics Medical Genetics Cytogenetics Molecular Genetics	Medical College U of M & Health Sciences Centre	Canadian College of Medical Geneticists	National	voluntary		2005	full	\$1,500	U of M/HSC
Predoctoral Internship Training Program in Clinical Psychology	U of M & teaching hospitals	Canadian Psychological Assoc./American Psychological Assoc.	National	voluntary		June 2008	full	\$2,444-yr 2,472/yr of site visit	U of M/HSC
School of Medical Rehabilitation									
Department of Occupational Therapy	U of M	Canadian Association of Occupational Therapists	National	voluntary		2005	5 year	\$2,794 yr \$5,588 yr of visit	U of M
Department of Physical Therapy	U of M	Accreditation Council Canadian Physio Therapy Academic Programs	National	voluntary		2008	continuing	\$6,000/yr	U of M
Department of Respiratory Therapy	U of M	Council on accreditation of Respiratory Therapy Education	National	mandatory		2008	full	\$2580/yr	U of M

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Accreditation	End Date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>NURSING</b>									
B.N.	U of M plus clinical facilities	Canadian Association of Schools of Nursing	national	professional		Dec 2003 <sup>3</sup>	full	\$12,000 est	U of M
B.N.	U of M plus clinical facilities	College of Registered Nurses of Manitoba	provincial	professional	Dec 2002	Dec 2006	full	N/A	

<sup>3</sup>Tentatively slated for a Level One Accreditation (CASN) in the fall of 2006

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Accreditation	End Date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>PHARMACY</b>									
Bachelor of Pharmacy degree program	All Pharmacy facilities in Canada	Canadian Council for Accreditation of Pharmacy Programs	Canada	Professional	2003	2007	full	\$6,063/yr	Faculty
					Interim Report due 1 Apr 05,			next site visit fall of 2006	

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Accreditation	End Date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>PHYSICAL EDUCATION &amp; RECREATION STUDIES</b>									
Athletic Therapy (BESS)		CATA	National	Professional	2002	2006	4 year full	\$200 applic(1) \$250/yr \$2000/site visit (1)	Phys Ed & Rec Studies (U of M)
Physical Education/ Kinesiology (Intend to seek accreditation in the 2002 year)		Canadian Council of University Physical Education and Kinesiology Administrators (CCUPEKA)	National	Professional			application being prepared - near completion	applic fee \$1200 applic w/site visit \$1600 w/site visit	PHYS Ed & BESS
Recreation Studies		National Recreation & Parks Assoc. recognized by the Commission on Recognition of Post-Secondary Accreditation	North America	Professional			early stage of preparation		

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Accreditation	End date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>SCIENCE</b>									
Computer Science - Honours Computer Sc. - Honours Cptr Sc. With Co-op - Major Computer Sc. - Major Cptr Sc. With Co-op	U of M	Computer Science Accreditation Council	National		April 2002	March 31, 2007	full		
Chemistry-Honours & 4-yr Major <sup>4</sup> note	U of M	Canadian Society for Chemistry	National	Professional		June 2007	full	c.\$2000	

<sup>4</sup>Also Included Biochemistry Joint Honours and 4-yr. Major

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start of Accreditation	End Date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>SOCIAL WORK</b>									
Bachelor of Social Work	U of M plus Access Programs • 2 Distance Educ.	Canadian Association of Schools of Social Work	National	voluntary		2007	full	\$3000 fee plus expenses of 3-person team for on-site visit	U of M
Master of Social Work	U of M plus one-time offerings to cohorts in MB	Canadian Association of Schools of Social Work	National	voluntary		2007	full	\$3000 fee plus expenses of 3-person team for on-site visit	U of M
* Access Programs-Winnipeg Education Centre and the School of Social Work at Thompson									

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Accreditation	End Date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
<b>STUDENT AFFAIRS</b>									
Counseling Service	U of M	International Association of Counseling Services (IACS) <sup>5</sup>	International	voluntary		Sep 30/02	full	\$750 US	U of M
	U of M	American Psychological Association (APA)	International	voluntary		Aug 31/05	full	\$1000 US	U of M
	U of M	Canadian Psychological Association (CPA) <sup>6</sup>	National	voluntary		Aug 31/05	full	\$2172.10 Cdn	U of M
* Joint CPA/APA accreditation for internship training program									

<sup>5</sup>Scheduling Site Visit (2005/06)

<sup>6</sup>Scheduling Site Visit (2005)

Programs Accredited/ Eligible for Accreditation	Locales Included	Accrediting Agencies	Jurisdiction of Accrediting Agency	Status of Accrediting Agency	Start Date of Accreditation	End Date of Accreditation	Status of Accreditation (Full or Provisional)	Costs	Agency Paying
SCHOOL OF ART									
	none								
SCHOOL OF MUSIC									
	none								

Report of the Senate Committee on Awards respecting Awards - October 27, 2004

Preamble

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

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

At its meeting on October 27, 2004, SCOA reviewed one new award offer and reports as follows.

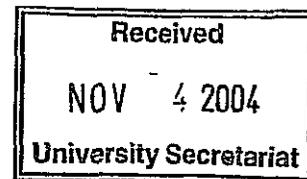
Observation

On behalf of Senate, the Senate Committee on Awards approved and recommends that the Board of Governors approve one new award as set out in Appendix "A" of the Report of the Senate Committee on Awards (dated October 27, 2004). These award decisions comply with the published guidelines of November 3, 1999, and are reported to Senate for information

Respectfully submitted,



Professor R. Baydack, Chair  
Senate Committee on Awards



APPENDIX "A"

OFFERS

RANA-MEDICAL SCHOLARSHIP

RANA-Medical has offered to provide an annual scholarship in the School of Medical Rehabilitation. RANA-Medical is a Manitoba company that focuses on community based respiratory services, including: Oxygen Therapy, Sleep Apnea Diagnostic and Treatment Services and Asthma Education. RANA-Medical also pioneered the use of on-site oxygen production technology for acute care hospitals. The first award will be offered in 2004.

A scholarship, valued at \$1,000, will be offered to a student who:

- (1) is enrolled in the third year of the Respiratory Therapy Program at The University of Manitoba's School of Medical Rehabilitation;
- (2) has achieved a minimum cumulative grade point average of 3.5;
- (3) has demonstrated excellent communication and interpersonal skills as judged through classroom and clinical experience and activities;
- (4) has demonstrated active interest and involvement in community based health care.

The recipient may also be offered a four-month paid summer position (May to August) with RANA-Medical following completion of the third year of the program.

The selection committee will be the Awards Committee of the Department of Respiratory Therapy and will include a representative of RANA-Medical.



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UNIVERSITY  
OF MANITOBA

Office of the President

November 5, 2004

**TO:** Dr. Mark Whitmore, Dean, Faculty of Science  
**FROM:** Dr. Robert Kerr, Vice-President (Academic) & Provost  
**SUBJECT:** **Joint Honours Program in Computer Science and Physics and Astronomy**

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At its meeting of 15 October 2004, the Council on Post-Secondary Education approved our proposed Joint Honours Program in Computer Science and Physics and Astronomy. You and your colleagues are to be congratulated.

Because this program requires no additional resources, I am pleased to authorize its immediate implementation.

RK/sc

cc Dr. E.J.E. Szathmáry  
Dr. Richard Lobdell  
Neil Marnoch  
✓ Jeff Leclerc

## PRESIDENT'S REPORT: December 1, 2004

My last report to Senate was submitted for its meeting on October 6, 2004. Part A of this report is organized into sections on General, Academic, Research, Administrative, and External matters. Part B contains a list of significant external engagements during the time period of this report.

### I. GENERAL

#### 1. Regional Economic Impact Analysis

The Regional Economic Impact Analysis for the University of Manitoba, produced by PriceWaterhouseCoopers was released on October 26, 2004. The study assesses not only economic impact (in fiscal 2003), but also cultural contributions to the city and the province. An update pertaining to economic impact only in fiscal 2004 was also provided. In addition to using input-output models based on Statistics Canada models, interviews were conducted with faculty members, administrative officers, and key stakeholders. Highlights of the two studies include:

- In fiscal 2004, more than \$1.2 billion in province-wide economic activity was stimulated by the University of Manitoba.
- In addition to being an educational and research facility, the University is a significant community resource providing social and cultural enrichment, promoting sports and physical activities and promoting health and wellness. As well the University is a catalyst for economic growth and is a pillar of the local economy.

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- 77,514 graduates live in Manitoba, including, for example, 63% of Manitoba's practicing engineers. Over 90% of the I.H. Asper School of Business graduates are employed in various positions in the Province.
- In fiscal 2003, \$136 million in taxes in Winnipeg, or \$158 million province wide were generated from economic activity arising from the University's expenditures in the city and province, respectively.
- In fiscal 2004, in addition to almost 6,700 employed at the University, an additional 4,468 full-time, full-year jobs were created in Manitoba because of the University's presence.
- In fiscal 2003 the University hosted approximately 114,000 visitors to Manitoba, whose expenditures province-wide were estimated at \$27 million. The stimulus of their spending on the local economy yielded

more than \$7 million in taxes, of which close to \$6 million was generated within Winnipeg itself.

- The University attracted 5141 students from outside Winnipeg in fiscal 2003, whose annual spending in the city is estimated at \$44 million.
- Fourteen (14) spin-off companies, whose origins - ranging from “completely” to “at least in part” - are attributed to the University, employ approximately 2100 people.
- In fiscal 2003 the University had 113 patents for 37 technologies (7<sup>th</sup> among Canadian universities) and earned \$2 million annually from 77 licenses ( 6<sup>th</sup> among Canadian universities).
- In fiscal 2004, nearly \$85 million in research and special projects expenditures generated \$136 million in gross output in Manitoba, of which \$117 million was in the city of Winnipeg.

The complete study is available at  
[http://umanitoba.ca/admin/vp\\_admin/REI\\_Analysis\\_2004.pdf](http://umanitoba.ca/admin/vp_admin/REI_Analysis_2004.pdf)

## **2. November 1, 2004 Enrolment**

The official reporting date for student enrolment data to Statistics Canada is November 1. Total enrolment stands at 27,631, an increase 4.0% over November 1, 2003, or an additional 1,059 students. This brings the University to its highest enrolment ever, exceeding last year's record. Undergraduate enrolment is up 3.9% to 23,935 while the graduate enrolment has increased by 4.8% to 3,260 students. The international student population increased by 34.1% from 1,718 to 2,304 students, representing 8.3% of the student body, with three-quarters of international students registering in undergraduate programs.

## **3. Estimates Meeting**

Members of the Council on Post Secondary Education (COPSE) visited the University on October 20, 2004 to review the estimates of operating and capital requirements for 2005/2006. Representing the University were Mr. Wayne Anderson, Chair of the Board of Governors, the President, and the Vice-Presidents. I began the meeting by providing an overview for the estimates, and commenting on the questions of accessibility and tuition fee rates. The Vice-Presidents then outlined some challenges in their portfolios, and I then summarized the estimates submissions. There were questions raised following the presentations, and overall the presentation and the submission appeared to be well received. At the meeting, we “welcomed back” Mr. Don Robertson as Chair of COPSE.

He had taken leave from his membership on Council to assume the position of the Chair of the implementation group for University College of the North.

#### 4. Maclean's Survey

The results of the *Maclean's 2004 Ranking of Universities* placed the University 15 out of 15 medical-doctoral universities. This ranking, while disappointing, is unlikely to change much given the methodology and the focus of the *Maclean's* survey. The following are highlights pertaining to the University:

- In the average entering grade category, Manitoba ranked 22<sup>nd</sup> out of 47 universities at 83.1%; however, this placed Manitoba 14<sup>th</sup> out of a 15 medical-doctoral universities (Dalhousie is 13<sup>th</sup> at 84.4%, Calgary is 15<sup>th</sup> at 82.6%, while McGill is 1<sup>st</sup> at 89.3%)
- In terms of the proportion of first year students with an entering grade of 95% or higher, Manitoba ranked 3<sup>rd</sup> of the 47 universities at 6.8% (UBC and Queen's were tied 1<sup>st</sup> at 11.6%, Saskatchewan was 2<sup>nd</sup> at 11.1%). *Maclean's* does not include this measure in the calculation of a university's overall rank.
- In terms of the proportion of first years students admitted with grades below 70%, Manitoba ranked 1<sup>st</sup>. *Maclean's* does not include this measure in its calculation of a university's overall rank. The following observations apply to the 14 other medical-doctoral universities:
  - None admitted with marks below 75% (McMaster, Queen's, Western)
  - < 1.0 % admitted with marks below 75% (McGill, Montréal, Toronto, UBC)
  - None admitted with marks below 70% (Dalhousie, Ottawa, and the 7 above)
  - < 1.0% admitted with marks below 70% (Alberta, Calgary, Laval, Sherbrooke, [UBC also admitted 0.1% below 70%])
  - < 2.0% admitted with marks below 70% (Saskatchewan)
  - < 6.0% admitted with marks below 70% (Manitoba)
- Manitoba ranked 1<sup>st</sup> among medical-doctoral universities and 12<sup>th</sup> among the 47 universities in "value-added" - the degree to which universities assist students to graduate within the time expected on admission. *Maclean's* does not include this measure in the calculation of a university's overall rank.
- Manitoba students were ranked 10<sup>th</sup> among the 15 medical-doctoral universities in the number of national awards received.
- Manitoba's performance on the 24 factors considered by *Maclean's* was the following:
  - unchanged from the rank attained in 2003 on 9 factors (average entering grade, %

admitted with 75% or more, national student awards, faculty with PhDs, medical/science grants received, total library holdings, holding per student, library expenses, reputation). These factors carry a weight of 48.5%;

- decreased from the rank attained in 2003 on 7 factors (% who graduate within the expected time period on admission, 1<sup>st</sup> and 2<sup>nd</sup> year class size, classes taught by tenured faculty, national awards per full-time faculty, SSHRC grants, library acquisitions). These factors carry a weight of 19.9%;
- increased from the rank attained in 2003 on 8 factors (student retention, out of province students [1<sup>st</sup> year], international 1<sup>st</sup> year students, international graduate students, operating budget, scholarship and bursary support, student services, alumni support). These factors carry a weight of 31.5%.
- The response rate to the reputational survey was 12.6 percent, down from 13.2% last year. University officials led the response rate with 41.4% return. Manitoba retained its 15<sup>th</sup> of 15 medical-doctoral universities in terms of reputation. Among the 47 universities, we rank
  - 27<sup>th</sup> on “best overall”, on “highest quality” categories;
  - 30<sup>th</sup> on “most innovative” category;
  - 23<sup>rd</sup> in the “leaders of tomorrow” category, a change from 27<sup>th</sup> last year. This may suggest that the University’s campaign to provide targeted information mailings to university officials has had some impact, as the first mailing, on the quality of our students and their successes, coincided with the distribution of the survey.

A new feature of the *Maclean's* approach this year was its *University Graduate Survey*. Graduates were randomly selected from the classes of 1999, 2000, and 2001 and asked for their comments on eight questions. 12,334 graduates completed the survey for a 17% response rate. The survey results were not factored into the rankings this year, but *Maclean's* indicates this is an option it is considering for future years. *Maclean's* ranks the 47 universities according to graduates’ “rating the entire educational experience” as “very good” and “good.”

- When the two responses are combined, all universities achieve 90% or more.
- Only four medical-doctoral universities ranked in the top 20 in the “very good” category. Manitoba was 10<sup>th</sup> of the 15 medical-doctoral universities ranking above Ottawa, Toronto, UBC, Montreal, and Calgary (which placed 44, 45, 46, and 47 respectively).

Clearly, many large medical-doctoral universities have a problem replicating the more intimate atmosphere found in their smaller counterparts and in primarily

undergraduate universities, an atmosphere on which “rating the university experience” depends. In large institutions the professional schools, rather than large arts and science faculties, are the most likely to provide the more intimate atmosphere sought by students. *Maclean’s* ought to examine whether or not this constitutes a confounding factor in its sample design, because if such confounding exists, more graduates of professional schools ought to be included in samples from large universities than from their arts and science programs.

## **II. ACADEMIC MATTERS**

### **Faculty of Agricultural and Food Sciences**

- Dr. Qiang Zhang, Biosystems Engineering, has been awarded the 2004 Canadian Society of Agricultural Engineering (CSAE/SCGR) John Turnbull award for his outstanding contribution to teaching, research and professional service in building systems engineering
- Biosystems Engineering students were successful at the 2004 CSAE/SCGR student awards competition, held at the annual conference in Ottawa. Fuji Jian won the PhD Thesis Award; James Allen, Philip Gould and Layne Maciura won the Undergraduate Design Competition; Jason Bunn won the Undergraduate Student Paper Competition.
- Jude Liu, a Biosystems Engineering graduate student received the 2004 Graduate Student Leadership and Service Award of Association of Overseas Chinese Agricultural, Biological and Food Engineers.

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- Lynne Penner, M.Sc. student in Animal Science, has been selected as the recipient of the first annual \$1,000 Animal Nutrition of Canada (ANAC) Graduate Scholarship - Western Competition. The ANAC Graduate Scholarship is awarded to Canadian university graduate students enrolled in animal science or a related field of study, with a specific interest in animal nutrition.

### **Faculty of Architecture**

- Dr. David Witty, Dean, was appointed by the Minister of Labour as Chair of the Association of Professional Engineers and Geoscientists (APEGM) and Manitoba Association of Architects (MAA) Joint Board.

### **Faculty of Arts**

- The fifth annual Arts Celebrating Arts was held in the Multi-Purpose Room on October 1, 2004. The event is held annually to celebrate the achievements of

Faculty of Arts students, support staff, faculty members and alumni during the 2003-04 academic year. Highlights of the faculty awards was the presentation of the Faculty of Arts Professor of the Year award to Professor George Toles, Film Studies for his outstanding contributions to teaching, research, and service to the university and wider community.

### **Continuing Education**

- In 2004-2005, Off-Campus Study is offering more courses than ever before at Winnipeg locations off the Fort Garry Campus. Many of the courses are offered in cooperation with external organizations, such as Canadian Mennonite University, the Rady Jewish Community Centre, and the Ukrainian Cultural and Education Centre. For the first time this year, courses are being offered on the weekend at the University of Manitoba- Downtown: Aboriginal Education Centre. Courses offered there include: Native Peoples of Canada, Aboriginal Creative Writing, and Intermediate Ojibway.

### **Faculty of Education**

- Dr. Benjamin Levin was recently presented with the Lieutenant Governor's Medal For Excellence in Public Administration. Dr. Levin has been with the Department of Educational Administration, Foundations and Psychology since 1989.

### **Faculty of Engineering**

- In the summer of 2003, the Internationally Educated Engineers Qualification (IEEQ) Pilot Program was developed by the Faculty of Engineering in partnership with the Association of Professional Engineers & Geoscientists of Manitoba (APEGM) and Manitoba Labour & Immigration, with a vision of meeting a professional need in the immigrant community and to support workforce development in Manitoba. On October 27th, the first 5 "graduates" of the IEEQ Program were recognized at a special reception. Representatives from the university, government, and industry were on hand to celebrate the achievements of these immigrant engineers, and to welcome the next group of 14 now entering the program.
- Michael VanHelden, a Civil Engineering graduate, has been awarded first place in the 2004 Canadian Geotechnical Society National Student Thesis Competition for "Numerical Modeling of Geosynthetic Reinforced Embankments Loaded to Failure."
- Dr. James Blatz, Civil Engineering, will receive the A.G. Stermac Award for Outstanding Service to the Canadian Geotechnical Society.

## Faculty of Environment

- Dr. James Teller, Geological Sciences, was awarded the Michael J. Keen Medal of the Geological Association of Canada, Marine Geosciences Division, 2004, for significant contributions to lacustrine geoscience.

## School of Music

- This year's Artist-in-Residence is Jazz percussionist Alvin R. Atkinson, Jr. Atkinson has served as professor of drum-set studies for University of North Carolina at Wilmington and East Carolina University, and most recently worked with students at New School University in New York City.
- Deborah Jurens, a School of Music third-year voice student, received the gold medal in on Conservatory Canada's Grade Ten voice examination, for the highest scores from the jury on her voice examination.
- On October 27, over 700 attended a special School of Music ensemble concert, *Josef Haydn's Creation*. The concert, held at Westminster United Church featured the University Singers, University Women's Choir, Bison Men's Choir, and the University Symphony Orchestra under conductor Earl Stafford, music director of the Royal Winnipeg Ballet.

## Faculty of Pharmacy

- Of the seven schools that took part in the Pharmacy Examination Board of Canada (PEBC) Evaluating Examination Pretest, the Faculty of Pharmacy was 1st in respect to participation, with 100% of the graduating class writing. The graduating class also received the highest school average on the pretest with a score of 544.
- Dr. Mike Namaka, and Dr. Maria Melanson (his graduate student), received a Commitment to Care Award for their Multiple Sclerosis Clinic at Health Sciences Centre. Drs. Namaka and Melanson also operate the only MS research site in Manitoba, and have traveled around Manitoba recently hosting research-based sessions for patients and health professionals.
- Dr. Ruby Grymonpre has been appointed to the Board of Fellows of the Canadian Society of Hospital Pharmacists.
- Dr. Yuewen Gong was elected to be Vice-President of the Canadian Institute of Chinese Herbal Research, located at the University of Western Ontario

## St. John's College

- The third College conference on the prairie theme, "The Prairies: Lost and Found" was held in September. Keynote speakers for the conference were: Sarah Carter, on "Prairie Dusters", and Aritha van Herk, "The West's Dirty Washing".

## Student Affairs

- The University of Manitoba's annual Week of Excellence was held October 18 to 21, 2004. The week began with the Entrance Scholarship Reception on October 18, 2004. Scholarship winners were honored in the Investor's Group Athletic Centre with parents and families as guests. Mr. Norman Riddell, Executive Director and Chief Executive Officer the Canada Millennium Scholarship Foundation, spoke to the scholarship recipients and congratulated the winners of the Foundation's Excellence Awards. Scholarships were offered to 1058 students valuing approximately \$1.4 million dollars in total. The Evening of Excellence was also held during this week. This is a special evening whereby the top high school students and their parents are invited to visit the University and learn more about the academic options available to them. More than 2000 students and parents attended a plenary session and then had the opportunity to visit displays offered by faculties, schools, Student Affairs departments and other administrative units.

## III. RESEARCH MATTERS

### Honours and Distinctions

- Dr. Gerald Friesen, Distinguished Professor of History, was awarded the 2004 Winnipeg Rh Institute Foundation Medal. Dr. Friesen is an internationally recognized historian and author whose cultural and political themes have helped to define the heritage of the prairie provinces and of Canada. He has established himself as one of the leading experts in the history of Canada's prairies and his work as a historian has influenced and shaped contemporary thinking about the prairies, regionalism, and the place of Aboriginal people in Canadian history and society.
- Dr. Paul Hackett, Community Health Sciences, has been selected as the winner of the 2004 Jason. A. Hannah Medal for his book *A Very Remarkable Sickness: Disease and Epidemics in the Petit Nord, 1670 - 1846*. The medal is awarded to bring recognition to the work of Canadian research in the history of medicine. The medal was established in 1976 by the Royal Society of Canada with assistance from Associated Medical Services, Inc. through its Hannah Institute for History of Medicine.

- Six faculty members, four from the University of Manitoba, have been named the founding directors of the International Centre for Infectious Diseases (ICID), also known as BioMed City. The Board has been assembled to realize Winnipeg as a world leader in the battle against infectious disease. They are:
  - ▶ Dr. Stephen Moses, Medical Microbiology, and board chair
  - ▶ Dr. Frank Plummer, Medical Microbiology, and director of the National Microbiology Laboratory
  - ▶ Dr. Henry Friesen, Distinguished Professor Emeritus,
  - ▶ Dr. Joanne Keselman, Vice-President (Research)
  - ▶ Dr. John Langstaff, president and CEO of Cangene Corporation, and
  - ▶ Dr. Lorne Babiuk, of the University of Saskatchewan's Vaccines for Infectious Diseases Organization also serve on the board.

### Grants Received and/or Applied for

- Under the joint leadership of Dr. Harvey Max Chochinov, Psychiatry, and director of the Manitoba Palliative Care Research Unit at CancerCare Manitoba, and Dr. Deborah Stienstra, Director of Disability Studies, the End of Life Care and Vulnerable Persons New Emerging Team (VP-NET) will receive a total of \$1.4 million of funding from the Canadian Institutes of Health Research (CIHR) over the next five years to assist the team in exploring and addressing the availability and accessibility of end-of-life care. The team will examine these populations and how their various physical, psychological and intellectual impairments affect access to end-of-life care.
- The Canada Foundation for Innovation (CFI) announced the results of its New Opportunities Fund competition and a total of \$1,097,445 is supporting 11 newly recruited faculty members. They are:
  - ▶ Michael Czubryt, Physiology, was awarded a grant totalling \$100,069 to investigate how gene expression changes in the heart as it becomes enlarged due to exercise or disease. The research will increase understanding of how these processes occur and may lead to improved therapies for heart failure and production of novel drugs.
  - ▶ Gail Davoren, Zoology, was awarded a grant totalling \$100,000 for equipment that will enhance knowledge of the ecology of marine species and the interactions among species which will increase the scientific capacity to predict the ecosystem-level impacts of fisheries activities and climate change.

- ▶ Gerald Gwinner, Physics and Astronomy, was awarded a grant totalling \$98,357 to design and build an electron cooler ion trap (ECIT) which will introduce new capabilities to the field of nuclear astrophysics by providing for the first time, cooled highly charged ions for precise mass-measurements with radioactive isotopes. This innovative project is the first of its kind.
- ▶ Torsten Hegmann, Chemistry, was awarded a grant totalling \$99,843 to support a nanomaterials synthesis and characterization lab. Its focus is to combine molecular self-organization and mobility of liquid crystalline materials with the preparation of nanoscale materials to achieve the most important goal in nanotechnology - controlled self-assembly of particles.
- ▶ Denis Krause, Animal Science, was awarded a grant totalling \$99,697 to equip a large animal biosecurity lab for the purpose of using microbial genomics approaches to evaluate uncultured microbial diversity of the digestive tract and to investigate how the growth of pathogens and normal flora are promoted or suppressed. Results could be used to reduce the spread of pathogens from animals to humans.
- ▶ Brian Mark, Microbiology, was awarded a grant totalling \$99,782 to create a protein biochemistry lab capable of examining protein-protein and protein-ligand interactions, which are applicable to developments in drug design, disease treatment and biotechnology. New products will include specific drugs that will alleviate the effects of genetic defects and infectious agents.
- ▶ Sima Noghianian, Electrical and Computer Engineering, was awarded grant totalling \$99,822 to equip an ultra-wide band microwave imaging lab. Using a hybrid technique and adaptive beam forming, this research is expected to lead to the development of a safe, inexpensive alternative diagnostic technique for detecting breast cancer and distinguishing between malignant and benign tumors.
- ▶ Chris Siow, Physiology, was awarded a grant totalling \$100,000 to support a core facility for the analyses of natural health products. The goal of the research program is to develop innovative therapeutic approaches based on Chinese medicine that targets cell signaling processes by obtaining chromatographic fingerprints of herbal preparations for quality control purposes and to isolate bioactive compounds from herbal medicines.
- ▶ Jude Uzonna, Immunology, was awarded a grant totalling \$100,000 to support a parasite vaccine development lab designed to define the

mechanisms responsible for inducing protective immunity against leishmaniasis, a chronic and debilitating parasitic disease. The disease is prevalent in six continents and considered endemic in 88 countries. Currently, there are no effective vaccines.

- ▶ Jamie Van Gulck, Civil Engineering, was awarded a grant totalling \$100,000 to equip a field laboratory for the study of retrofitted landfill leachate removal systems. Leachate is generated from rainwater collecting into the refuse and from the degradation of the waste itself. If not removed, leachate can move into the ground and potentially contaminate ground and surface water.
- ▶ Shetuan Zhang, Physiology, was awarded a grant totalling \$99,875 to establish a centre to study ion channels in living cells. Many common diseases such as cardiac arrhythmias, cystic fibrosis and epilepsy have been related to dysfunction of ion channels. By deciphering the exact role of specific ion channels, the research may yield answers about therapeutic potentials of ion channel gene transfer.
- Dr. Allan Becker, Pediatrics, was awarded \$900,000.00 from the Canadian Institutes of Health Research, for an Interdisciplinary Capacity Enhancement (ICE) Grant, over three years, for his project "Adolescent Females, Obesity and Asthma: An Inflammatory State."

### **Related Initiatives**

- The Great West Life Manitoba Breast Cancer Research Centre was officially opened on October 25 at CancerCare Manitoba. The goal of this \$3.9 million facility is to reduce deaths due to breast cancer. Located at the Manitoba Institute of Cell Biology (MICB), a joint institute between the University and CancerCare Manitoba, the Centre was funded through CFI, the Manitoba Research and Innovations Fund, and the generosity of Manitoba channeled through the CancerCare Manitoba Foundation. Participating in the event were provincial Health Minister Tim Sale, Dr. Eliot Phillipson, President and CEO of the CFI, Dr. Dhali Dhaliwal, President and CEO of CancerCare Manitoba, Dr. Emőke Szathmáry, President, University of Manitoba, and Dr. Jim Davie, Biochemistry and Medical Genetics, and Director of the MICB. The Centre uses a multi-disciplinary approach to research, using supporting platforms that collectively are unique in the world.
- Agricore United is investing \$1 million dollars over a five-year period for the Richardson Centre for Functional Foods and Nutraceuticals. The investment will assist with constructing the unique facility, scheduled to open in fall 2005, where researchers from different disciplines and industry partners can work together to

develop functional foods and nutraceuticals. Agricore United is one of Canada's leading agribusinesses. The prairie-based company has diversified into sales of crop inputs and services, grain merchandising, livestock production services and farm business communications.

- Ground was officially broken for the Richardson Centre for Functional Foods and Nutraceuticals on October 8 with an unveiling of its cornerstone. Dr. Joanne Keselman Vice-President (Research) counted down as Dr. Emőke Szathmáry, Diane McGifford, Minister of Advanced Training and Education, Digvir Jayas, Associate Vice-President (Research) and Interim Director for the Centre, Hartley Richardson, President and CEO of James Richardson & Sons, Limited, Derryl Millar, Director General of Operations for Western Economic Diversification Canada, and Curt Vossen, President of James Richardson International pulled the cover off the cornerstone. More than 120 people attended the start-of-construction ceremony held at Smartpark including representatives from the project's public and private-sector supporters. The 55,000 square-foot, \$25 million centre will house up to 40 full-time researchers from the faculties of agricultural and food sciences, human ecology, medicine, pharmacy as well as from outside collaborating agencies. Researchers will focus on several areas in the research and development of food supplements extracted from crops grown in the prairie region – from identifying useful compounds in plants, enhancing these compounds, developing ways to process and incorporate them into food products and considering the consumer acceptability of the final products.
- Dr. Joanne Keselman served as master of ceremonies at a dinner to honour the University's Canada Research Chairs. Hosted by Dr. Emőke Szathmáry, the evening incorporated the theme "Advancing the Frontiers of Knowledge," and Canada Research Chair holders, along with their partners/guests, deans, associate deans (research) and department heads, members of the Senate Committee on University Research and administration enjoyed a meal and short program at the University Club on Sept.28. Special guests included the Honourable Tim Sale, Minister of Energy, Science and Technology, MP Anita Neville, Winnipeg South Centre, Mr. Hubert Gauthier, President and CEO of St. Boniface General Hospital, Dr. Blake McClarty, Director of Research at the Health Sciences Centre, Dr. Dhali Dhaliwal, President and CEO of CancerCare Manitoba, Mr. Jim Carr, CEO of the Business Council of Manitoba, and Ms. Kerri Irvin-Ross, MLA for Fort Garry.
- Dr. Emőke Szathmáry and Mr. Hubert Gauthier, President and CEO of St. Boniface General Hospital, participated in a ceremony that marked the signing of the Research and Intellectual Property Affiliation Agreement between the University and the Hospital on October 22 at the St. Boniface General Hospital Research Centre. The agreement, which recognizes the two organizations' respective contributions, and the value and benefit to be derived from

collaborative efforts, will develop the community's awareness of the University and the Hospital working together and provides a seamless set of research services to researchers.

#### **IV. ADMINISTRATIVE MATTERS**

##### **Strategic Resource Planning Process**

- To support the 2005/06 resource allocation process, Deans, Directors and Heads of Administrative Units have been requested to develop their strategic resource plans with a particular focus on the relationship between the units' priorities and University strategic priorities as communicated in the document "Building for a Bright Future, a Strategic Academic Plan for the University of Manitoba". As part of the review process, the President and Vice-Presidents will meet with the Deans and Directors of academic units to review and discuss the unit submissions beginning in January 2005. Administrative units will meet with the Vice-President to whom they report. Copies of the submissions will be provided to the members of the Budget Advisory Committee to assist them in fulfilling their role of advising on the University's operating budget and related resource allocation issues.

##### **Ancillary Services**

- Although waiting lists still exist for student and staff parking at both Fort Garry and Bannatyne Campuses, parking has been relatively problem-free this fall due to the addition of 220 daily/casual parking stalls and the popular University of Manitoba Shuttle Bus Services.
- Resident advisors have received over 60 hours of training in areas ranging from fire safety to non-violent crisis intervention with significant attention paid to leadership development and team building. New sessions were added to this year's training to educate residence staff on issues such as suicide awareness and intervention and dealing with sexual assault and self harm.
- The University Centre Pharmacy postal outlet processed 1,537 Canada student loans in September. The University of Manitoba outlet continues to process more loans than any other in Western Canada and has the lowest error rate.

##### **Financial Services**

- Steady progress continues to be made with respect the development of the Financial Records Information System (FRIS). Interface testing continues with the focus being bridging transactions into Banner from outside systems such as

payroll, private funding, postage, telephone, bookstore, student records , special functions and parking. Work is also underway on electronic receipt of invoices from suppliers. Three separate software solutions have been identified to fill gaps in Banner Finance. Millenium's FAST product will resolve gaps related to position control and budgeting; CORE Business Technologies' One Step product will provide a cashiering solution; and the University of Regina has provided us with their non-student receivable system.

- Payment statistics for the month of September show that 28% of all tuition payments were made over the WEB, compared with 21% in September 2003. Total payment volume was 22,143 payments valued at \$35.5 million compared to 19,688 payments valued at \$26.0 million in September 2003.

## Human Resources

- Significant progress continues to be made on the Human Resources Information System (HRIS) renewal project. The Eckler Penache Pension Administration System will be loaded on November 4, 2003. This new system will run in parallel with the legacy system in production mode
- The University of Manitoba recently hosted the annual Human Resource Association of Universities of Western Canada (HRAUWC) conference on October 3 - 5, 2004. Approximately 50 human resources professionals from Western Canada were in attendance.
- The Respectful Work and Learning Environment Policy came into effect at the University of Manitoba this past spring. This new policy incorporates the former sexual harassment and human rights policies into one new policy which clarifies that harassment or discrimination of any kind, including personal harassment (bullying), is not acceptable. The inclusion of personal harassment is new. Learning and Development Services has been hosting information sessions this fall for staff, faculty and students
- The Pension Plan Actuary has completed the valuation of the UM Pension Plans and the plans have met the solvency criteria established by the Manitoba Pension Benefits Act.
- The University co-hosted the College and University Safety Association Annual Conference at Gimli with the University of Winnipeg and Red River College from September 30 - October 3, 2004.

## Information Services and Technology

- Wireless network policies and standards have been developed and will be circulated to unit computer representatives and placed on the Web.
- A search engine device has been purchased from Google to replace the obsolete search engine software now in place and will greatly improve search capabilities in UMINFO. Expected installation date is mid-November.

## Physical Plant

- Status of Building Projects:
  - Construction of the Engineering and Information Technology Complex (EITC) is approximately two weeks behind schedule due to weather. Concrete work is currently proceeding well with floors poured up to level 300 and forms ongoing to Level 400. Work has begun on the renovations to Engineering 1 with the exterior stair at the courtyard being removed in preparation for piling. The main slab at the south side of the old structure has been removed and the new floor poured. The contractor is working toward completion of Engineering 2 by September 2005 and completion of the subsequent renovations to Engineering 1 by September 2006.
  - Construction of the Environmental Safety Building continues. The structural steel has been installed and the installation of exterior block walls has been started. Installation of the roof is 50% complete and the exterior shell stud wall installation has started. Expected completion date is January 2005.
  - Cost saving measures are being explored with the users and contractor of the Livestock Research facility at Glenlea. The Manitoba Wildlife Association buildings will be located on the south side of the drive. The drawings are completed and tender documents have been sent out.
  - Phase 1 of the Infrastructure Utility Expansion and Upgrade is ongoing. The south tunnel to Engineering III is complete with restoration work now underway. The chilled water lines are being installed down Dafoe Road with the steam line installation following behind. All installations and tie-ins are expected to be completed by the end of November. This project is currently three weeks behind schedule due to weather.
  - The Buller Building is undergoing extensive renovations involving basement slab work, asbestos abatement, laboratory redevelopment, fume-hood upgrade and roof replacement. The drawings for the lab

redevelopment are being reviewed. The underground piping work is now complete, and the slab was poured on October 24, 2004. The replacement of the roof is proceeding well, as well as the fumehood upgrade.

- St Paul's College Theatre 100 and washroom renovations are progressing with an expected completion of early December. Design issues resolving the pit and entry into the vestibule have been resolved.
- St. Paul's College foundation waterproofing is complete and landscaping is underway.
- Construction of the Richardson Centre for Functional Foods and Nutraceuticals has begun. The general contractor has been working on foundation and underground services, crawlspace construction and weeping tile installation. Scheduled completion date is July 2005 however unseasonably wet weather has slowed operations. The project is presently two weeks behind schedule.
- Waterproofing and insulating of the exterior foundation walls for the Russell building have been completed. The south, west and north excavations have been backfilled.
- All concrete grade beams are complete and approximately 25% of the structural concrete slab is complete at the Selkirk avenue site. A security guard is now present to deter vandalism. The anticipated project completion date is May 2005.
- University Centre Sprinkler System upgrade (phase 1) is overall 95% complete with most of the work in public areas completed.
- Dentistry roof replacement of four roofing sections is underway. The 300 level is complete and the contractor is now working on the Clinic roof replacement. Completion is expected by early November.
- Design work is now underway for the 12,000 square foot addition to the Wallace building and for the Pharmacy Building.
- A Facilities Asset Management software program is being purchased for the collection, storage and reporting of facilities and infrastructure condition and related asset data. This software program will quantify and centrally manage all facility needs including deferred maintenance, functional requirements, vulnerability, energy requirements and generate reports on requirements of the facilities including reports on different funding requirements and funding scenarios. Facility condition modeling will be based on a life-cycle model of each

building at the University which will enable us to make immediate use of the software and immediately provide us with useful information that can be used for forecasting upcoming requirements.

- The Canadian University Reciprocal Insurance Exchange (CURIE) annual meeting was held October 1 - 3, 2004 at the Fairmont Hotel. This meeting draws approximately 50 participants from across Canada to discuss current issues and upcoming challenges specific to University insurance.

### **Security Services**

- Security Services staff have been directing traffic between 4:30 and 5:00 pm weekdays at the intersection of University Crescent and Sifton Road. Traffic lights are being installed at this intersection and are expected to be operational by January 2005.
- Restricted traffic flows around the Administration Building has enhanced safety by providing a much less congested environment for student, staff and visitor pedestrian traffic. Security services provided personnel to restrict access to "N" lot from September 7 to October 29, 2004.

### **Treasury Services**

- Treasury Services is conducting a review of approximately 250 Trust and Endowment accounts that have historically not spent their annual revenue allocations. Communications regarding these accounts are ongoing with the various Faculties and Schools. Terms of reference for each fund will be reviewed and modified if possible and if necessary.
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## **V. EXTERNAL MATTERS**

### **Special Events**

- For the second year, the University of Manitoba hosted a broadcast seminar by the Office for Partnerships for Advanced Skills (OPAS), on November 8, 2004. The featured speaker was Pamela Wallin, Canada's Consul General in New York on Canada / US relations. A local panel featuring Todd Schwartz, US Consul to Manitoba, Arts faculty members Jim Fergusson and Sarah Elvins, and moderated by Richard Sigurdson, Dean of the Faculty of Arts, responded to remarks by Ms Wallin:

## **Private Funding**

- Since April 1, 2004, \$13 million has been raised from private funding sources. This includes almost \$6 million in capital funds and \$2.5 in student support.
- The system renewal project for the alumni and advancement database is approximately 60% complete, with a scheduled "Go Live" date of April 1, 2005.

## **Public Affairs**

- A guide to educational costs and funding sources", an insert for the publication "Sharing stories, sharing dreams: A guide to Aboriginal programs and services" was developed to inform potential students and other stakeholders about the financial awards and support services available to Aboriginal students at the University of Manitoba.

## **Alumni Affairs and the Alumni Association**

- The Alumni Association hosted a reception for alumni in Toronto on November 5, 2004 with more than 400 alumni and friends in attendance.

## **Government Relations Office**

- The Director met with the President in Ottawa, arranged meetings with Reg Alcock, Anita Neville, and Steven Fletcher, and accompanied the President at these meetings. The Director had an additional 13 meetings with government and political staff and attended 2 receptions.

**PART B - Notable Events (External)**  
**Emőke J. E. Szathmáry**  
**September 22, 2004 - November 19, 2004**

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**Wednesday, September 22, 2004 - Thursday, September 23, 2004**

- Attend Japan-Canada Roundtable II at York University, a forum of Canadian and Japanese University Presidents
- Make a presentation on university funding, management and reputation at the Japan-Canada Roundtable II

**Sunday, September 26, 2004**

- Act as one of four judges at "The Great Debate", which involved eight debaters from Stanford, Yale, Princeton and Harvard

**Monday, September 27, 2004**

- Host reception for Dr. Marcel Desautels, University benefactor, in Toronto

**Tuesday, September 28, 2004**

- Attend meeting of Council of Presidents of Universities in Manitoba (COPUM)
- Make remarks at Canada Research Chairs Recognition reception and dinner

**Wednesday, September 29, 2004**

- Host reception for 2003 Teaching Awards recipients at 37 King's Drive

**Thursday, September 30, 2004**

- Make remarks at Official Opening of the Andor Weininger Exhibit, School of Art
- Make remarks at "Celebrating with Helen Glass" dinner, organized by the Faculty of Nursing

**Saturday, October 2, 2004**

- Present remarks at the Faculty of Medicine Reunion breakfast

- Host and present remarks at the Isbister Legacy Society Tea
- Present remarks at the Homecoming Gala Banquet

**Sunday, October 2, 2004**

- Host and present remarks at the President's Luncheon for alumni (classes of '34 and '44)

**Monday, October 3, 2003**

- Attend meeting of J. W. Dafoe Foundation Board

**Tuesday, October 5, 2004**

- Attend the Annual General Meeting of the Winnipeg Regional Health Authority

**Thursday, October 7, 2004**

- Present remarks, along with Dr. Charles Kupchella, President, University of North Dakota, at the Midwest Business Deans conference
- Meet with Dr. Charles Kupchella, President, University of North Dakota

**Friday, October 8, 2004**

- Present remarks at the Richardson Centre for Nutraceuticals Sod Turning Ceremony

**Tuesday, October 12, 2004**

- Attend City of Winnipeg Mayor's Office/University of Manitoba Joint Liaison Committee meeting along with Dr. Joanne Keselman, Mrs. Deborah McCallum and Mr. John Alho

**Thursday, October 14, 2004**

- Attend meeting of the Council of Western Canadian University Presidents, in Regina

**Saturday, October 16, 2004**

- Host and present remarks at University of Manitoba Retiree's Association Reception

**Sunday, October 17, 2004**

- Attend University of Winnipeg Fall Convocation ceremonies as a member of the platform party
- Attend St. Paul's College Hanley Memorial Lecture presented by Fr Joseph Komonchak, John and Gertrude Hubbard chair at the Catholic University of America

**Monday, October 18, 2004**

- Give remarks and participate in the presentation of awards at Entrance Scholarship Reception

**Tuesday, October 19, 2004**

- Present remarks at Evening of Excellence

**Wednesday, October 20, 2004**

- Provide remarks and host Convocation dinner for Honorary Degree recipients

**Friday, October 21, 2004**

- Present remarks at St. Boniface Hospital/University of Manitoba Research and Intellectual Property Affiliation Agreement Signing Ceremony
- Meet with Dr. Jeff Zabudsky, President, Red River College

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**Sunday, October 24, 2004**

- Dinner meeting with Dr. Frieda Law, Shantou University, China, along with Drs. M. Wu, Dr. J. Lin, P. Choy, B. Magwood, E. Kroeger

**Monday, October 25, 2004**

- Meet with Dr. Eliot A. Phillipson, President and CEO and Ms. Carmen Charette, Senior Vice-President, Canadian Foundation for Innovation
- Present remarks at the Official Opening of the Manitoba Breast Cancer Research Centre
- Attend meeting of the Board of Directors, St. Boniface General Hospital
- Attend the Anglican Diocese of Rupert's Land Annual Bishop's Dinner

**Tuesday, October 26, 2004**

- Provide telephone interview to CJOB Radio (Larry Updike) re University of Manitoba Economic Impact Study
- Provide telephone interview to CBC Radio (Terry McLeod) re University of Manitoba Economic Impact Study
- Provide remarks at Province of Manitoba Energy, Science and Technology funding announcement
- Provide remarks at University of Manitoba/University of North Dakota Forum

**Wednesday, October 27, 2004**

- Attend Meetings of the Association of Universities and Colleges in Canada (AUCC) in Ottawa

**Thursday, October 28, 2004**

- Attend Installation of Karen Hitchcock as Principal of Queen's University in Kingston, and present greetings
- Attend Social Sciences and Humanities Research Council (SSHRC) awards reception along with John Alho, Director of Government Relations, in Ottawa
- Meet with Member of Parliament Anita Neville, in Ottawa
- Meet with The Honourable Reg Alcock, President of the Treasury Board, in Ottawa

**Friday, October 29, 2004**

- Meet with Member of Parliament Steven Fletcher, in Ottawa
- Present remarks at University College 40<sup>th</sup> Anniversary dinner

**Tuesday, November 2, 2004**

- Attend telephone meeting of Council of Presidents of Universities in Manitoba (COPUM)
- Attend Province of Manitoba Aboriginal Summit "Bridging Opportunities" dinner

**Wednesday, November 3, 2004**

- Attend Province of Manitoba Aboriginal Summit “Bridging Opportunities”
- Attend St. Paul’s High School 2004 Crusader Challenge Tribute Dinner

**Thursday, November 4, 2004**

- Attend Manitoba Health Research Council Reception
- Meet with members of the Jewish Federation of Winnipeg

**Friday, November 5, 2004**

- Present remarks at Alumni Association Reception in Toronto

**Saturday, November 6, 2005**

- Receive the degree Doctor of Sacred Letters (*honoris causa*) from the University of St. Michael’s College, and attend the convocation luncheon, in Toronto

**Monday, November 8, 2004**

- Host reception for RBC Academic All Canadian Athletes
- Present remarks at the Official Opening of the Arthur Mauro Centre for Peace and Justice
- Present remarks at the concert to celebrate the Official Opening of the Arthur Mauro Centre for Peace and Justice

**Tuesday, November 9, 2004**

- Attend breakfast meeting with Orysia Lennie, Deputy Minister, Western Diversification and senior staff from Manitoba, along with Vice-Presidents Joanne Keselman and Elaine Goldie, and Director of Government Relations, John Alho

**Wednesday, November 10, 2004**

- Receive “trailblazer” award and attend “Most Powerful Women: Top 100” Award luncheon in Toronto

**Friday, November 12, 2004**

- Meet with Honourable Dave Chomiak, Minister of Science, Energy and Technology with Dr. Joanne Keselman, Dr. Digvir Jayas and Dr. Peter Cattini
- Present remarks and attend dinner at the "Fast-a-Thon" celebration organized by the Muslim Students' Association

**Saturday, November 13, 2004**

- Present remarks at the Jón Sigurdsson Chapter of the IODE 2004 Scholarship Program Reception

**Monday, November 15, 2004**

- Meet with Louise Gordon, Executive Director, Council of Post-Secondary Education
- Meet with representatives of Winnipeg Regional Health Authority, with Vice-Presidents Robert Kerr, Joanne Keselman, Deborah McCallum and Elaine Goldie, as well as the Dean of Medicine and the Director of Government Relations
- Host dinner at Chancellor's Hall for the Chief Executive Officer and the Executive Director (Research and Quality) of the Winnipeg Regional Health Authority, the Chief Operating Officer and the Director of Research at the Health Sciences Centre, Dr. Kerr, Dr. Keselman and Dean D. Sandham

**Tuesday, November 16, 2004**

- Present certificates at Annual Outreach Awards Reception

**ANNUAL PROGRESS REPORT**  
(as of September 2004)

**BUILDING FOR A BRIGHT FUTURE**

**A Strategic Academic Plan for the University of Manitoba**

**The Plan.**

The Board of Governors and the Senate approved *Building for a Bright Future* in June 2003. Rather than prescriptive in form (as was the case with the previous plan, *Building on Strengths*, which contained 95 specific recommendations) *Building for a Bright Future* outlined five institutional priorities for success:

1. Provide Access to an Exceptional Education
2. Attract and Retain the Best
3. Be a Centre for Research and Graduate Education that Makes a Difference to our Province, our Nation and our World
4. Provide the Human, Physical and Technological Infrastructure Necessary for Learning and Research
5. Be at the Centre of our Community: On Manitoba

Each priority is accompanied by challenge statements which outline approaches to be taken to assist in addressing each priority.

**Progress Reports.**

*Building for a Bright Future* specifies that at the end of the 2006-07 academic year, the President will undertake a comprehensive evaluation of the progress made towards the attainment of the goals that address the challenges in the plan. In addition, the President was requested to report annually to Senate and to the Board of Governors on the progress made towards the achievement of the plan. This report is the first of the annual reports that will be submitted.

**Format of the Progress Report.**

This report is in two sections:

**Section A: Responses Centrally Initiated**

This section summarizes initiatives which were developed centrally but which relate to many units within the University.

**Section B: Responses from the Units**

Each faculty, school and administrative unit submitted reports on the progress made at the unit level in addressing the five priorities. This section of the report includes some examples from unit reports to provide an overview of initiatives taking place at the unit level.

SECTION A:  
RESPONSES CENTRALLY INITIATED

1. Resource Planning

The implementation section of *Building for a Bright Future* states that "during the annual planning exercise, which is part of the University's resource allocation process, the President and the Vice-Presidents will require the submission of plans under each institutional priority to warrant the allocation of incremental funds."

The process for developing submissions for the annual operating budget and for the three year strategic resource plan was amended in October 2003 (and will continue in place for the October 2004 request for submissions) to reflect this requirement in the plan. A strategic resource planning template was developed to assist academic and administrative units in formulating their Strategic Resource Plan which is a written communication that summarizes the unit strategic priorities, resource plans, and achievements. The template creates an explicit linkage between unit priorities and those expressed in *Building for a Bright Future*. Unit priorities are to be addressed in the submissions in the context of the five priority statements outlined in the strategic plan.

2. Advisory Committees to the Provost

The Vice-President (Academic) & Provost established the following advisory committees to develop specific responses to the challenges of the strategic plan. The committees were:

- i. Access to an Exceptional Education
- ii. First Choice for Aboriginal Students
- iii. Learning Technology
- iv. International Relations
- v. Life Sciences
- vi. New Media
- vii. Health Sciences and Health Studies

The committees were encouraged to consult widely so that there would be an opportunity for input from all interested units as well as from senior administrators and students. Collectively the committees drew on the expertise of 64 faculty and staff and completed their reports in the spring of 2004. A summary of the reports including recommendations have now been developed and implementation committees will be established to recommend next steps including recommendations which require approval by Senate and/or the Board of Governors.

### 3. Enrolment Management

An enrolment management plan is being finalized to give strategic direction to the University with respect to anticipated or planned growth from 2004-05 to 2010 and beyond. The overriding assumption in the plan is based on demographic trends and estimates and leads to the conclusion that for planning purposes the optimal enrolment or capacity should be +/- 26,000 students. There is emphasis placed on "for planning purposes" ie. the level of continuing staff appointments and other resources that are required to meet an enrolment of 26,000. This is not to say that the 26,000 cannot be exceeded but the additional students would be accommodated with short-term initiatives eg. term appointments, and not tenure track appointments. In addition to the optimum enrolment, the enrolment plan outlines five priorities designed to ensure that the optimal enrolment can be sustained in the long term. The priorities are:

1. To review administrative policies and practices that may impact on enrolment.
2. To develop student retention strategies that will be implemented over the next three-year period.
3. To develop recruitment strategies that will enhance our recruitment efforts for graduate students.
4. To refine recruitment strategies such that they will enhance our recruitment of international students.
5. To develop recruitment strategies that will include a focus on increasing the participation rates of high school students, Aboriginal students, mature students, and those interested in Continuing Education.

### 4. Infrastructure and Capital Project Support

A common challenge among the five institutional priorities is the need to provide infrastructure support and capital project development. Indeed the need is great with a total requirement of \$268 million. The challenge has been to develop a detailed analysis of requirements and financial models that would support these requirements. Much time has been devoted to this challenge by the President, Vice-President (Administration), Associate Vice-President (Finance) and the Director of Government Relations including extensive discussions with Government officials. It is anticipated that a plan will be finalized hopefully in this calendar year. The \$268 million includes the need for "bridge financing" for capital projects identified in the five year campaign *Building on Strengths: Campaign for the University of Manitoba*. While the campaign was very successful, and exceeded the \$200 million goal by \$37 million, some categories exceeded the targets while others, including capital projects, did not meet the target and/or the costs of the projects have escalated since the initial target was developed at the outset of the campaign. Fund-raising continues for these projects, with the expectation that the targets will be met; in the meantime bridge financing is required to ensure the timely completion of these projects.

SECTION B:  
RESPONSES FROM THE UNITS

As noted, each faculty, school and administrative unit has submitted reports on the progress made towards achieving the five priorities. The following are some examples from these reports, outlined according to each priority, to give an overview of achievements and activities at the unit level.

1. Provide Access to an Exceptional Education

*Agricultural and Food Sciences*

- A new Diploma in Agricultural Finance is being finalized in part because of demand. Funding and in-kind contributions will be sought from industry to support the new program.

*Architecture*

- Faculty members encourage students to enter competitions and assist them in preparing submissions. This recognizes the importance of "promoting excellence of students". Successes this year include: Best Architecture Thesis in Canada; Interior Students in the Environmental Design undergraduate program won first place in the North America design competition sponsored by Dow BioProducts for the Green Interiors Student Design Competition; City Planning students won the Regional Best Paper Award at the Canadian Association of Planning Students national conference; an architecture student's thesis was selected as one of the top 15 finalists for best thesis in the world based on it being named the best in Canada.
- Emphasis on recruiting of Aboriginal students has resulted in an increase from 6 students in 2002 to 13 in 2003.

*School of Art*

- Information Sessions for entering students and a new "mentor" program where senior students mentor entering students were introduced in the Summer of 2004. These efforts have reduced attrition and created a better sense of community for students.
- An expanded summer program included seven new courses for the Summer Session, pilot programs in portfolio development, an exit seminar, art history and studio combinations.
- A New Media area working group is developing a B.F.A. and B.F.A. Honours programs in New Media. The working group is examining existing new media related courses, editing redundancies, and developing new courses for the fall of 2005.

*Arts*

- Curriculum review is a continuous process to ensure programs are able to take advantage of changes in staffing as well as to address contemporary issues. Last year the Faculty

engaged in a substantial amount of curriculum review, for example in Religion, Political Studies and English, which made significant changes to their undergraduate programs.

- A proposal for the establishment of an interdisciplinary major in Italian Studies has been developed and is now before the appropriate Senate Committees for review. This program will include courses offered in Classics, History, Fine Arts, and Music, as well as those in Italian language and literature.
- A series of teaching workshops for Teaching Assistants has been introduced to complement the annual Graduate Teaching Award.

#### *Continuing Education Division*

- Based on the recommendations of the review of the ACCESS Programs, a three-year plan has been developed to improve the supports provided to students as well as student retention and success rates. New partnership models are also being developed to reach more students without incurring the full costs of extending services. For example, as of January 2004 ACCESS will provide counselling, financial and tutorial assistance to students, while the Faculty of Education will assume responsibility for academic advising.

#### *Education*

- A cohort of about 50 teachers (mostly Aboriginal), from rural and remote Aboriginal communities, have enrolled in a post-baccalaureate degree program in resource and special education.
- The Early Years Stream, is initiating the "first of its kind" program in Canada. Together with Pembina Trails School Division (specifically General Byng School) a Centre for Inquiry School has been established where administrators, teachers, faculty members and students will not only conduct their practical work but also do their theoretical study and research in a school setting.
- The Dean's Advisory Committee on Aboriginal Student Recruitment has been very active in recruiting such that for September 2004, 17 self-declared Aboriginal students have enrolled, bringing the total to 30. In addition two new Aboriginal faculty have been hired bringing the total to three. Also all undergraduate students have a cross-cultural component in their programs.

#### *Engineering*

- The Internationally Educated Engineer Qualifications Initiative, although still in the pilot stage, has attracted national attention as a model for assisting immigrants with engineering education to obtain professional status in Canada. The 12 month program includes 8 months of senior level course work and 4 months paid work experience. Graduates of the program are recognized as having met the academic qualification of the Professional Engineers and Geoscientists of Manitoba. This is the only such program in a Canadian

engineering faculty. As a result of this activity, Dr. Ron Britton, head of the program, has been appointed to the Manitoba Immigration Council.

- A post-baccalaureate certificate program in Aerospace Engineering is being introduced in cooperation with the Manitoba Aerospace Human Resource Coordination Committee and Red River College. This is direct result of industry requests for continuing education.
- There are several student organized competitions each year. Faculty advisors encourage students to develop projects and the Faculty provides workshop space and technical support. Student competition teams continue to enjoy success. Were successful this past year. In the national glider competition the Canadian Aeronautics and Space Institute (CASI) team placed first with a mark almost 50% higher than its nearest competitor. Other teams also did well in competition: Formula One (placed 64 of 129); Cargo Aircraft (placed 9 of 37). Four engineering students won Best Presentation awards at the IEEE 4<sup>th</sup> Annual Student Design contest hosted by the Rochester Institute of Technology in Rochester, New York; a team placed second (of 9) in the 14<sup>th</sup> Annual Environment of Design Competition, in La Cruces New Mexico.

#### *Environment*

- A number of strategies including mentoring and support programs for improving teaching (including use of UTS mentors), rewarding teaching excellence and student success have been identified. These include workshops designed for faculty members in Environment, with the first workshop scheduled for November.
- The undergraduate curriculum in all departments is under review to identify gaps and overlap. The results of departmental reviews will be considered by the faculty's undergraduate curriculum committee. Opportunities for integrating the undergraduate curriculum to provide inter and trans-disciplinary education across the Faculty are also being considered.

#### *Graduate Studies*

- Twenty-four graduate programs in 14 departments have been reviewed or are currently under review. The results have all been positive with no recommendations for major changes in any of the programs. Changes that are recommended in the reviews are monitored every six months.

#### *Human Ecology*

- The Faculty has adopted a new "health" direction. Examples are:
  - A new under-graduate curriculum in Textile Sciences, which includes a stream for medical textiles and a stream for the global textile industry has been developed. Several Faculties and external agencies support this unique initiative for its strong training and research potential.

- A major revision of the Human Ecology program focuses on social services and life skills with a strong family orientation, and includes an entrepreneurial approach to the interactions between clients and service providers.
- The undergraduate curriculum of Family Social Sciences now has stronger foci in developmental health and family violence in response to student demand.
- Preliminary work is underway on an undergraduate program with a partner in the food service industry, which focuses on the quality and safety of food delivered to retail stores, restaurants and other outlets. The program would support the accredited dietetics program and other programs in the Department of Food Science.
- A draft proposal for the new Centre for Developmental Health is under discussion in the Faculty. The Centre superceeds the Family Research and Education Centre (FREC) and has a wider scope by addressing the social determinants of health.
- The Faculty is actively recruiting students with Aboriginal background by having an Aboriginal student visit high school guidance counsellors and classes with explanations of the four programs and employment opportunities. In addition, the Faculty is hiring four experienced Aboriginal people as consultants in the delivery of credit courses. These consultants will introduce culturally sensitive material into existing credit courses and help co-teach courses with academic staff.

#### *I.H. Asper School of Business*

- In 2003-04 the International Exchange Program had 41 international exchange partners, with over 123 students participating (41 outgoing and 82 incoming).
- The Aboriginal Business Education Program (ABEP) has had significant success in assisting Aboriginal students in completing the BComm (Hons) degree. From 1995 to 2004 there have been 33 ABEP graduates from the BComm (Hons) program. Over this same period only two Aboriginal students in ABEP who were admitted to the BComm (Hons) program chose to withdraw, reflecting a 94% completion rate.
- A new Department of Supply Chain Management has been established to house the proposed new undergraduate and graduate majors in Logistics and Supply Chain Management, the Transport Institute, and the CN Chair in Transportation.

#### *Law*

- The Marcel A. Desautels Centre for Private Enterprise and the Law was established with a \$5 million gift from the Canadian Credit Management Foundation (CCMF), and named after Dr. Marcel Desautels, President and CEO of the CCMF. The Centre will provide future lawyers and their clients with a greater understanding of opportunities and challenges facing privately owned businesses.

### *Libraries*

- Continuous improvements to the physical environment including staff and student areas have been made and the possibility of a "Libraries Café" is under consideration.
- "Chat Help", a new reference service was introduced to provide users with a new way to connect in real time with reference librarians - through the web site. Users are able to "chat" live online with library staff from one of the University of Manitoba libraries by clicking on the "Chat Help" link located on the UM Libraries' home page. Library staff can lead conversation, and generally help with the research process. At the end of the session, a transcript of the conversation, which includes all URLs is emailed to the user.

### *Medicine*

- Ten strategies have been identified to augment efforts in recruitment of rural and Aboriginal students to the health professions, to strengthen curriculum offerings on Aboriginal and Rural Health at all levels of education and to enhance the Bannatyne campus facilities for Aboriginal students.

### *Music*

- Two new program initiatives are:
  - The Northern Music Project: A distance education project to bring music education to high school students in Northern Manitoba towns, who might otherwise not be exposed to the level of musicianship available in Winnipeg.
  - Post Baccalaureate Performance Diploma: To offer special opportunities in the form of extra training in performance and for some, English language skills, as a bridge to prepare for graduate study.

### *Nursing*

- The Curriculum Revision Committee has been working on a number of new initiatives that will enhance the quality of the present curriculum. These initiatives include: a clinical practice course in community health; changes to admission criteria; exploration of a second degree option and an honours stream; and the development of a new conceptual framework to guide the curriculum.

### *Pharmacy*

- The entry level curriculum continues to be refined with a particular emphasis on developing a central skills theme across the four professional years of the program. This theme integrates required physical, clinical and social science streams within practice simulation laboratories using standardised patient models and experiential clinical placements. The new curriculum ensures early exposure to patient focused clinical interaction, as opposed to the previous model in which the formative years of the program were devoted to knowledge acquisition.

- Students are encouraged to compare their experiences and successes with the eight other pharmacy programs in Canada. Student assemblies are used to review student successes in national examination competitions, and to review student and faculty experiences of visits to external programs, and conference and student activities. By sharing knowledge of other programs, and information gathered from the many international, national and local professional meetings attended by our students, the strength of the Manitoba program has been reinforced.
- The results of the 2003 Qualifying Exam (Pharmacy Examining Board of Canada) place Manitoba graduates 1<sup>st</sup> (out of 9 schools and Manitoba in terms of size ranks 8). Manitoba also ranked 1<sup>st</sup> (100% pass rate) on the Objective Structured Clinical Exam (OSCE) and had the highest Faculty average score. The results for the 2004 graduating class are not yet available; however, a University of Manitoba Faculty of Pharmacy graduate, Pak-Wai Chan, has been announced as this year's winner of the Canadian Pharmacists Association's (CPhA) "Dean George A. Burbidge Award." This prestigious award is presented annually to the individual graduate with the highest academic standing on the Pharmacy Examining Board of Canada (PEBC) Qualifying Examination.

#### *Physical Education and Recreation Studies*

- Students in the Bachelor of Exercise and Sport Science Program now have the opportunity to prepare for Professional Fitness and Lifestyle Consultant certification, as per national standards (Canadian Society of Exercise Physiology) and in partnership with the local professional association.

#### *Science*

- The new joint honours degrees between Mathematics and Economics and between Statistics and Economics are designed for students who want the challenge of demanding programs and have a desire to broaden their education. Students can receive either a B.Sc. or a B.A. depending on their particular interests.

#### *Social Work*

- The Faculty has been restructured with respect to policies, procedures, committee structures, and decision-making processes that should facilitate the development of an exceptional curriculum and appropriate and respectful student policies at the undergraduate and graduate levels.
- The process of strengthening undergraduate and graduate curricula continues especially in the areas of anti-oppression content and in harmonizing course content among multiple sections of the same courses and across program sites (i.e., Fort Garry; Inner City; Thompson; and Distance Education sites).

*University Teaching Service*

- The Peer Consultation Program provides academic staff with an opportunity to work one-on-one with a trained consultant (an academic colleague with specific training in this area) to explore and make changes in their teaching.
- There is substantial evidence for the increased use of technology in teaching on campus and WebCT and technology workshops continue to be scheduled. An example in the new faculty workshop series is a session on 'Using the Web in Teaching'. This session will explore the various ways the web can be used strategically to enhance student learning. The Teaching and Learning with Technology (TLT) grants program continues, but modified to provide grants to projects that explore pedagogically innovative uses of technology, and/or projects that are technologically innovative.

*Office of the Vice-President (Research)*

- In collaboration with the Division of Continuing Education, a new University of Manitoba Continuing Education Certificate in Intellectual Property and Technology Commercialization Management was introduced. In addition, discussions continue with the Faculty of Graduate Studies to explore mechanisms to expose our graduate students to issues related to intellectual property management.

*Office of the Vice-President (Administration)*

- The Respectful Work and Learning Environment Policy approved by the Board of Governors supports a climate of respect in the workplace, and in the learning environment where individuals are free from harassment and discrimination. Workshops are underway to inform the implementation of the policy.

*Office of the Vice-President (External)*

- With the completion of *Building on Strengths: Campaign for the University of Manitoba*, \$41.2 million was raised over the past five years for scholarships, fellowships and bursaries, resulting in annual allocations to student support increasing from approximately \$4 million in 1998-1999 to over \$7 million in 2002-2003.
- Funds raised for the construction of the University of Manitoba - Selkirk Avenue and the Aboriginal Students' Centre will enhance accessibility by creating new facilities for ACCESS programs and services for Aboriginal students.
- Programs "to recognize and celebrate excellence in our students, faculty and staff" include: "Marks of Achievement" on the home page, "Now You Know" print ads, promotional brochures ("Our Students Are Taking Centre Stage" and "Research Means the World to Us").

## 2. Attract and Retain the Best

### *Agricultural and Food Sciences*

- To develop a recruitment plan for students, the faculty hired a research group to conduct focus groups and the Faculty commissioned a marketing plan for recruitment.

### *Architecture*

- The Faculty has initiated a 'grow our own' Ph.D. program by assisting full time faculty to complete their Ph.D. at another university, but who will continue with their positions in the Faculty

### *Continuing Education Division*

- One of the six priorities of the Division relates to a "Healthy Workplace" which creates a work environment to reward and encourage excellence.

### *Dentistry*

- In the past the faculty complement has been dominated by males. With the increase in the number of female undergraduate students, the recruitment of female faculty members has been a priority. This priority has been met with 7 of the 8 recent hires being female, all at the assistant professor rank.
  - A new faculty member in Dental Hygiene has been mentored over the past year and encouraged to continue her education at the doctoral level. She has subsequently enrolled in a Ph.D. program in the Faculty of Medicine.
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### *Environment*

- Programs in schools, and with research partners, are in place to attract high quality undergraduate and graduate students. For example there is a high school visitation program where faculty members visit high schools, including some in rural Manitoba. Further the faculty encourages high school students to become involved in research e.g. through ArticNet and the research icebreaker.

### *Human Ecology*

- The Faculty attempts to offer start-up funds to all new staff to facilitate preliminary research that will make applications for larger research projects to the national granting agencies more successful. For this same purpose, the Faculty offers new academic staff a reduced teaching load, which may include no teaching for 6 months and a reduced load up to 12 months. The Faculty also releases the teaching time of existing staff for research when the research program is particularly demanding, or when research awards demand that minimum percentage of time is spent on research.

*I.H. Asper School of Business*

- Two professorships recognizing academic excellence have been established: The Bryce W. Douglas Professorship in Corporate Finance and Stuart Clark Professorship in Financial Management.

*Law*

- Increased support for research has been provided including the appointment of an Associate Dean (Research & Graduate Studies). There has also been increased support provided to faculty on probationary appointments to attend conferences and present research.
- A new functional allocation of administrative responsibilities for support staff has been introduced. There continues to be support for training and professional development for support staff.

*Libraries*

- The mentor program is being extended to support staff and Library technology training is being facilitated e.g. through discussions with Red River College.

*Medicine*

- The Faculty is establishing, in consultation with partners such as the Winnipeg Regional Health Authority (WRHA) and Research Institutes, a strategy process to determine the numbers and distributions across disciplines of clinical and basic science faculty required to optimally sustain the teaching research and service and administrative programs in the Faculty, with a long term view of anticipating academic needs. The first stage in this process was the accreditation institutional self-study process, during which a significant amount of data were collected regarding faculty numbers, recruitment and faculty teaching hours in the Pre-Clerkship curriculum (first 2 years of the undergraduate medical education program).

*Music*

- Due to recruiting efforts, including outreach to music educators in Manitoba and the surrounding provinces and states, web presence, and use of modern marketing materials and advertising, in the past three years, application inquiries have nearly tripled. Auditions have increased by 50%. Admissions have remained highly selective, enabling the School to remain within its targeted enrolment numbers. In addition, retention rates have increased dramatically to over 90%, from a low of less than 40%. The fourth year class stands at 50 students out of an admitted class of 58, compared to only 12 students who graduated two years ago.

### *Pharmacy*

- Applications for the 50 spaces have increased from 155 in 2001, to 340 in 2004. Further, entry level GPA for admitted students (without exemption) is also increasing, with a minimum adjusted GPA in excess of 4.0 for 2004. Over the last five years, on average, 93.6 percent of the entry cohort has successfully graduated with a B.Sc. (Pharm), within the four years of entering the undergraduate program. In 2004, a new admissions category has also been introduced to facilitate recruitment of applicants of Aboriginal ancestry (10% of the admissions cohort).

### *Physical Education and Recreation Studies*

- The "Student Recruitment Project" involves: focus groups with current and prospective students, and with staff and faculty members, phone calls and follow-up to all high school guidance counsellors in Manitoba, as well as, community and school presentations. There has been a significant increase (31% overall) in applications to undergraduate programs for this Fall.

### *Science*

- The Faculty has hired 44 new academic staff in the past four years. All but one of the 38 hired at the Assistant Professor rank or above are funded in their research programs. The Faculty and the University have invested significantly in the development of these new staff. Together with the Office of the Vice-President (Research) the Faculty has provided \$1.9 million in startup funds to help in the set up of laboratories and the beginning of their research careers.

### *Social Work*

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- New Faculty receive a new computer, a reduced teaching load for their first year, mentoring, and assistance in identifying and applying for research grants. These provisions are also made available to continuing faculty in ACCESS programs who are pursuing Ph.D. studies.
- The Faculty's 'support staff organizational review' is underway and the agreed-upon recommendations will be implemented.

### *Office of the Vice-President (Research)*

- Eight successful nominations for Canada Research Chairs were submitted, four resulting in the recruitment of top international researchers and four resulting in the retention of top researchers.

### *Office of the Vice-President (Administration)*

- A senior purchasing position has been established to oversee construction and scientific purchasing. This individual has been instrumental in refining the tendering process for major capital projects. The appointment and strengthened procedures have improved

internal relationships with faculties and schools and enhanced the service provided by Purchasing.

*Office of the Vice-President (External)*

- During *Building on Strengths* campaign \$11.7 million was committed for chairs and professorships, which assists in recruiting world class scholars, who in turn recruit other faculty and attract top quality graduate students.
3. Be a Centre for Research and Graduate Education that Makes a Difference to our Province, our Nation and our World

*Agricultural and Food Sciences*

- The Faculty has established goals to be achieved in research funding and publications. For example research funding is currently at \$5.3 million; the goal is to achieve \$7 million. Research publications are at 528; the goal is to increase the number, and the quality by focussing more on international journals. Strategies to meet these goals have been established.

*Architecture*

- A proposal for a Ph.D. program has been developed and is at the "letter of intent" stage in the approval process.
- The first initiative of the Centre for Flood Architecture was the successful international conference: *Rural to Urban Resettlement: The Three Gorges Project* co-ordinated by the Faculty with Chongqing University and Southwest Jiaotong University in China.
- The Department of Architecture is the leader of a consortium of the University of Calgary, University of Waterloo, and three universities from each of Mexico and the United States that received \$160,000 in funding from Human Resources and Development Canada (HRDC). The project is related to NAFTA and the movements of architects between countries and focusses on matters such as language and design skill sets.

*School of Art*

- Arrangements have been made with the Asian Art Museum of San Francisco to allow travel-study courses relating to their major collections. Students enjoy free admission, access to galleries, study center, use of the education rooms, and class time in galleries to work with the works of art. The Asian Art Museum, a premier cultural institution parallel with the Metropolitan Museum in New York, will also promote our courses in their glossy magazine, *Treasures*, and help to recruit international students who can take our courses for university credit. A similar liaison has been established with the San Francisco Museum of Modern Art.

- Student and faculty exchange agreements are being discussed with California College of Art. It is especially interested in our Aboriginal and Inuit Art courses which the School of Art will teach there, i.e. their students would enrol in U of M courses.

### *Arts*

- The Faculty has implemented a policy which provides a 0.5 course teaching release for each year of a grant received from SSHRC, CIHR, and NSERC. This policy provides an incentive for faculty members to apply to the granting councils, it helps retain our best researchers, and it allows faculty to spend more time on their research.
- The success of the Institute for the Humanities has led the Faculty to form the Social Science Research Unit (SSRU) to act as a catalyst for social science research. While the new Unit is still awaiting space, funds have been committed for a computer research lab and for staff.

### *Education*

- The expectation of an externally funded research program is now part of every letter of offer to new faculty members. Each new professor receives research start-up support, and a research and grant-writing assistant is available to all faculty.
- Faculty members in Education with the direction of Principal Investigator, Gordon Robinson, Associate Dean of the Faculty of Science, and several other partners were one of 14 successful applicants invited to submit a full (NSERC) proposal for a grant for a Centre for Research in Youth Science Teaching and Learning (CRYSTAL). If successful, the grant (\$978,000) will support the project titled "Understanding the Dynamics of 'Risk and Protective Factors in Promoting Success in Science and Mathematics Education.'"
- The Faculty has established partnerships with Carleton University in Canada, Universidad Nacional Autonoma de Mexico and La Universidad de las Americas in Mexico, and Georgia State University and Portland State University in the United States, to initiate a program that will develop teachers who are knowledgeable about educational cultures in North America and skillful at analyzing and adjusting to these different educational environments. The program is funded by the HRDC Program for North American Mobility in Higher Education.

### *Engineering*

- Every academic staff member is expected to maintain an externally funded research project. At present, approximately 90% of eligible staff hold NSERC grants.
- A world class nanotechnology laboratory that will support research across the University and the Province is nearing completion.
- The Faculty has placed a priority on support of local engineering research initiatives. One example is how the work of a graduate student is a featured component of the provincial strategy in groundwater management. Another example is the role played in evaluating

road traffic for the Manitoba Department of Highways, and the cities of Winnipeg and Brandon.

#### *Environment*

- An Associate Dean (Research) has been appointed to provide leadership in initiating and promoting research and research partnerships in the Faculty, the University, Canadian Universities, and government and non-governmental organizations.
- The Faculty has placed a high priority on promoting network building with other universities in Canada and internationally (through, for example the NCE (Network Centres of Excellence) North Research Forum, the University of the Arctic).

#### *Graduate Studies*

- A new Associate Dean (Programs and Planning), Dr. Pamela Hawranik (Nursing) is responsible for the recruitment of students, including students of Aboriginal ancestry, international students and others.

#### *Human Ecology*

- The Faculty is developing research partnerships with several other institutions such as the Manitoba Institute for Child Health, St. Amant and Riverview.
- The Faculty has created two part-time positions to support researchers in the preparation, writing and submitting of grant requests, scientific publications and reconciliation of grant accounts. The effect of this administrative support on research productivity will be evaluated later in the academic year. Preliminary indications are positive.
- The Faculty is improving working conditions of graduate students by upgrading offices, workstations, computer access and management of resources.

#### *I.H. Asper School of Business*

- The research productivity of the faculty and doctoral students has continued to grow. At the 2003 Administrative Sciences Association of Canada Conference (ASACC), the Asper School was given an award for the most papers accepted by ASACC in relation to size of the School.

#### *Law*

- A new Research Centre has been developed in space vacated by the library which moved into the new addition to Robson Hall. The Centre has eight offices for Chairs, Centres and research programs. Dedicated space has also been provided for graduate students.

### *Medicine*

- The communication of research opportunities from the Research Office is now regular, and occurs by email at least twice per month. The research office is very effective in facilitating faculty meeting competition deadlines with a complete application. As well, particular researchers are contacted in person when unique opportunities arise in their field. This assistance is greatly facilitated by the *Research Inventory in the Faculty of Medicine*, recently published.
- There are increased rates of participation in Resident Research Day and Student Research Days for graduate students. The latter is now firmly established with sponsorship of CIHR as a National program, and has been joined with annual meetings of the Associate Deans for Graduate Studies in Faculties of Medicine, under the auspices of the Association of Canadian Medical Colleges. This has increased opportunities and information available for funding graduate students and resident research projects.

### *Music*

- Faculty members continue to perform, conduct research and create art around the world. For example, this summer Dr. Kurt Markstrom returned to Italy to continue his research on 18<sup>th</sup> century opera composers; Charles Horton conducted his choir, "All the King's Men" in Westminster Abbey and St. Paul's Cathedral; Judy Kehler Siebert travelled to several Eastern Europe countries to perform and teach; David Moroz returned to Alberta to lead the "Bridge" program, which brings Chinese musicians to Canada. In addition, two professors took ensembles on international tours to share the high quality of University of Manitoba musicians with Europe: Henry Engbrecht led the University Singers in concerts in Ireland and the United Kingdom, and Dr. Richard Gillis took the Jazz Orchestra to Germany. In the past year, the head of the composition area, Dr. Michael Matthews, had works performed in Norway, Mexico, New York City, Saskatchewan and Ontario.

### *Nursing*

- The development of a new position in the Faculty entitled Coordinator, Faculty Research Development, will have a positive effect upon the Faculty's ability to be competitive in national grant competitions. The Faculty secured close to \$1,000,000 in grant funds this past year.
- The Faculty received approval to proceed with the implementation of the Ph.D. in Cancer control.

### *Pharmacy*

- Support for ongoing research exceeded \$2.8 million for full time faculty appointees in 2002-2003. Within Canada, the Faculty ranks second overall with respect to research income (Faculty of Pharmacy, University of Montreal ranks first).
- In June 2004, the Dean was invited to visit the China-Japan Friendship Hospital as part of a scientific exchange program between the National Natural Science Foundation of China,

and CIHR. As a result of the visit, faculty, in combination with research colleagues in the Faculty of Medicine, are undertaking research into the efficacy of many widely used Chinese herbal medicines, and formalizing their involvement in combined graduate education programs between the University of Manitoba, and the China-Japan Friendship Hospital.

### *Science*

- Major new and continuing thrusts for research can be summarized as:
  - a) Biological Sciences (botany, microbiology, zoology)
    - biological sciences including a unique in Canada transgenic fish facility and the newly established Aquatic Research Group.
    - biodiversity involving species identification, the analysis of population diversity and biological systematics using modern molecular techniques.
    - protein biochemistry to better understand the general principles of protein structures.
    - boreal forest ecosystems with a view to protecting and rehabilitating them.
    - industrial biotechnology involving collaboration with biotech industries.
  - b) Physical Sciences (chemistry, physics, and astronomy)
    - science of materials to elucidate many properties of matter with applications far beyond those originally envisaged particularly in the medical field.
    - nanoscale physics involving the physical properties of nanostructured systems on a scale of a few nanometers (one nanometer equals one billionth of a meter).
    - subatomic physics probing the most fundamental constituents of matter and influencing the understanding of a number of areas including the origin and structure of the universe, the decay of radioactive species, and imaging techniques of nuclear medicine.
    - mass spectrometry which enables the rapid and precise analysis of complex, biological macromolecules and applications to proteomics.
  - c. Mathematical and Informational Sciences (computer science, mathematics, statistics)
    - functional analysis in mathematics including application to quantum physics, engineering and mathematic finance.

- mathematical modelling of disease control strategies in areas such as the control of diseases such as HIV and SARS.
- advanced networking examining, for example, the problem of communicating among computers.
- There has been a rapid expansion of the number of graduate students in the Faculty of Science. There were 288 graduate students in 2003-2004 representing an increase of 57% over the past 4 years. This increase is due in part by an enhanced ability to offer financial support to graduate students including the introduction of a Graduate Studentship program in the Faculty which awards \$5,000 per year to graduate students who do not have a major source of funding. Presently, there are 50 graduate student recipients of these awards.

#### *Social Work*

- The major research facility within the Faculty, the Child and Family Services Research Group, is undergoing a process of review and renewal.

#### *Office of the Vice-President (Research)*

- Several initiatives were undertaken to build broad awareness of the University's research expertise and capabilities including two "Focus on" Free Press inserts (one on health research and one on Smartpark); the production of the brochure *Research Means to World to Us* in conjunction with Public Affairs; the development of a periodic research review to be released in the spring of 2005 to external stakeholders, both locally and nationally.
- A research and intellectual property affiliation agreement was negotiated between the University of Manitoba and St. Boniface General Hospital. Discussions are underway for similar agreements with the Children's Hospital Foundation with respect to the Manitoba Institute of Child Health, and with the Health Sciences Centre.

#### *Office of the Vice-President (Administration)*

- A grant accountant has been positioned at the Bannatyne Campus and there have been additions to grant accounting staff at the Fort Garry Campus. These resources are devoted to supporting research activities at both campuses and are supporting researchers in applying for and administering grants.
- A senior purchasing resource consultant dedicated to research has been hired to be involved at the grant application stage, to assist in developing budget estimates, to identify suppliers and to work with researchers to refine equipment specifications.

#### *Office of the Vice-President (External)*

- The Government Relations Office has assisted senior administration to build broad awareness of the university's research expertise and capabilities with government and community stakeholders.

- One of the objectives identified in the strategic plan is to increase the level of graduate student funding. One example is the Graduate Students Association's pledge of \$1 million over four years towards a graduate fellowship and bursary award fund. A private donor offered a challenge grant of \$500,000, which was matched through the Manitoba Scholarship and Bursary Fund. By 2006, the endowment to support this program will be \$3 million.
  - The Alumni Association has promoted teaching and research at the university to alumni by using the *On Manitoba* magazine, web site, and e-newsletter to communicate successes in research to graduates. Examples include the "Professor Profile" and "Research News" sections in each edition of the magazine.
4. Provide the Human, Physical and Technological Infrastructure Necessary for Learning and Research

#### *Architecture*

- The Technology Program Fee investment plan was completed with input from the students. All undergraduate students are assessed a \$400 Technology Fee with \$100 allocated to the technology endowment fund and \$300 to be expended on technology items of direct benefit to students.

#### *School of Art*

- Upgrades to the FitzGerald Building and other School of Art buildings have been implemented. Safety upgrades were completed in the Ceramics and Sculpture area, and the Video area re-designed to create more space for student workstations. A Faculty Resource Centre has been created and includes Mac and PC workstations, mailboxes, information on grants and fellowships, and other support materials.
- The Robert Harrison Sculpture Garden was developed between the Sculpture and Ceramic Building and the Painting Barn. The sculpture garden provides a restful and reflective space for students, faculty and visitors. New plantings provide shaded areas for drawing in the summer.

#### *Arts*

- Improvements have been made in several laboratories. The most significant of these has been the development of a 3-D Imaging Laboratory for biological anthropology and very extensive improvements to the facilities for the growing group of behavioural neuroscientists including the construction of a new wetlab. The archaeological laboratory and storage facilities are currently being renovated. In addition, there has been an expansion and upgrade of the Language lab and discussions are underway to co-ordinate Language Lab expansions with other users, notably in Continuing Education and the Office of Student Services.

- Policy changes have been made to facilitate computer and information technology use among individual researchers including providing all new faculty with an office computer and implementing a system for regular replacement and upgrading. A series of upgrades has begun, and discussions are underway for an upgrade in network wiring capacity. In addition, new data projectors have been purchased for teaching and for academic conferences.

#### *Continuing Education Division*

- The renovations required to transform U of M Downtown into "The University of Manitoba - Downtown: Aboriginal Education Centre" (AEC) are well underway. The intent of AEC is to create a very positive, comfortable learning environment for Aboriginal students enrolled in the Aboriginal Focus Programs. AEC will occupy 15,500 square feet in Place Promenade, an increase of 6,300 square feet over the old space. The student area (4 classrooms, breakout rooms, computer facility, lounge and ceremonial room) will be ready for use in September with the Aboriginal Focus Programs office space (17 offices) ready for occupancy in November. The space will also be used for other certificate programs. An events coordinator has been appointed to develop community service programs and cultural events to create profile for - but, more importantly, to bring people into - the Centre.

#### *Dentistry*

- The lecture facilities have recently been upgraded to allow the adoption of a digital curriculum where all students and staff will use computer technology with a comprehensive digital library to enhance learning and communication.
  - New state-of-the-art radiographic equipment for teaching and dental treatment in the undergraduate clinic has been installed.
- 

#### *Engineering*

- A "Mobile Computing" (Laptop) environment will be introduced into all programs in conjunction with the EITC construction and renovations.

#### *Environment*

- The Faculty participated in a Network Centres of Excellence proposal that was successful in obtaining the funds to outfit a Coast Guard Vessel for research into Arctic Systems Science. This project is a collaborative venture with Scientists from several universities across Canada. One of the four themes is led by Faculty members and all four themes have input from Faculty members and students. Facilities on the ice-breaker include state of the art labs, lab equipment, computers, sampling and analytical technologies. In addition the Faculty participates in the research consortium that works on the Coast Guard Vessel, *Namao*, to conduct freshwater research in Lake Winnipeg.

### *Human Ecology*

- New research facilities are being created for the Centre for Developmental Health as well as new space for research assistants and graduate students.
- The Faculty is supporting the training of a support staff member to work with academic staff on web-based delivery of courses, as well as upgrade and maintain the information and promotional web pages of the Faculty.

### *I.H. Asper School of Business*

- The Asper School has renovated two classrooms to provide state of the art audio and visual technology. Five classrooms have now been refurbished in this way.

### *Law*

- The 4,000 square foot expansion to the 4<sup>th</sup> floor of Robson Hall was completed. In addition a new Legal Research Centre was developed.

### *Libraries*

- **UM Links** was launched to improve access to library resources because the user can move directly from a citation in a database to the full text of the corresponding article. This new service was immediately popular. In the month of March it was used 125,000 times. Another example of improved access are the improvements made to the Libraries web site. The use of the web site increased from 16.5 million page hits in 2001-2002 to 31.4 million page hits in 2003-2004, an increase of 90%.

### *Medicine*

- A current and continuing process for the accurate determination of space utilization in the Faculty, based on an academic and administrative needs assessment, has been established including the completion of a Space Audit.
- The institutional self-study conducted for accreditation of the MD education program (2004) and the Internal Review of the Dean's office (1999) both identified requirements for increases in administrative support staff. In 2004, a second person was recruited to each of the administrative and financial offices and a third financial officer is about to be recruited.
- The consolidation of the Dean's offices into the new suite of offices in Brodie Centre has had a very positive impact on working relationships, teamwork, communications, planning exercises internal to the Dean's office, and in the profile of the Dean's office, and its communications with the University and external communities.

### *Nursing*

- The Faculty recently completed computer upgrades for all support staff and faculty. Video conference equipment was upgraded to provide better linkages with other program sites in Brandon, The Pas, Thompson, and Norway House. For the first time, the faculty was able to connect to Norway House via the Manitoba Telehealth equipment housed in the hospital in that community.

### *Physical Education and Recreation Studies*

- Renovations include converting the Human Anatomy Laboratory to an Anatomy Lab/Multipurpose Athletic Therapy classroom; Renovations of the Human Performance Laboratory to better accommodate teaching, research, and community service; and renovation of the racquetball/handball courts.

### *Science*

- Major improvements have been made to the aging and obsolete facilities in the Buller building which houses the Departments of Botany and Microbiology. Over \$2 million has been invested to renew the laboratories in the building.
- The Herbarium has been upgraded with a large CFI grant. This facility is an important provincial as well as national and international resource for the identification and study of local plants.
- Delta Marsh Field Station is an important teaching and research facility, especially for wetland and aquatic ecology, landscape ecology, plant biology, songbird biology and behaviour ecology. The facility has been improved with the construction of a new residence to house researchers and students who spend significant periods of time studying and doing research at the Marsh.

### *Office of the Vice-President (Research)*

- With support from the federal indirect costs of research program, a Manitoba Research Data Centre has been established (with operating support provided by the Council on Post-Secondary Education) to support social science research at Manitoba's three post-secondary institutions. The facility is on the 300 level of Brodie Centre on the Bannatyne Campus and coordinated by the Academic Director, and a data analyst from Statistics Canada.

### *Office of the Vice-President (Administration)*

- The University is currently moving from mainframe systems to modern administrative systems which are web-based. The implementation of these new systems will play a key role in moving the University forward to facilitate better academic and administrative planning while at the same time allowing further improvements to internal processes and service delivery. Seven systems are in various stages of testing and installation (financial

management, student information, human resources, luminus (student portal), private funding and alumni, academic record, and library).

- Processes have been implemented for student tuition payments by raising awareness of the WEB banking service. During the August, 2003 to April, 2004 period, almost 12,000 payments representing \$12.4 million were processed on-line. These volumes increased by approximately 50% over the prior year to the point where 1 in 5 tuition payments are now processed on-line.
- A review of the high performance computing facility is underway. The demand for access exceeds its capacity, hence the review will consider how the facility's capacity can be increased. Discussions are also underway with the Western Canadian High Performance Computing Consortium.
- Construction has commenced on several major capital projects on campus including the Engineering and Information Technology Complex, Richardson Centre for Functional Foods and Nutraceuticals, University of Manitoba on Selkirk Avenue and Environmental Safety Building. Design has commenced on the Centre for Music, Art and Design Building and the Pharmacy Building.
- Improved procedures related to security card access have been implemented at the Bannatyne Campus. Baseline funding was provided to Physical Plant through the resource allocation process to facilitate the hiring of an additional support staff member to perform card access administration as well as other much needed administrative assistance to the Bannatyne Physical Plant office.
- Physical Plant is developing a renovation planning approach which integrates strategic initiatives of faculties, schools and administrative units with Physical Plant's infrastructure upgrades to optimize resources in the orderly development of the campus. To date, meetings have been held with Deans and Directors from six faculties and schools. Several projects have been advanced through cost-sharing incentives.
- Physical Plant is investigating the purchase of a facilities management asset software program that allows for the collection, storage and reporting of facilities/infrastructure condition and related asset data. This software allows for a holistic view of all the facility assets including, buildings, security elements energy, and utility infrastructure and is able to quantify and centrally manage all facility needs including deferred maintenance, functional requirements, vulnerability, energy requirements and generate reports on requirements of the facilities including reports on different funding requirements and funding.
- Physical Plant appointed an energy advocate and has set up technical and administrative support to expand on the existing energy conservation program. An energy savings reporting format has been established to track progress. Mechanical and electrical design guidelines are in place. Annual savings targets have been established. Continuous research and opportunities are explored for new energy and water conservation projects.

- The Environmental Health and Safety Office developed and is delivering an expanded program of seminars and workshops to ensure supervisors and staff are aware of their responsibilities, as well as providing technical guidance on specific topics. For example, all Physical Plant staff attended a general health and safety orientation session delivered by EHSO. This is also one of the new course offerings to new staff and others who may wish to attend. As well, new sessions covering Asbestos Awareness, Supervisory Due Diligence, Laboratory Safety, Indoor Air Quality, and Radiation Safety Orientation have been added to existing training sessions.
- All hazardous chemical, biological and radioactive waste at the University is now collected and removed from each area that generated it, and such waste is transported to the Fort Garry Waste Management Facility. At this facility, which will be replaced by a new facility under construction, it is consolidated and packaged for removal by a commercial waste disposal company. This is an extremely efficient and cost-effective activity for the University.

#### *Office of the Vice-President (External)*

- \$90.4 million was raised during the campaign for infrastructure. However, funding is still required for several major capital projects and so this area is the top priority for the Department of Private funding. Since April 1, 2004, \$5.8 million has been raised for capital projects.

#### 5. Be at the Centre of our Community: On Manitoba

##### *Agricultural and Food Sciences*

- The Faculty is providing leadership in the emerging area of functional foods and nutraceuticals during the construction of Richardson Centre for Functional Foods and Nutraceuticals. The Faculty is working with governments and the private sector to establish a new research program in bio-fuels.

##### *School of Art*

- The School has actively sought individuals of First Nations ancestry to bring a diversity of cultural experiences to areas of expertise with two appointments made this fall. A working group will be creating curriculum in this area, for review by the School Council.

##### *Arts*

- Two new academic initiatives will directly contribute to the building of a stronger Manitoba:
  - *The introduction of a new Master's degree in School Psychology.* This will enhance the province's ability to serve its population by providing a full graduate program for School Psychologists.

- *The development of a proposal for a Ph.D. program in Native Studies.* The University of Manitoba is a world leader in Native Studies and a new graduate program at the doctoral level could serve to dramatically increase opportunities for academics interested in the issues related to Aboriginal peoples in Manitoba and Canada.

#### *Continuing Education Division*

- The essence of the mission of the Continuing Education Division is to be at the centre of the community. To respond successfully to a range of community needs for flexible and relevant opportunities for continuing and university level education, the Division must be "centred" in the community. Creating partnerships between members of the University community and agencies, organizations, and associations in the external community is a continuous process and provides the mechanism for achieving our mission.

#### *Dentistry*

- A proposal is under consideration to partner with the University College of the North to educate Dental Hygienists in the north.
- A dental clinic, opened on October 2003, has been established to provide dental service to the residents of Norway House.

#### *Education*

- The Faculty has become a leader in the disability education community, with its Inclusive Special Education programs, and collaboration through the Centre for Disability Studies.

#### *Engineering*

- The Faculty continues to be very involved in the engineering profession with faculty members holding positions in the Association of Professional Engineers and Geoscientists of Manitoba (APEGM) (e.g. J. Doering is a Councillor and B. Stimpson chairs the Board of Examiners) and the Canadian Council of Professional Engineers (CCPE) (e.g. R. Britton is a Board member and D. Ruth is vice- chair of the Accreditation Board).

#### *Environment,*

- An External Advisory Board is being established with representatives of government, industry and non-governmental organizations to advise the Faculty on its future role and priorities.
- The Faculty developed the successful Schools on Board program which takes high school students from Manitoba and other parts of Canada onto the Icebreaker *Amundsen* to observe researchers and to gain hands on experience.

### *Human Ecology*

- The proposed Medical Textiles training and research programs will support the policy directions of both the Manitoba and Federal governments. The initiative will train people who help frontline health care and emergency personnel protect themselves from infectious agents, chemical and biological hazards.

### *I.H. Asper School of Business*

- The 2004 edition of the Curry BizCamp saw 90 youth between the ages of 13-20, from either a lower socio-economic neighbourhood or were identified as "at-risk", come to the Asper School to learn about Entrepreneurship. Another 47 youths between 10-12 years old learned about entrepreneurship at the Asper School through the joint Asper Centre/Mini U New Venture Adventure Program. The Curry BizCamp continues to receive international attention from such groups as the International Council of Small Business and the US Association for Small Business and Entrepreneurship.

### *Law*

- The Faculty has enhanced its relationships with the bar and bench, for example:
  - judge shadowing program for all first year students
  - new clerkship program with Manitoba Court of Appeal
  - expanded mentors program with the Manitoba Bar Association
  - active participation with the "Future of Law in Manitoba" committee
- Publications of the Faculty are important for outreach and are:
  - "Underneath the Golden Boy" - a review of Manitoba statutes and case law
  - "Court of Queen's Bench Rules - Annotated" - a guide to the Rules of Court
  - "The Asper Review of International Business and Trade Law"
  - "The Supreme Court Series" - the work of members of the country's leading court
  - The Manitoba Law Journal - recently reorganized

### *Libraries*

- The site for the Canadian Wartime Participation project was completed. The 9,620 images of documents and photographs were scanned from a number of collections relating to Canada's participation both at home and abroad. Researchers wrote modules for grades, 4,6,9 and 11 students and teachers of history relating to this subject. The project was partially funded by a Canadian Council of Archives grant of \$24,500.

### *Medicine*

- Guided by continuous review of health profession human resource needs in Manitoba (in concert with government assessments) the Faculty is collaborating in recruitment strategies and innovative programs of educating more health professionals to provide quality health

care services to presently underserved populations. This includes consultation with the Provincial Physician Resource Planner.

### *Music*

- Faculty play a vital role in many music organizations in the city. For example they serve as:
  - the artistic director of the Winnipeg Jazz Orchestra;
  - an artistic director of GroundSwell New Music Series;
  - the artistic director of the Royal Winnipeg Ballet;
  - the artistic director of the Winnipeg Chamber Music Society;
  - the director of Canzona early music choral ensemble;
  - creative consultant to COOL FM;
  - board member of the Jazz Winnipeg Society; and
  - the past president of the Manitoba Orff Chapter.
- Students continue to collaborate with arts organizations, for example performing with the Winnipeg Symphony Orchestra, Manitoba Opera and Royal Winnipeg Ballet. Students also perform throughout the province for high schools and communities.

### *Nursing*

- The Faculty has appointed an administrative contact for Norway House students studying at Fort Garry campus. The Faculty continues to work closely with the Norway House Cree Nation to ensure that the needs of Aboriginal nursing students from that northern community are addressed in our program.

### *Pharmacy*

- Pharmacy faculty play a leadership role on national and provincial decision making bodies. In addition faculty provide mentorship for clinical practitioners through clinical consultancies at HSC and St. Boniface Hospitals.

### *Physical Education and Recreation Studies*

- This summer Great West Life covered the cost of providing a "care worker" for children attending Children's Programs. This allowed between 5-10 children to attend, who would not have been able to without the assistance of a "care worker". In addition a grant from the Winnipeg Foundation provided financial resources to assist with the accessibility initiative in the Children's Programs. This summer 65 youth described by their sponsors as "at risk" attended the camps.
- The Faculty partnered with WRHA and the Province of Manitoba to develop "Winnipeg in Motion", a major community-wide strategy to promote physical activity.

### *Social Work*

- The Faculty continues to maintain the current student diversity where one-third of the Fort Garry Campus students and approximately 90% of the Inner City Program students and Thompson students are non-traditional (mostly Aboriginal) students.
- Collaboration continues with Collège Universitaire de Saint-Boniface to design and implement a BSW degree (en français) to serve the needs of Franco-Manitobans.

### *Office of the Vice-President (Research)*

- A university-wide Energy Research Forum was planned in consultation with Government Relations, involving Manitoba Energy, Science and Technology, to foster information sharing and research collaborations in an identified area of high priority to the province. As the result of the forum, plans are underway to create an Energy Research Centre at the University. As well, proposals for several new research chairs in the field of alternate energy are under development.
- More emphasis in technology transfer programs has resulted in a steady increase in invention disclosures (43 in 2003-2004 vs. 21 in 2001-2002); further, these services are now offered, under formal agreements, to researchers at both of the University's affiliated teaching hospitals, CancerCare Manitoba and to our two sister institutions in the Province. In 2003-2004, 13 new patent applications were filed and 4 new patents were issued, six new licenses and four new options were executed, and two new companies were established (International River Power - ultra-lowhead run-of-the-river turbine design; Nibtec - arthritis therapeutic).
- several networking programs at Smartpark were initiated to strengthen connections between local industry and our research community, including *Smartpark Interactive* and *Cash @ Smartpark*. Plans are underway to combine these events with facilities tours.

### *Office of the Vice-President (Administration)*

- Physical Plant made significant progress to improved recycling initiatives and waste prevention activities under the direction of the Sustainability Steering Committee. The U of M Recycling and Environmental Group was recently awarded a 3<sup>rd</sup> prize in the CAUBO Quality and Productivity Awards.
- The University Centre Pharmacy assumed responsibility for the MILE (Medication Information Line for the Elderly) program from the Faculty of Pharmacy. The medication information line has been an outreach service of the University since 1985, assisting consumers and health care professionals in achieving optimal drug therapy through the provision of drug information. MILE provides a rich resource of dispensing medication and health information to the University community and the public at large.

*Office of the Vice-President (External)*

- Public Affairs has been working with Destination Winnipeg and Travel Manitoba to promote both campuses as vital "areas" within the city and province, worth visiting, doing business in, or otherwise interacting with.
- In its first year, the Government Relations Office has endeavoured to ensure that governments understand the activities, capabilities, needs and opportunities at the University, and the University understands the activities, capabilities, needs and opportunities of the three levels of government. Since its inception in September 2004 the office has facilitated 26 official visits to the University by ambassadors, elected and non-elected government officials and community leaders, and more than 100 meetings with members of the same stakeholder groups.

17 November, 2004

**Report of the Senate Executive Committee**

**Preamble**

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

**Observations**

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

Professor Judith Owens will be the Speaker for the Executive Committee for the December meeting of Senate.

2. **Comments of the Executive Committee of Senate**

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

Respectfully submitted,

Dr. Emőke Szathmáry, Chair  
Senate Executive Committee

Terms of Reference: *Senate Handbook* (revised 2000), Section 7.

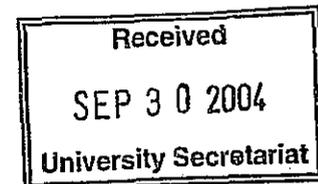
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UNIVERSITY  
OF MANITOBA

Asper School of Business  
*Faculty of Management*

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## MEMORANDUM

**DATE:** September 28, 2004  
**TO:** Dr. Robert Kerr, Vice-President (Academic) & Provost  
**FROM:** Glenn Feltham   
**SUBJECT:** Request to Establish a Professorship in Financial Management

---

Enclosed is a request from the I.H. Asper School of Business to establish a Professorship in Financial Management.

It is my understanding that the request to establish a Professorship is first sent to you and copied to the Vice-President (Research).

The request to name the Professorship will be sent to the Senate Committee on Honorary Degrees.

Please let me know if I can be of any assistance in facilitating this proposal through the approval process.

Copy: Dr. Joanne Keselman, Vice-President (Research)  
Jeff Leclerc, Acting Secretary of Senate  
Dr. Larry Gould, Acting Head, Department of Accounting and Finance

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



**Proposal to Establish a Professorship in Financial Management  
In  
The I.H. Asper School of Business**

As required in Policy 428 (2.1), this is a proposal to establish a Professorship in the I.H. Asper School of Business.

<b><u>Type of Appointment:</u></b>	Professorship
<b><u>Name of Professorship:</u></b>	Professorship in Financial Management
<b><u>Purpose of Professorship:</u></b>	The purpose of the proposed professorship is to enhance the study of financial concepts into the undergraduate and graduate finance and accounting curriculum, which is a major area of research and teaching in the I.H. Asper School of Business. The Professorship will allow the School to recognize outstanding scholarship in these important areas, and hire or retain an outstanding scholar in finance or accounting.
<b><u>Relationship to the Goals of The Unit:</u></b>	Finance and accounting are core to the curriculum at both the graduate and undergraduate levels. With the difficulty in recruiting and retaining faculty members in these areas, the Professorship will make our School more attractive. In addition, the Professorship will provide support for our goal of increasing the research output of the finance and accounting area.
<b><u>Funding:</u></b>	The Professorship is being established in recognition of Stuart Clark's gift of \$500,000 to the Asper School of Business. The funds have been placed into an endowment.
<b><u>Qualifications:</u></b>	The individual holding the Professorship will normally hold a tenured or tenure-track appointment at the I.H. Asper School of Business at the Associate Professor or Professor level. Normally, the individual will have a Ph.D in Finance or Accounting or a related discipline and will have an accomplished research and teaching record in the field of financial management.
<b><u>Term of Appointment:</u></b>	The Professorship will be awarded on a competitive basis for a five-year period.
<b><u>Selection Committee:</u></b>	The Selection Committee will consist of the Dean (or designate), the Associate Dean (Research), one Full Professor in Finance appointed by the Head of the Department of Accounting and Finance (if there are no Full Professors in Finance an Associate Professor),

one Full Professor in Accounting appointed by the Head of the Department of Accounting and Finance (same as above), and one Full Professor from the I.H. Asper School of Business appointed by the Dean.

Other Provisions:

The Professorship may not be held in conjunction with other endowed Professorships or endowed Chairs (but may be held simultaneously with an Honorary Professorship.)

September 28, 2004



UNIVERSITY  
OF MANITOBA

Office of the President

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

October 22, 2004

**TO:** Mr. Jeff LeClerc,  
Acting University Secretary

**FROM:** Dr. Robert Kerr,  
Vice-President (Academic) & Provost

**RE:** Establishment and Naming of Professorship in Financial Management



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In response to the 28 September 2004 memo from Dean Feltham on the above subject, and having received a copy of the formal proposal for the establishment of a Professorship in Financial Management, I am writing to indicate my support to this proposal.

Should you require further input from my office prior to forwarding this proposal to Senate for consideration, please advise at your earliest opportunity.

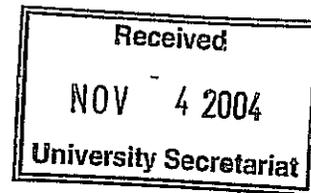


UNIVERSITY  
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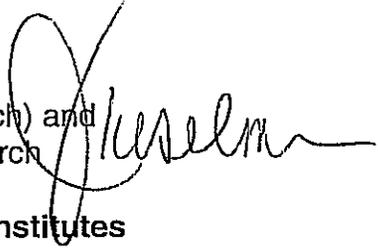
OFFICE OF THE  
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November 3, 2004



TO: Mr. Jeff Leclerc, Acting University Secretary

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

SUBJECT: **Periodic Review of Research Centres and Institutes**

Attached, please find reports which include recommendations relating specifically to the reviews of the Centre for Hellenic Civilization and the Centre for Research and Treatment of Atherosclerosis which were conducted by the Senate Committee on University Research according to *Policy 1405, Research Centres, Institutes and Groups*.

I would ask that you place these recommendations on the next agenda for Senate. Please feel free to contact me should you require any further information.

Thank you.

JCK/wc  
enclosures.

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

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**THE SENATE COMMITTEE ON UNIVERSITY RESEARCH  
SUB-COMMITTEE REPORT ON THE REVIEW  
OF THE  
CENTRE FOR HELLENIC CIVILIZATION**

**Preamble:**

1. Policy 1405, *Research Centres, Institutes and Groups*, stipulates that all research centres/institutes be reviewed by the Senate Committee on University Research (SCUR) on a periodic basis but not less than once every 5 years. Accordingly and following the approval by Senate of Policy 1405, the Senate Committee on University Research established a schedule for the review of all research centres/institutes.
2. For each research centre/institute identified for review, a sub-committee of the Senate Committee on University Research was established. In accordance with Policy 1405, the task of each sub-committee was to recommend to SCUR on whether a formal, independent review committee should be struck to conduct a full review. If a sub-committee was of the view that a full review of a specific research centre/institute was not warranted, it was further charged with recommending to SCUR on the continuance or termination of the research centre/institute.

**Observations:**

1. The review process followed that which is outlined in section 3.3.1 of Policy 1405, and involved a review of a report prepared by the Centre for Hellenic Civilization which contained:
  - a description of how and why the centre/institute has achieved and revised its original objectives; a detailed listing of its research and training accomplishments; a current membership list; and a detailed financial statement;
  - a five-year plan which identifies (in general) future research directions and development strategies; and
  - the names of individuals who could provide external assessments of the research centre/institute.
2. The Centre for Hellenic Civilization review sub-committee has completed its work, and its recommendation has been considered and approved by the Senate Committee on University Research. The membership of the sub-committee was as follows: Dr. Douglas Ruth, Chair (Engineering), Dr. Mary Kinnear (History), Dr. Rick Linden (Sociology).
3. The assessment of the sub-committee was as follows:

The Sub-Committee concluded from its review that the University of Manitoba Centre for Hellenic Civilization (UMCHC) has been very effective in building ties between the University and the Greek community, both in Winnipeg and abroad. The sub-committee was particularly impressed by the ability of the UMCHC to attract funds from the Greek government to support a teaching position. The ongoing archaeological activities at Olbia in Ukraine provides a valued link with not only the Greek community, but also the Ukrainian community.

The review report from the Centre contained an impressive list of publications by faculty members from various departments which focused on Hellenic studies. The sub-committee viewed these publications as direct and significant evidence that the UMCHC is indeed fulfilling its objectives to "encourage and facilitate the pursuit, dissemination and application of scientific knowledge and scholarship pertaining to any aspect of the material, intellectual, artistic or social culture of Hellas".

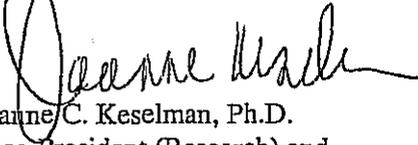
4. At the September 22<sup>nd</sup>, 2004 meeting of SCUR, the sub-committee recommended and SCUR approved the recommendation that a full review of the research centre/institute was not warranted and that the Centre for Hellenic Civilization should continue for a five-year period.

**Recommendation:**

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

**That the University of Manitoba Centre for Hellenic Civilization continue for a five year period, beginning January 1, 2005.**

Respectfully submitted,



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

**THE SENATE COMMITTEE ON UNIVERSITY RESEARCH  
REPORT ON THE REVIEW OF  
THE CENTRE FOR RESEARCH AND TREATMENT OF ATHEROSCLEROSIS**

**Preamble:**

1. Policy 1405, *Research Centres, Institutes and Groups*, stipulates that all research centres/institutes be reviewed by the Senate Committee on University Research (SCUR) on a periodic basis but not less than once every 5 years. Accordingly and following the approval by Senate of Policy 1405, the Senate Committee on University Research established a schedule for the review of all research centres/institutes.
2. For each research centre/institute identified for review, a sub-committee of the Senate Committee on University Research was established. In accordance with Policy 1405, the task of each sub-committee was to recommend to SCUR on whether a formal, independent review committee should be struck to conduct a full review. If a sub-committee was of the view that a full review of a specific research centre/institute was not warranted, it was further charged with recommending to SCUR on the continuance or termination of the research centre/institute.

**Observations:**

1. The review process followed that which is outlined in section 3.3.1 of Policy 1405, and involved a review of annual reports of the Centre for Research and Treatment of Atherosclerosis as well as a report prepared by the centre director which contained:
  - a description of how and why the Centre for Research and Treatment of Atherosclerosis has achieved or revised its original objectives; a detailed listing of its research and training accomplishments; a current membership list; and a detailed financial statement;
  - a five-year plan which identifies future research directions and development strategies;
  - letters indicating continued support for the Centre from appropriate department heads and the faculty dean; and
  - the names of individuals who could provide external assessments of the research centre/institute.
2. The Centre for Research and Treatment of Atherosclerosis review sub-committee has completed its work, and its recommendation has been considered and approved by SCUR. The membership of the sub-committee was as follows: Dr. Jim Davie, Professor, Department of Biochemistry and Medical Genetics and Director, Manitoba Institute of Cell Biology (Chair); Dr. Rachael Scarth, Associate Dean, Faculty of Agricultural and Food Sciences; and Dr. Harold Bjarnason, Past Dean, Faculty of Agricultural and Food Sciences.
3. The assessment of the sub-committee was as follows:

The sub-committee recognized that the mission of the Centre is to conduct research which is pertinent to the prevention and treatment of atherosclerosis. The sub-committee noted that members of the Centre have published 115 research articles and the Centre has been active in the training of graduate students and postdoctoral fellows, with nine graduate students being trained over the past five years and fifteen students being currently trained.

The sub-committee acknowledged that there were no proposed changes in the Centre's objectives/directions over the next five years, and it suggested that the Centre continue to explore new opportunities to collaborate with new/existing entities which share the Centre's common goal for the prevention and treatment of atherosclerosis.

The operation of the Centre is supported financially by a grant from the Heart and Stroke Foundation of Manitoba and funds from the Federated Insurance Companies of Canada. In addition, funding for the annual Cardiovascular Risk Factor Clinic is provided by numerous pharmaceutical companies. The Centre has developed a business plan for the research and marketing of tea oil, with a proposed Venture Box Company currently being assessed by the University Technology Transfer Office. The review sub-committee recommends that the progress of the five-year plan be monitored by the Director of the Centre, particularly in the development of the business plan. The Centre has recruited a Laboratory Scientist, who has submitted a proposal to the Canada Foundation for Innovation (CFI) to establish a core facility for the analysis of natural health products within the Centre. If the application is successful, this infrastructure will enhance the Centre's research.

4. At the September 22, 1004 meeting of SCUR, the sub-committee recommended and SCUR approved the recommendation that a full review of the research centre was not warranted and that the Centre for Research and Treatment of Atherosclerosis should continue for a five-year period.

**Recommendation:**

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

**That the Centre for Research and Treatment of Atherosclerosis continue for a five year period, beginning January 1, 2005.**

Respectfully submitted,



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

October 28, 2004

**Report of the Senate Committee on Curriculum and Course Changes Part B - Submitted to Senate for Ordinary Debate**

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**Preamble**

1. The terms of reference for the Senate Committee on Curriculum and Course Changes (SCCCC) are found in section 8.21 of the *Senate Handbook*. SCCC is "to recommend to Senate on the introduction, modification or abolition of undergraduate programs, curricula and courses".
2. This part of the report contains observations and recommendations on course change proposal for units where the net increase is more than nine credit hours. The Senate Planning and Priorities Committee was provided with copies of these proposals as well.

**Observations**

1. **Faculty of Agricultural and Food Sciences**

**Diploma in Agriculture**

The School of Agriculture proposes the introduction of an Agricultural Finance Option in the Diploma in Agriculture program. The option is aimed to attract students to the Diploma in Agriculture program and will include existing courses as the basis for the curriculum and will include a series of 13 new courses primarily in the areas related to agricultural finances and include courses relating to human resources.

The option has been developed in consultation with agricultural finance institutions, and will train students who will be prepared to work with lending agencies or with large agribusiness firms.

2. **Faculty of Arts**

**Department of History**

In an effort to broaden its offerings in the field of United States history, the department is proposing the introduction of **011.3AA History of the United States from 1877 to 1939 (A)**, and **011.3BB History of American Consumer Culture (A)**. To provide a wider range of course offerings in the Medieval area, the department proposes the introduction of **011.3XX The Margins of the Middle Ages (D)**.

**Collège Universitaire de Saint-Boniface - Political Studies**

The Collège, in an effort to respond to student and program needs is proposing the introduction of **019.2XXF Introduction aux relations internationales**, **019.3XXF Sujets particuliers en Politique 1**, **019.3XYF Sujets particuliers en Politique 2**, and - **019.3YYF La prise de décisions en politique étrangère**. All four courses have been offered for many years in English at the Fort Garry campus. 019.365F Politique

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

étrangère canadienne is being modified by added a new prerequisite and a restriction.

### **Labour and Workplace Studies Program**

**153.128 Introduction to Labour Institutions and Problems** is being deleted and replaced with the new **153.1XX Introduction to the Canadian Labour Movement**. **153.308 Workers' Self-Management**, a 6 credit hour course is being deleted and replaced with the 3 credit hour **153.3XX Workers' Self-Management**.

In order to better reflect course content, 153.127 Introduction to the Political Economy of Labour, 153.242 Economics of the Labour Process and Labour Relations, and 153.313 Employment Legislation and the Protection of Workers are being modified.

**153.481 Labour and Workplace Studies Work Experience Seminar**, and **153.482 Labour and Workplace Studies Work Experience** are being deleted.

The replacement of 153.128 with 153.1XX will require a change in prerequisite for 153.244, 153.301, 153.303, 153.306, 153.307, 153.314, 153.315, 153.351, 153.451, and 153.452.

The above noted course changes will also result in consequential amendments to the General Major, Advanced Major and Minor programs, the list of core courses and list A: the list of electives for the Labour and Workplace Studies Programs. These changes will also apply to the Continuing Education Diploma in Labour and Workplace Studies.

### 3. **School of Art**

The School of Art is proposing the introduction of **058.4AA Video Workshop**. The addition of 058.404 Video Workshop will parallel the Thesis Degree offering and will provide the opportunity for diploma students to graduate with a Diploma in the Video as they can now in the areas of the School of Art.

### **Recommendations**

The Senate Committee on Curriculum and Course Changes recommends that curriculum and course changes from the units listed below be approved by Senate:

#### 1. **Faculty of Agricultural and Food Sciences**

Diploma in Agriculture

#### 2. **Faculty of Arts**

Department of History  
Collège Universitaire de Saint-Boniface - Political Studies  
Labour and Workplace Studies Program

#### 3. **School of Art**

Respectfully submitted,  
Professor B. L. Dronzek, Chair  
Senate Committee on Curriculum and Course Changes

/jml

1. **Faculty of Agricultural and Food Sciences**

**Diploma in Agriculture**

Courses to be introduced:

- 041.0AA Case Studies in Institutional Lending 1 +4  
Case studies will provide a primary look at assessing loan applications and determining financial need, production feasibility and repayment. Students will, analyze lending portfolios and the management of various enterprises. *Prerequisite:* 061.047 or 27035; 061.045; 061.069; 041.0AD; 041.0AC.
- 041.0AB Case Studies in Institutional Lending 2 +4  
This course is a continuation of Case Studies in Institutional Lending, and will examine and analyze more applications and financial statements of agricultural operations.  
*Prerequisite:*041.0AA
- 041.0AC Agricultural Enterprise +3  
On-site visits to various agricultural operations to illustrate and reinforce management principles and practices. The focus of the tours will be on horticulture, cereal and oilseed, livestock, and research operations. Guest lectures will cover topics pertinent to the agricultural industry. Students may not hold credit for 041.0AC and the former 065.065 or 065.062.
- 
- 041.0AD Agricultural Industry +3  
This course provides students with the opportunity to increase their awareness of agriculture and the agri-business sector. The following will be emphasized: agriculture in other parts of the world, humane livestock practices, marketing of agricultural products, production of agricultural products for niche markets, and trade shows. Students may not hold credit for 041.0AD and the former 065.065 or 065.062.
- 041.0AE Money & Banking +3  
Introduction to various financial institutions and the services they provide. Students will study interest rate determination, the Bank Act and money markets. This course is designed to provide an overview of the program of study in the Diploma in Agribusiness Finance.
- 041.0AF Agricultural Law +3  
Discussion of the complexity of the agriculture industry and the laws affecting it. The course will illustrate laws critical for effective planning and the making of sound management decisions respecting the farm operations and agribusiness. Topics include the Manitoba and Canadian legal system, major laws affecting agriculture, and

the resolution of issues in Canadian agriculture.

041.0AG      Tax      +2  
Examination of specific farm and agribusiness tax laws and filing procedures. Tax management strategies will also be discussed.

041.0AH      Succession and Estate Planning      +2  
An in depth look at the legal requirements necessary for asset transfer and farm continuity. Topics include wills, asset divisions, tax planning, savings and opportunities.

041.0AI      Asset Appraisal      +3  
To learn the principles and concepts as they relate to the valuation of property, specifically, the process for various methods of appraisal of assets.

041.0AJ      Intercultural Communications      +2  
A course designed to introduce written and verbal communication in a multicultural environment.

041.0AK      Public Relations      +2  
identification of and interaction with various public within an organization or business. Enhanced written and verbal communications.

041.0AL      Business Writing Skills      +2  
A course designed to enhance written business communications skills. *Prerequisite:* 065.041.

065.0AM      Environmental Farm Plans and On-Farm Food Safety      +3  
Examination of environment and food safety concerns and regulations as they relate to farming. Students will develop a Manure Management Plan, an Environment Farm Plan and will understand HACCP principles.

The Agricultural Finance Option will be comprised as follows:

Year 1, Term 1

061.046	Financial Management 1	(4)
061.044	Agricultural Economics and Marketing 1	(4)
065.041	Communication and Learning Skills	(4)
065.042	Introduction to Soils and Crops	(4)
035.042	Animal Biology and Nutrition	(4)
041.0AC	Agricultural Enterprise	(3)

Year 1, Term 2

061.047	Financial Management 2	(4)
061.045	Agricultural Economics and Marketing 2	(4)
041.0AD	Agricultural Industry	(3)
041.0AF/	Agricultural Law/Asset Appraisal	(3/3)
041.0AI		
041.0AL	Business Writing Skills	(2)
041.0AE	Money and Banking	(3)

Plus Group 2 or 3 elective (3 or 4)

Year 2, Term 1

061.068 Ag. Business Management (4)  
041.0AA Case Studies in Institutional Lending 1 (4)  
065.0AM Environmental Farms Plans and On-Farm  
Food Safety (3)  
041.0AH Succession and Estate Planning (2)  
041.0AG Tax (2)  
Plus Restricted Electives from Group 1 (3 or 4)  
Plus Restricted Elective from Group 2 or 3 (3 or 4)  
Plus 1 Free Elective (3 or 4)

Year 2 Term 2

061.069 Agricultural Finance and Credit (4)  
041.0AB Case Studies in Institutional Lending (4)  
041.0AF/ Agricultural Law/Asset Appraisal (3/3)  
041.0AI  
041.0AJ Intercultural Communications (2)  
041.0AK Public Relations (2)  
Plus Restricted Elective from Group 1 (3 or 4)  
Plus Restricted Elective from Group 4 (3)  
Plus 1 Free elective (3 or 4)

Group 1 Restricted Electives: Agribusiness - must choose a minimum of 2 of the 4 courses (6 or 8 CH)

061.071 Agricultural Policy (3)  
061.356 Agribusiness Portfolio Management (3)  
061.070 Merchandising and Sales (3)  
061.073 Financial Risk Management (3)  
061.072 Farm Business Management (4)

Group 2 Restricted Electives: Livestock - must choose a minimum of 1 course (3 or 4 CH)

035.067 Beef Cattle Production and Management (4)  
035.068 Dairy Catfie Production and Management (4)  
035.069 Swine Production and Management (4)  
035.070 Poultry Production and Management (4)  
035.073 Horse Production and Management (3)

Group 3 Restricted Elective: Crop Production - must choose a minimum of 1 course (3 or 4 CH)

039.041 Cereal and Oilseed Production (4)  
039.075 Forage and Pasture Management (4)  
039.076 Special Crops (4)  
039.080 Diversification with Horticultural Crops (4)  
039.070 Nursery Management (3)  
039.071 Greenhouse Crop Production (3)  
039.073 Commercial Vegetable Production (3)

039.074	Commercial Fruit Production	(3)
039.082	Organic Crop Production on the Prairies	(3)

Group 4 Restricted Electives: Services and Human Resources must choose a minimum of 1 course (3 or 4 CH)

24006	Managerial Process and Organizational Behavior (Div of Continuing Education)	(3)
24011	Managing the Human Resource Function (Div. of Continuing Education)	(3)
24033	Organizational Behavior	(3)

## 1. Faculty of Arts

### Department of History

Courses to be introduced:

011.3AA History of the United States from 1877 to 1939 (A) +6  
 This course will trace the political, social, economic, and cultural history of the United States from the period of Reconstruction to the start of the Second World War. Prerequisite: a grade of "C" or better in six credit hours of history or written consent of department head.

011.3BB History of American Consumer Culture (A) +3  
 This course will trace the development of American consumer society from the colonial era to the present. Topics addressed include the histories of: branding, mass distribution, department stores, advertising, mass-market magazines, consumer organizing, and consumer protest. Prerequisite: a grade of 'C' or better in six credit hours of history or written consent of department head.

011 .3XX The Margins of the Middle Ages (D) +3  
 A study of groups and movements situated on the periphery of European society between 1100 and 1500. Prerequisite: a grade of "C" or better in 011.242 or written consent of the department head.

**NET CHANGE IN CREDIT HOURS +12**

### Collège Universitaire de Saint-Boniface - Political Studies

Courses to be introduced:

019:2XX F Introduction aux relations internationales +6  
 Introduction à l'analyse des actions et des interactions politiques internationales. Le cours examine la manière dont les politiques étrangères des Etats sont formulées; les conflits, les compétitions et les coopérations produites par les

interactions étatiques. On ne peut se faire créditer le 019.207 et l'ancien 019.153.  
Donné au Collège universitaire de Saint-Boniface.

019.3XX F Sujets particuliers en politique 1 +3  
Le contenu du cours variera. Contacter le secteur pour une description de cours. Donné au Collège universitaire de Saint-Boniface. Préalable: consentement écrit du professeur ou chef de département.

019.3XY F Sujets particuliers en politique 2 +3  
Le contenu du cours variera. Contacter le secteur pour une description de cours. Donné au Collège universitaire de Saint-Boniface. Préalable: consentement écrit du professeur ou chef de département

019.3YY F La prise de décisions en politique Étrangère +6  
Analyse et construction d'un certain nombre de modèles théoriques. Les études de cas font surtout référence à la politique étrangère américaine (mais pas exclusivement).  
Donné au Collège universitaire de Saint-Boniface.

**NET CHANGE IN CREDIT HOURS +18**

### **Labour and Workplace Studies Program**

Courses to be deleted:

153.128	Introduction to Labour Institutions and Problems	-3
153.308	Workers' Self Management	-6
153.481	Labour and Workplace Studies Work Experience Seminar	-3
153.482	Labour and Workplace Studies Work Experience	-6

Courses to be introduced:

153.IXX Introduction to the Canadian Labour Movement +3  
An introduction to the development of the contemporary working-class movement in Canada and to workplace issues today. Students may not hold credit for both 153.1XX and the former 153.128 or 099.128.

0153.3XX Workers' Self-Management +3  
An examination of historical and contemporary examples of self-managed workplaces and the theory of a participatory economy based on workers' self-management. Students may not hold credit for both 153.3XX and the former 153.308. Prerequisite: a grade of "C" or better in 153.351 (or 018.351) or written permission of instructor.

Courses to be modified:

153.127 Introduction to the Political Economy of Labour 3  
An introduction to how working for wages has changed the lives of ordinary people, how labour is produced and reproduced, and the dynamics of labour markets, work organization and class conflict in capitalist societies. Students may not hold credit for



**Report of the Senate Planning and Priorities Committee on Undergraduate Changes with Potential Resource Implications or Course Changes Beyond Nine Credit Hours**

SPPC has the responsibility to report to Senate on curriculum changes with significant resource implications, including additions to departmental curricula of more than nine credit hours.

**A. FACULTY OF ARTS**

The Faculty of Arts proposes such changes in three Departments: History, St. Boniface College (Political Studies), and Labour and Workplace Studies.

**1. History**

**Preamble**

The Department of History proposes to introduce +12 credit hours of new courses to take into account the interests of new faculty, adjustments to degree programs, and interests of students.

**Observations**

1. Courses to be introduced are 011.3AA History of the United States from 1877-1939 (6 CH), 011.3BB History of American Consumer Culture (3 CH), and 011.3XX The Margins of the Middle Ages (3 CH).
2. Statements from the Libraries indicate that the proposed courses can be supported with existing resources. Regular budget funds will be used to acquire books or monographs on the course reading lists that the Library does not already own. The Library is unable to purchase electronic access to the New York Times but does own the paper index and a complete run of the newspaper on microfilm.
3. Addition of the proposed courses will have no impact on workload or programs in other departments.

**2. St. Boniface College -- Political Studies**

**Preamble**

St. Boniface College is proposing to add +18 credit hours of courses in Political Studies. These courses already exist at the University of Manitoba. Offering them in French at the College will give more choice to students majoring in political studies and will respond to program and student needs.

### **Observations**

1. Courses to be added are 019.2XXF Introduction aux relations internationales (6 CH), 019.3XXF Sujets particuliers en Politique 1 (3 CH), 019.3XYF Sujets particuliers en Politique 2 (3 CH), and 019.3YYF La prise de décisions en politique étrangère (6 CH). Another course to be modified is 019.356F Politique étrangère canadienne (6 CH).
2. The Department of Political Studies at the University of Manitoba considers these courses to be equivalent to the English language versions it offers and fully supports their inclusion in the Political Studies Undergraduate Calendar.
3. Library support for the proposed courses is adequate or the required funding to acquire additional documents on the proposed reading lists is in place.
4. St. Boniface College's financial arrangements are independent of the University of Manitoba. SPPC is satisfied that resources are in place or will be allocated to the proposed courses.

### **3. Labour and Workplace Studies**

#### **Preamble**

The Department of Labour and Workplace Studies proposes to delete 9 credit hours of a work experience and related seminar, and to replace or modify several other courses, in response to the retirement of one instructor and the need to clarify and update course titles and descriptions for students.

#### **Observations**

1. Courses to be deleted and not replaced are 153.481 Labour and Workplace Studies Work Experience Seminar (3 CH) and 153.481 Labour and Workplace Studies Work Experience (6 CH).
2. 153.128 Introduction to Labour Institutions and Problems (3 CH) will be deleted and replaced with 153.1XX Introduction to the Canadian Labour Movement (3 CH). 153.308 Workers' Self-Management (6 CH) will be deleted and replaced with 153.3XX Workers' Self-Management (3 CH). Minor modifications to the calendar entries of 3 other courses (12 CH) are proposed.
3. The Libraries deem the proposed changes to be administrative only and hence not to require a review of the Libraries' holdings.
4. Change in the calendar entry for 153.242 Economics of the Labour Process and Labour Relations (6 CH), which is cross-listed as 18.242 in the Department of Economics, has the approval of both departments and will be implemented jointly by both. The Senate Committee on Curriculum and Course Changes is advised of other course descriptions

that will be affected by the re-naming and re-numbering of the former 153.128 noted above.

### **Recommendation**

The SPPC recommends that:

Senate approve and recommend to the Board of Governors that it approve the proposed changes to departmental curricula in the Faculty of Arts.

## **B. FACULTY OF AGRICULTURE AND FOOD SCIENCE**

### **Preamble**

1. The Faculty of Agriculture and Food Sciences proposes to introduce a new option, Agricultural Finance, in the Diploma in Agriculture Program within the Faculty of Agricultural and Food Sciences.

### **Observations**

1. The proposed option in Agricultural Finance will prepare students in the Diploma in Agriculture Program to work with lending agencies or large agribusiness firms. The proposed option will complement four existing options in Agribusiness Management, Crop Management, Livestock Management, and General Agriculture. The existing program is the leading one in Manitoba for applied education in the areas of agricultural production, finance, and business. The proposed new option is expected to revitalize the diploma program, which provides an important revenue stream for the Faculty of Agricultural and Food Sciences. Despite excellent job opportunities and large numbers of current employees who are approaching retirement in the agricultural sector, enrollment in the Diploma program has declined over a number of years due partly to declining numbers of rural youth (i.e., the program's traditional base), and partly to negative perceptions of the agricultural industry among urban youth.
2. The proposed option has been developed in consultation with industry representatives and has the particular support of credit and lending institutions such as Royal Bank, Steinbach Credit Union, Farm Credit Canada, CIBC Agriculture Division, and the Manitoba Agricultural Credit Corporation. The option would consist of four 11-week terms of coursework, delivered initially on campus; however, delivery of courses on-line is planned to begin in April 2005, or as soon as funding permits. Likewise, once the proposed option is established, planning will proceed to develop a certificate in Agricultural Finance for those with previous diplomas or degrees, or for those in industry wanting professional development in this area.
3. Although the proposed option will use some existing courses, 13 new courses (34 credit hours) are needed in areas related to agricultural finance, law, safety, human resources, and communications/public

relations. Detailed budgetary projections over 5 years show that the proposed option's costs (including salary, operating, and capital costs) will exceed its revenues by about \$75,000 spread over years 1-2. Thereafter, the option will be self-sustaining, and the initial investment will be recovered in year 4. These projections are based on enrollment of 10-20 new students per year, with 90% retention, and a revenue sharing agreement with the University that would return 100% of tuition funds to the Faculty in years 1-2, 70% in year 3, 60% in years 4-5, and the current 30% thereafter. Startup funds of \$75,000 have been requested from the University. The Vice-President (Administration) has authorized the release of these funds from the Faculty of Agricultural and Food Science's unallocated carry-over balance, provided the option is formally approved by Senate.

4. New courses in the proposed option will be delivered mostly by sessional instructors and will not add to the workload of existing academic staff. Workload may increase modestly for School of Agriculture staff involved in hiring and managing sessional instructors or in classroom allocation. None of the new courses has a laboratory component.
5. University of Manitoba Libraries (UML) has conducted a review of new course descriptions, library holdings, and current collection development activities related to the proposed option. The conclusion of this review is that UML has adequate resources to support the proposed option.

**Recommendation:**

The SPPC recommends that:

Senate approve and recommend to the Board of Governors that it approve the proposed Agricultural Finance Option in the Diploma in Agriculture Program, within the Faculty of Agriculture and Food Sciences.

**C. SCHOOL OF ART**

**Preamble**

1. The School of Art proposes to introduce a Video option in its Diploma program.

**Observations**

1. The intent of the proposed option is to allow students in the final year of the Diploma of Art program to undertake a major creative project, similar in nature to the BFA thesis, using the medium of video. The School of Art's studio curriculum was recently redesigned to include a video area. The failure to include a video option for Diploma students at that time was simply an oversight and went unnoticed until a student in that program wanted to choose video as his area of study. The proposed option will redress the initial oversight.

2. One new course will be introduced, 058.4AA Video Workshop (15 CH). This is meant to be a self-directed production- and research-based video course, with a grading structure similar to that of the BFA thesis, which will form the final year of the Diploma of Art program for students who have declared video as their major area. In a related move, designed to give students more flexibility to choose their area of study, the formerly required course, 054.220 Advanced Drawing I (9 CH), will be deleted and reintroduced as a 6 CH elective course, 054.2XX with the same title.
3. University of Manitoba Libraries (UML) has corresponded with the professor of the proposed course about the lack of any required text or suggested reading list. Students are expected to gain their influences from contact with artists, attending exhibitions and screenings at local galleries, and consulting the holdings of video art at Video Pool. UML already supports the Video Thesis course, continues to receive contemporary art journals and exhibition catalogs, and holds other relevant material in support of the Film Studies program. Thus, library support is adequate for the proposed option.

**Recommendations:**

The SPPC recommends that:

Senate approve and recommend to the Board of Governors that it approve the proposed Video Option in the Diploma of Art program, within the School of Art.

Respectfully submitted,

---

Norman Hunter, Chair  
Senate Planning and Priorities Committee

/jml



UNIVERSITY  
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Telephone (204) 474-9593  
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DATE: November 10, 2004  
TO: Members of the Senate  
FROM: Jeff M. Leclerc, Acting University Secretary  
SUBJECT: Notice of Motion

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During the Senate meeting of November 3, 2004, Professor Gabbert presented the following notice of motion:

"THAT the language respecting clauses regarding academic freedom in agreements with university benefactors, including that contained in the President's communication to members of Senate dated October 12, 2004, be referred to the Senate Standing Committee on Academic Freedom;

And that the Senate Standing Committee on Academic Freedom be requested to consider such language and report its findings to Senate, including recommendation for any modifications to forms currently in use".

A copy of the President's October 12, 2004 correspondence to members of Senate is attached.  
/jml



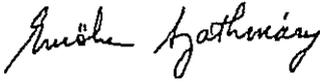
UNIVERSITY  
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October 12, 2004

To: Members of Senate

From: Dr. Emőke J. E. Szathmáry   
Chair of Senate

Re: (1) President's Working Group to Review International Graduate Student Awards  
(2) Clause in Gift Agreement with University of Manitoba benefactors

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**(1) President's Working Group to Review Matters Related to the Implementation of International Graduate Student Awards**

At the October 2004 meeting of Senate I advised senators that I would establish a Working Group to consider issues brought up at that meeting of Senate regarding the Report of the Senate Committee on Awards, dated 27 September 2004, on International Graduate Student Awards. Given the concerns expressed, I thought it would be useful for senators to know that the Working Group has been established. Please find attached (1) the composition of the Working Group and its Terms of Reference.

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**(2) Clause in Gift Agreement with University of Manitoba benefactors**

A question was raised on the floor of Senate during the October 2004 meeting regarding my commitment to determine whether a clause could appear in contracts with corporate donors to protect academic freedom in those units which benefit from the gift, and in which the issue of academic freedom might arise. I believe I made this commitment at the 30 June 2004 meeting of Senate, but had not reported back as of the October meeting. When the matter was raised at the October meeting, Vice-President (External), Ms. Elaine Goldie, observed that in fact such protection already exists.

Please find attached a clause from the template for Endowed Gift Agreements, which the University draws on not only for endowed gifts when warranted, but also in other instances, such as those involving 'bricks and mortar'. Gifts for scholarships and bursaries, for example, whether endowed or not do not normally include the 'protection' clause, whereas endowed gifts for professorships, chairs, and even one-time 'bricks and mortar,' if given to academic units, do include the clause or a version of it.

(1) **President's Working Group to Review Matters Related  
to the Implementation of International Graduate Student Awards**

**Composition**

Co-Chairs

- Dr. Joanne Keselman, Vice-President (Research)
- Dr. Robert Kerr, Vice-President (Academic) and Provost

Members

- Dr. Mark Abrahams, Zoology; Associate Dean (Research), Science
- Dr. Norman Halden, Geological Sciences; Professor "at large", Environment
- Mr. Shamsul Islam, President, Graduate Students' Association
- Dr. Digvir Jayas, Biosystems Engineering; Associate Vice-President (Research)
- Dr. Ed. Kroeger, Physiology; Assistant Dean (Graduate Studies), Medicine
- Dr. Joe LoVetri, Electrical and Computer Engineering; Associate Dean (Research), Engineering
- Dr. Rachael Scarth, Plant Science; Associate Dean (Research), Agricultural and Food Sciences
- Dr. Tony Secco, Chemistry; Dean, Faculty of Graduate Studies

**Terms of Reference**

1. To consider the report of the Senate Committee on Awards, dated September 27, 2004, in light of concerns raised regarding its potential for negative impact on research;
2. Where warranted, to make recommendations to the President on:
  - i) mechanisms to mitigate negative impacts; and /or
  - ii) changes to the terms of the awards, for consideration by the Senate Committee On Awards;
3. To complete the review, so that:
  - i) any requests to the Senate Committee on Awards can be considered by that

Committee to determine if it wishes to amend its report of 27 September 2004, for reporting to Senate at its November 3, 2004 meeting.;

- ii) the President can present a report to Senate at its meeting on November 3, 2004. The President's report shall be based on the report of the Working Group to the President.

(2) **Protection of Academic Freedom in Gift Agreements with Benefactors**

Clause from Template for Endowed Fund Agreements

"Notwithstanding any provision of this Agreement, the University and the Faculty/School/Department of \_\_\_\_\_ shall, at all times, operate in accordance with academic processes approved by the University Senate, and the academic freedom of its faculty members shall be maintained to the fullest extent."

Examples of Variations of the "Protection" Clause in Contracts Signed within the Past 5 Years:

*Example A*

"Academic Mandate and Academic Freedom

The parties agree and understand that notwithstanding any provision of this Agreement, the University, its officers, employees, agents and students shall, at all times, operate in accordance with the University's academic processes and mandate, as approved by the University Senate from time to time. The parties further agree that the academic freedom of faculty members of the University shall be maintained to the fullest extent."

*Example B*

"Notwithstanding any provision of this memorandum of understanding, the University and Faculty shall, at all times, operate in accordance with academic processes approved by the University of Manitoba Senate, and the academic freedom of its faculty members shall be maintained to the fullest extent."

*Example C*

"Notwithstanding the foregoing or any other provision of this Agreement, the University and the Faculty shall, at all times, operate in accordance with academic processes approved by the University Senate, and the academic freedom of its faculty members shall be maintained to the fullest extent. Nothing herein shall abridge academic freedom of the institution or obligate the University or the Faculty to adopt advice or counsel provided by the Foundation."