January 26, 2015

Report of the Senate Planning and Priorities Committee RE: Merger of the Department of Textile Sciences with the Department of Biosystems Engineering

Preamble:

1. The terms of reference of the Senate Planning and Priorities Committee (SPPC) are found on the website at http://umanitoba.ca/admin/governance/governing_documents/governance/sen_committees/508.htm wherein SPPC is charged with making recommendations to Senate regarding any such studies, proposals or reports that it may initiate within itself, have referred to it by Senate, other Councils, Committees or Bodies, formal or otherwise.

2. The committee met on January 26, 2015 to consider a proposal from the Faculty of Human Ecology and the Faculty of Agricultural and Food Sciences for the merger of the Department of Textile Sciences and the Department of Biosystems Engineering. The committee met with Acting Dean Frankel, Faculty of Human Ecology, and Dean Wittenberg, Faculty of Agricultural and Food Sciences.

Observations:

1. The proposal for the merger of the Department of Textile Sciences and the Department of Biosystems is brought forward by the Faculties of Human Ecology and Agricultural and Food Sciences in response to the President’s initiative, launched in January 2012, to improve the academic structure of Faculties and Schools at the University of Manitoba. The proposal has been developed by the Departments following initial discussions within and between the departments that occurred in March 2013 and the subsequent decision, in April 2014, to formally pursue the possibility of a merger.

2. The rationale for the proposal is that, “[t]he merging of these two departments would strengthen productivity and innovation by generating designs based in engineering that provide solutions to environmental, agricultural, biological and health-related problems. This restructuring would also enhance the application of nano-technology for the purpose of creating medical textiles and new health care products by placing this research area in the context of the larger Biosystems Engineering research programs.”

3. The proposal has been recommended by the Department Councils of Textile Sciences and Biosystems Engineering, the Faculty Council of Human Ecology, and the Faculty Council of the Faculty of Agricultural and Food Sciences, based, in each instance, on the result of a secret ballot vote.

4. The proposal was also provided to the Faculty Council of the Faculty of Engineering, for information. In his letter to Acting Dean Frankel (attached; dated August 18, 2014), Dean Beddoes communicates the Faculty of Engineering’s support for the proposal.

5. The amalgamated department would be administered by the Faculty of Agricultural and Food Sciences. Academic (4.0 FTE, including tenured and term instructor positions) and support staff (1.0 FTE) positions, and operating ($441,000) and research ($240,850) revenues would be transferred from the Department of Textile Sciences and the Faculty of Human Ecology, to the Department of Biosystems Engineering and the Faculty of Agricultural and Food Sciences, as appropriate.
6. Responsibility for teaching, research, and office spaces in the Human Ecology and Duff Roblin Buildings that are currently occupied by the Department of Textile Sciences would be transferred to the Faculty of Agricultural and Food Sciences. Use of space in these buildings would continue to be considered in the context of other units/occupants.

7. The proposed merger might require one-time funding for transition and implementation costs but otherwise would not require additional University resources. Current resources, which are sufficient to support teaching and research programs in the Departments of Textile Sciences and Biosystems Engineering, as outlined in Tables 1 and 2 in the proposal, would continue to be used to support these activities in the amalgamated department. These include academic and support staff positions; operating (combined total $2.47 million), research (combined total $2.78 million); and office, teaching, and research spaces.

8. A commitment is made in the proposal that the merged Department of Biosystems Engineering would be responsible for the delivery of Textile Sciences courses that undergraduate students currently registered in the Bachelor of Science in Textile Sciences programs, including the Product Development and the Textile Development Streams, and the Minor in Textile Sciences, would require to complete their programs. Admission to the B.Sc. in Textile Sciences programs has already been suspended, as reported to Senate for information, January 8, 2014. The SPPC was informed that all of the students registered in these programs have now completed the required Textile Sciences courses.

9. Students currently registered in the Master of Science in Textile Sciences would complete that program based on requirements set out in the Academic Calendar for the year in which they were admitted. The possibility of establishing a Textile Sciences stream within the Master of Science in Biosystems Engineering will be considered during the implementation of the merger. The establishment of a new stream would be expected to be resource neutral.

10. The possibility of continuing to offer undergraduate courses in textile sciences, to enhance course offerings in the Faculties of Agricultural and Food Sciences and Engineering, and including a small number of courses that could be used toward a teachable subject area in Human Ecology in the Faculty of Education, would also be considered during the implementation of the merger.

11. Members of SPPC were assured that any faculty currently at the rank of Assistant Professor who are considered for tenure within the next five years, would have the option to be assessed based on the tenure and promotion guidelines of the Faculty of Human Ecology that were in place at the time of their appointment or under the tenure and promotion guidelines of the Faculty of Agricultural and Food Sciences. Likewise, tenured faculty who apply for promotion within the same time period could choose to be evaluated under either set of guidelines.

Recommendation

The Senate Planning and Priorities Committee recommends THAT:

Senate approve and recommend to the Board of Governors that it approve, in principle, the merger of the Department of Textile Sciences, Faculty of Human Ecology, and the Department of Biosystems Engineering, Faculty of Agricultural and Food Sciences.

Respectfully submitted,
Ada Ducas, Chair
Senate Planning and Priorities Committee
November 21, 2014

Mr. Jeff Leclerc
University Secretary
312 Administration Building
University of Manitoba

Dear Mr. Leclerc

Re: Proposed Merger of the Department of Textile Sciences and the Department of Biosystems Engineering

The Council of the Department of Textile Sciences met on August 22, 2014 to discuss the Proposal to Merge the Department of Textile Sciences Faculty of Human Ecology with the Department of Biosystems Engineering, Faculty of Agricultural and Food Sciences dated August 18, 2014. A motion was made that the Textile Sciences Council supports the proposal, which had been circulated previously. A secret ballot was conducted and the motion was passed with 4 in favour and 0 against.

The Council of the Faculty of Human Ecology met on September 12, 2014 to discuss the Proposal to Merge the Department of Textile Sciences, Faculty of Human Ecology with the Department of Biosystems Engineering, Faculty of Agricultural and Food Sciences dated August 18, 2014. A motion was made that Faculty of Human Ecology supports the proposal, which had been previously circulated. A secret ballot vote was conducted and the motion was passed with 12 in favour and 1 against.

Please forward the proposal to the appropriate Senate Committees, Senate and the Board of Governors for consideration.

Sincerely,

Harvy Frankel, M.S.W., Ph.D.
Acting Dean, Faculty of Human Ecology

/cc: J. Keselman
    D. Collins
    K. Wittenberg
    N. Cicek
November 19, 2014

Mr. Jeff Leclerc
University Secretary
312 Administration Building
University of Manitoba

Dear Mr. Leclerc:

Re: Proposed Merger of the Department of Textile Sciences and the Department of Biosystems Engineering

The Council of the Department of Biosystems Engineering, Faculty of Agricultural and Food Sciences met on September 15, 2014 to discuss the attached document, Proposal to Merge the Department of Textile Sciences, Faculty of Human Ecology with the Department of Biosystems Engineering, Faculty of Agricultural and Food Sciences, dated August 18, 2014. A Motion was made that Biosystems Engineering Council supports the Proposal, which had been circulated previously. A secret ballot was conducted, and the motion was passed with 12 in favour and 0 against.

The Council of the Faculty of Agricultural and Food Sciences (FAFS) met on November 18, 2014 to discuss the attached document, Proposal to Merge the Department of Textile Sciences, Faculty of Human Ecology with the Department of Biosystems Engineering, Faculty of Agricultural and Food Sciences, dated August 18, 2014. A Motion was made that the Faculty of Agricultural and Food Sciences supports the Proposal, which had been previously circulated. A secret ballot vote was conducted, and the Motion was passed with 43 in favour and 0 against.

Please forward the Proposal to the appropriate Senate Committees, Senate and the Board of Governors for consideration.

Sincerely,

Karin Wittenberg,
Acting Dean

Attachment
cc: J. Keselman
    H. Frankel
    N. Cicek
Proposal to Merge the

Department of Textile Sciences
Faculty of Human Ecology

with the

Department of Biosystems Engineering
Faculty of Agricultural and Food Sciences
I. Background and Introduction

This proposal is advanced as part of an initiative launched by President David Barnard in January of 2012 to improve and simplify the University's current academic structure. In launching this initiative, President Barnard noted the University's large number of free-standing faculties/schools and departments relative to other Canadian medical/doctoral universities of similar size and scope, and expressed concern that this overly elaborated academic structure was impeding the University's academic work in a number of important ways. He identified the cluster mechanism as a useful starting point in a plan to simplify and improve the University's academic structure, and asked the Provost to work with deans and directors, through these cluster groups and in consultation with their faculty, staff and students and external stakeholders, to identify viable options for reducing the number of faculties and schools from the current total of 20 to a number closer to the national average of 13 by 2017.

The goal of the overall initiative, hereafter referred to the Academic Structure Initiative (ASI), is to arrive at an academic structure that better reflects the University's size and scope, and enhances progress on its Strategic Planning Framework priorities, in particular, and the University's ability to meet its mandate more generally.

II. Proposal Overview

This is a proposal to merge the Department of Textile Sciences in the Faculty of Human Ecology and the Department of Biosystems Engineering in the Faculty of Agricultural and Food Sciences at the University of Manitoba. The newly merged department would operate under the Faculty of Agricultural and Food Sciences. The intent of this proposal is for the University of Manitoba to be a leader in generating designs based in engineering science that provide solutions to environmental, agricultural, biological and health-related problems.

III. Context and Rationale

Research in the Department of Biosystems Engineering draws on engineering concepts and skills, combined with multi-disciplinary knowledge about biological, environmental and agricultural systems to arrive at practical solutions. Research activities include studies on stored grain ecosystems, biological treatment of wastes, phytoremediation of polluted soils, management of environmental odors, bio-processing, hyperspectral imaging techniques, animal and plant production environments, and alternative building systems.

Research in the Department of Textile Sciences focuses on the understanding of the science of textiles, its users and the environment under which textile products are used. Interdisciplinary in nature, it draws on knowledge and skills in chemistry, biology, microbiology, engineering and more. Much of the current research in the department today focuses on medical and bio-protective textiles. Research on the application of nano-technology in the development of health care products is illustrative of this fact. Pathogenic microorganisms are one of the leading causes of morbidity worldwide and are a substantial societal and economic burden. The health care

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1 January 19, 2012 Communiqué from President David Barnard
environment is dependent on technologies and materials that match the changing nature and complexity of disease patterns, changes in treatment regimens, and health care delivery systems.

The merging of these two departments would strengthen productivity and innovation by generating designs based in engineering that provide solutions to environmental, agricultural, biological and health-related problems. This restructuring would also enhance the application of nano-technology for the purpose of creating medical textiles and new health care products by placing this research area in the context of the larger Biosystems Engineering research programs.

Integrating the research, undergraduate and graduate teaching capacities of the Department of Biosystems Engineering and the Department of Textile Sciences creates a supportive environment to promote innovation and enhance the student experience. Interdependent research programs would allow problems to be seen from multiple perspectives in engineering and other disciplines. For example, the nano-based medical textiles research will generate opportunities to create products to address healthcare problems, such as the study of pathogenic disease mechanisms and methods to protect patients and health care workers from microorganisms.

The proposed combination of disciplines will strengthen the University of Manitoba Strategic Planning Framework through significant contributions in: a) Healthy, safe, secure and sustainable food and bio-products; b) Sustainable prairie and northern communities; c) Innovations in public and population health; and d) New materials and technologies.

IV. The Process

The Department of Textile Sciences started to develop this proposal with a period of discussions in early 2012 about potential research and teaching alliances across the University campus. During these discussions it became clear that the Department of Textile Sciences recognized more partnerships with units external to the Faculty of Human Ecology, than with the Departments within the Faculty.

In 2012 the Department of Textiles Sciences members began consultations with the respective Deans, Department Heads and academic staff of other units on campus.

They also:

1. Attended the two Special Faculty meetings that were arranged for all academic staff members of the Faculty to share views and expectations related to the University’s Academic Structure Initiative (ASI).

2. Received the written updates on changes and progress in ASI prepared by the Dean’s office, as well as the Faculty Council minutes that documented the exchange among academic staff members related to different options for new academic structures.

3. Took account of the proposed governance and administrative structure associated with the proposed new Faculty of Health Sciences that were outlined at the November 15, 2012 University Town Hall.
From January 2013 to April 2014, members of the Department of Textile Sciences reviewed the information obtained and identified four possible options for a new academic structure. Detailed and lengthy discussions on restructuring took place with two potential academic partners that could sustain research and graduate teaching activities related to medical textiles and materials protective against biohazards. In April 2014, members of the Department of Textile Sciences decided to pursue the option of merging with the Department of Biosystems Engineering and prepared an initial draft proposal for consideration by members of the Department of Biosystems Engineering.

The Department of Biosystems Engineering had discussions about academic restructuring with the Department of Textile Sciences in March 2013 and again in March 2014. The Textile Sciences MSc was one of the discussion points at these times, as it had been in discussion with other potential partners, because the work of students in this program contributes to the success and productivity in medical textile research. The Department of Biosystems Engineering noted that the admission criteria of the Textile Sciences MSc program were similar to the admission criteria of the Biosystems Engineering MSc program, which would allow the work of students in either program to contribute to medical textiles research. In April 2014, the Department of Biosystems Engineering agreed to consider a proposal that would result in the merger of the Department of Textile Sciences and the Department of Biosystems Engineering.

V. The Proposal

This is a proposal to merge the Department of Textile Sciences in the Faculty of Human Ecology and the Department of Biosystems Engineering in the Faculty of Agricultural and Food Sciences at the University of Manitoba. The process of merging the two departments will dissolve the Department of Textile Sciences and ultimately, the Faculty of Human Ecology, with the Senate-approved joining of the Department of Human Nutritional Sciences with the Faculty of Agricultural and Food Sciences and the merger of Family Social Sciences with the Department of Community Health Sciences.

The merging of these two departments would strengthen productivity and innovation by generating designs based in engineering that provide solutions to environmental, agricultural, biological and health-related problems. This restructuring would also enhance the application of nano-technology for the purpose of creating medical textiles and new health care products by placing this research area in the context of the larger Biosystems Engineering research programs.

The resources required to deliver the undergraduate and graduate teaching programs, and the research programs of the Department of Textile Sciences will be transferred from the Faculty of Human Ecology to the Faculty of Agricultural and Food Sciences. The resources to be transferred represent those that are currently used by the Department of Textile Sciences to carry out its functions. This includes resources for the Textile Sciences Departmental baseline tenured positions, term instructor positions, a part-time administrative position and a part-time technical position. In addition, these resources include Faculty of Human Ecology General Office baseline funding for a small number of sessional instructors. The newly merged department may choose to allocate some of these resources differently.

Admission into the undergraduate textile sciences undergraduate programs has already been
suspended. Undergraduate courses will be made available to facilitate completion of the program for those who are currently enrolled. Consideration will also be given to the continued offering of undergraduate courses, which could serve to enhance undergraduate offerings within the Faculty of Agriculture and Food Sciences and within the Faculty of Engineering. There is also the possibility that one or more of these undergraduate courses could be recognized towards a “teachable subject” area in the Faculty of Education. The newly merged Department will continue to have access to undergraduate student advisors, which are currently shared with other Human Ecology departments, until the transition is complete. A recommendation to close the undergraduate programs (i.e. the B.Sc. (T.S) in Product Development, the B.Sc.(T.S.) in Textile Development and the minor in Textile Sciences) will be made after all eligible students have been given the opportunity to complete their respective programs.

The Department of Textile Sciences and the Department of Biosystems Engineering have agreed in principle to maintain the visibility of the Textile Sciences M.Sc. program. During the implementation of this proposal the status of the Textile Sciences M.Sc. program will be considered by the Faculty of Graduate Studies and the Department, possibly becoming a stream within the Biosystems Engineering M.Sc. program. The creation of a stream is not expected to change the number of students in either program and would be resource neutral. Students currently enrolled in Textile Sciences will be given the opportunity to complete their programs as defined in the Textile Sciences M.Sc. program. There is currently no Ph.D. program in the Department of Textile Sciences; however the merger of the two units is expected to create new opportunities within the current doctoral program in the Department of Biosystems Engineering, most notably in the area of biomedical studies.

The allocation of student endowment funds held by the Faculty of Human Ecology will be the responsibility of Donor Relations, with input from the Faculty of Human Ecology and the Faculty of Agricultural and Food Sciences. The endowment funds with terms that specify benefits for students in the Department of Textile Sciences will be transferred to the Faculty of Agricultural and Food Sciences. Allocating general Faculty Human Ecology endowment funds to students in the three Human Ecology departments will be based on the 5-year average of undergraduate and graduate student enrolment in each of the departments. The Faculty of Agricultural and Food Sciences will continue to contribute the necessary resources to maintain the departmental functions of Biosystems Engineering. The Faculty of Agricultural and Food Sciences is also expected to provide faculty-wide services to the new faculty, staff and students, such as financial planning, research account reconciliation and the coordination of communications to students.

Research laboratories, teaching space and offices currently occupied by the Department of Textile Sciences in the Human Ecology and Duff Roblin buildings will be maintained for the departmental functions. The Faculty of Agricultural and Food Sciences is expected to assume responsibility for these spaces. With the phasing out of some undergraduate teaching, application will be made to the Campus Planning Office for the repurposing of two teaching laboratories to space for research laboratories.
With the exception of possible one-time funding to support transition and implementation costs, the establishment of the new department will not call upon any more of the University’s continuing (i.e., baseline) operating funds other than those currently directed to the Faculty of Agricultural and Food Sciences and the Faculty of Human Ecology for their respective departments.

VI. Issues and Opportunities

The academic members of the Department of Textile Sciences are particularly well qualified to make valuable contributions to both the teaching and research mandates of the Department of Biosystems Engineering. The textile engineering backgrounds of the academic members of Textile Sciences, together with their research interests in medical textiles and new healthcare products, provide an opportunity to enhance the undergraduate program in Biosystems Engineering, specifically the Biomedical Specialization. Likewise, their textile engineering background is an asset to departmental activity in the area of agricultural fibers.

The academic members of Textile Sciences have active collaboration, joint research and cross-appointments, in the Department of Medical Microbiology, Faculty of Medicine and the Department of Plant Science, Faculty of Agricultural and Food Sciences. Not only does the proposed merger promise increased innovation and productivity between Biosystems Engineering and Medical Microbiology, other departments in the Faculty of Agricultural and Food Sciences support microbiology expertise in areas of human, environmental and animal health, with two individuals cross-appointed to Medical Microbiology.

In addition, academic staff from the Department of Textile Sciences have collaborations with researchers in the Department of Surgery, College of Dentistry, Faculty of Science and the Faculty of Engineering. It is expected that such collaborations will continue and expand after the implementation of the proposal. The Dean of Engineering supports the proposed merger (see attached letter) and increased collaboration is expected between the Department of Biosystems Engineering and departments in the Faculty of Engineering as a result of joining with the Department of Textile Sciences. For example, a significant opportunity for joint research exists with the interdisciplinary Biomedical Engineering program that is jointly supported by the Faculties of Engineering, Science and Medicine.

VII. Implementation Process

Conditional upon approval of Senate and the Board of Governors, it is envisaged that the senior academic in Textile Sciences and Department Head of Biosystems Engineering will guide and oversee the implementation of the proposal with assistance from the Deans of Human Ecology and Agricultural and Food Sciences. As necessary, project and change management support would be requested from the Office of Change Management.

The Deans will consider whether, and what number, of committees may need to be established to advise on transition/implementation issues. These committees would include faculty, staff and students. Where actions arise from this process requiring the approval of Senate and/or the Board of Governors, they will be forwarded to these governing bodies for consideration. Further, all
actions will respect collective agreements with relevant employee groups.

It will be important that this implementation process be sufficiently flexible to facilitate adjustments, where required, and responsive to input on issues that may arise in both the short and longer terms. It will also be important to acknowledge the considerable time and energy that will be required of members of the affected units and the University, in general, to address transition issues.

VIII. Conclusion: Expected Goals and Outcomes

The coming together of these two departments fits with the goals of the Academic Structure Initiative and will have a number of important outcomes for the University. The resulting academic structure:

- Enhances the University’s capacity to deliver on its mandate
- Enhances leading-edge, multi-disciplinary research
- Enhances educational experiences for future engineering professionals
- Enhances research competitiveness for external research support

Appendix

Table 1 – Student and Staffing information

<table>
<thead>
<tr>
<th>Unit</th>
<th>UG</th>
<th>MSc</th>
<th>PhD</th>
<th>Academic</th>
<th>Support</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile Sciences</td>
<td>29</td>
<td>8</td>
<td>0</td>
<td>4.0</td>
<td>1.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Biosystems Engineering</td>
<td>114</td>
<td>19</td>
<td>33</td>
<td>12.0</td>
<td>4.0</td>
<td>16.0</td>
</tr>
<tr>
<td>Totals</td>
<td>143</td>
<td>27</td>
<td>33</td>
<td>16.0</td>
<td>5.0</td>
<td>21.0</td>
</tr>
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</table>

Table 2 – Annual resource information (2013-14)

<table>
<thead>
<tr>
<th>Unit</th>
<th>Operating Baseline</th>
<th>Research Revenues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile Sciences</td>
<td>$ 441,000</td>
<td>$ 240,850</td>
</tr>
<tr>
<td>Biosystems Engineering</td>
<td>$2,025,000</td>
<td>$2,543,000</td>
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<tr>
<td>Totals</td>
<td>$2,466,600</td>
<td>$2,783,850</td>
</tr>
</tbody>
</table>
18 August 2014

Harvy Frankel, M.S.W., Ph.D.
Professor (Social Work) and Acting Dean
Faculty of Human Ecology
University of Manitoba

Dear Dr. Frankel:

On behalf of the Faculty of Engineering this letter indicates support of the proposal to join/merge the Departments of Textile Sciences and Biosystems Engineering. While this proposal does not require the approval of the Faculty of Engineering Faculty Council, it was discussed at a Faculty Council meeting on 12 August 2014. Faculty members from the Department of Biosystems Engineering are members of the Engineering Faculty Council, as well as members of the Agricultural and Food Sciences Faculty Council.

From the Faculty of Engineering viewpoint, there are some key advantages to the proposal including:

1) The proposal indicates that Textile Science undergraduate program courses will be supported for the benefit of students already in the program. In the longer term the addition of resources from Textile Science to Biosystems Engineering does offer the opportunity to strengthen the Biomedical Specialization available to BSc Biosystems Engineering students. Strengthening this program specialization and adding Textile Science Faculty members to Biosystems should allow an increased intake quota for the BSc Biosystems Engineering program.

2) To ensure the Department of Biosystems Engineering has the maximum flexibility to offer courses, the faculty members from Textile Sciences should become registered with the Association of Professional Engineers and Geoscientists of Manitoba (APEGM). This registration should not be an issue, as they have engineering degrees, but it is needed for engineering accreditation purposes. The Faculty of Engineering is prepared to cover the cost of their application to and review by APEGM. Importantly, becoming registered with APEGM will in no way limit or influence the research programs they choose to pursue.

3) When the Textile Science undergraduate program is phased out the teaching laboratory facilities currently associated with the Textile Science program will not be needed to support the undergraduate Biosystems Engineering program. However, if the intake quota to the undergraduate Biosystems Engineering program is increased, then some upgrades to existing Biosystems teaching laboratories may be needed. Based on discussion this with Dr. Danny Mann (Head of Biosystems
Engineering) it is believed the costs for these upgrades can be supported by the Faculty of Engineering and/or the Engineering Endowment Fund. To support increased enrolment and corresponding teaching laboratory activity in Biosystems Engineering will require additional technical support staff dedicated to the undergraduate Biosystems teaching laboratories. It is currently understood that this support will transfer from that which is currently directed to the undergraduate teaching laboratories in Textile Sciences.

I hope the foregoing is reasonably clear, but if not, please let me know, I will be pleased to discuss any aspect of this.

Again, overall, I am strongly in favour of this proposal, I think it is good for the Faculty of Engineering, the Department of Biosystems Engineering and the staff and faculty currently in the Department of Textile Sciences.

Sincerely,

Jonathan Beddoes, Ph.D.,
P.Eng. Dean of Engineering

Cc: Dr. N. Cicek, Acting Head, Department of Biosystems Engineering