



# University of Toronto Quality Assurance Process (UTQAP)

## Cyclical Review: Final Assessment Report and Implementation Plan

- Program(s) Reviewed:**
- Forest Biomaterials Science, B.Sc., Hons.\*: Major, Minor
  - Forest Conservation (Science), B.Sc., Hons.\*: Specialist, Major, Minor
  - Forest Conservation (Arts), B.A., Hons.\*: Specialist, Major, Minor
  - Master of Forest Conservation (M.F.C.)
  - Master of Science in Forestry (M.Sc.F.)
  - Doctor of Philosophy in Forestry (Ph.D.)

\*offered through the Faculty of Arts and Science

**Division/Unit Reviewed:** Faculty of Forestry

**Commissioning Officer:** Vice-President and Provost

**Reviewers  
(Name, Affiliation):**

1. Anja Geitmann, Dean, Faculty of Agricultural and Environmental Sciences, McGill University
2. J. Keith Gilless, Dean, College of Natural Resources, University of California, Berkeley
3. Lisa Sennerby Forsse, Rector/Vice-Chancellor Emeritus, Swedish University of Agricultural Sciences

**Date of Review Visit:** May 4 – 6, 2016

**Date Reported to AP&P:** November 1, 2016

## 1 Outcome

The Committee on Academic Policy and Programs (AP&P) requested a follow-up report to address issues related to the undergraduate programs offerings, the nexus between the Faculty of

Forestry and the Faculty of Arts and Science and progress on faculty hires. The follow-up report will be considered by the AP&P at the Cycle 2 meeting in 2017-18.

## 2 Significant Program Strengths

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- Long tradition of thought leadership, especially in urban forestry
- Important, high caliber research on biomaterials that taps into the bio-economy and capitalizes on Ontario's natural assets, despite the declining economic opportunities in the lumber and paper industries
- Constructive engagement with the private sector, including the important relationships with the Haliburton Forest
- Undergraduates understand the professional dimension of forestry and the attractiveness of a forestry-style, interdisciplinary systems approach to the environment
- Association with Faculty of Arts & Science with respect to flexibility in combining a forestry major with other majors or minors
- Atmosphere of community created through the accessibility of faculty, their helpfulness, and the out-of-classroom enrichment opportunities in which they encourage students to participate
- MFC provides effective training for careers in diverse settings
- MFC successfully integrates students from BSc and BA backgrounds through peer-to-peer learning and a network of supportive practicing professionals that expand on faculty expertise
- MFC graduates are highly valued for their qualifications, find work easily, and have risen to key leadership positions in Ontario
- MFC quality rivals that of long-established elite programs

## 3 Opportunities for Program Enhancement

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- Engaging in better coordination between the Faculty of Forestry and the Faculty of Arts & Science, specifically noting the Faculties' divergent perspectives on the specialist programs.
- Addressing students' desire for the undergraduate programs to be accredited
- Determining how the programs' structure support their learning outcomes and broader undergraduate degree level expectations
- Broadening MFC courses offered and creating more transparency around internship placements
- Increasing the Faculty of Forestry's research and curricular capacity in the social dimensions of forestry and aboriginal issues
- Identifying a sustainable budget model to maintain academic excellence and strengthen programs

## 4 Implementation Plan

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The Deans of Forestry and the Faculty of Arts & Science engaged in consultation to support the following changes:

### Immediate Term (6 months)

- Engaging in better coordination between the Faculty of Forestry and the Faculty of Arts & Science
  - The Faculty of Forestry and the Faculty of Arts & Science will continue to work toward improvements to the undergraduate programs in Forestry. To fast track the process, a joint committee on curriculum initiatives has been proposed. The Forestry Undergraduate Coordinator along with the Faculty of Forestry's undergraduate administrator will meet on a regular basis with the FAS Vice- Dean, Undergraduate, to discuss changes to the curriculum. Improved coordination efforts will begin immediately, with the aim of introducing initial curriculum changes in the 2017-2018 academic cycle.
- Determining how the programs' structure support their learning outcomes and broader undergraduate degree level expectations
  - Effective as per the academic year 2017-2018 in the Faculty of Arts & Science Calendar- Program, the wording, "Forest Conservation" will be changed to "Forest Conservation and Biomaterials Science." This change will better reflect the content of the courses and will increase the visibility of the innovative biomaterials component of these programs.
- Broadening MFC courses offered and creating more transparency around internship placements
  - The Faculty is creating a password-secure website where our prospective MFC internship candidates will have access to all opportunities posted by internship organizations providing a more transparent process for matching students with internships.
- Increasing the Faculty of Forestry's research and curricular capacity in the social dimensions of forestry and aboriginal issues
  - The Faculty developed a short- term plan to strengthen the current capacity in teaching and research on Aboriginal interests by inviting speakers to the Faculty from Non- Governmental Organizations and other agencies.
- Identifying a sustainable budget model to maintain academic excellence and strengthen programs.
  - The Faculty plans to increase in research-based graduate students to 46 by 2021.
  - The Faculty recently made the necessary changes in their application procedure to register all applicants through the university enrollment system to record the exact number of applicants. The Faculty of Forestry maintains high standards for admission that comply with or exceed the requirements of the University of Toronto. The quality of applicants to the doctoral and other programs, therefore, will be enhanced by increased enrollment.

- By 2021, the Faculty anticipates ten faculty FTE, one CRC Tier One faculty member, and two endowed chairs. In addition, the Faculty expects to recruit at least one more "status only" professors.
- The Dean of Forestry has obtained a funding commitment for an Endowed Chair in Lightweight and Advanced Biocomposites, pending the Provost's approval.

**Medium Term (1-2 years)**

- Determining how the programs' structure support their learning outcomes and broader undergraduate degree level expectations
  - The Dean of Forestry and the FAS Vice-Dean, Academic Planning and Strategic Initiatives have discussed the possibility of increasing the undergraduate programs' visibility through outreach in large introductory courses that might potentially yield future forestry students. They also discussed reviewing the programs' specific course requirements to better meet the needs of students. The Dean of Forestry and the FAS Dean's office will continue to work together to support students' learning outcomes.
  - The joint committee on curriculum initiatives proposed will discuss the pre-requisites of the senior level courses in the undergraduate Forestry programs, and will streamline the list of course offerings for both mandatory and elective selections. The joint committee will also review curriculum changes, discuss possible field course options and discuss experiential learning opportunities for students.
- Broadening MFC courses offered and creating more transparency around internship placements
  - Faculty coordinators for the MFC and Graduate Programs are investigating the best means of offering a small number of supplementary analytical courses. In the current year 2016-2017, the Faculty introduced two courses in module form as a pilot program.
- Increasing the Faculty of Forestry's research and curricular capacity in the social dimensions of forestry and aboriginal issues
  - The Faculty put forward a budgetary justification for two additional faculty positions in the fields of Society and Forests and Forest Policy and Aboriginal Interests to ensure undergraduate and graduate students are grounded in the theories associated with societal change and Aboriginal issues, and to conduct research to provide evidence-based solutions to Aboriginal issues.
- Identifying a sustainable budget model to maintain academic excellence and strengthen programs
  - To increase undergraduate enrollment, the Faculty will pursue with two specific intermediate strategies:
    - Accreditation of the present undergraduate forestry programs {BA, BSc Forest Conservation and BScnBiomaterials Science Program}.
    - The establishment of a double degree 4+1 program by developing a five year program with a Professional Master of Forest Conservation degree as a collaborative program between the Faculty of Forestry and FAS. A collaborative doctoral research program with the School of Environment in the Faculty of Arts and Science (FAS) is already in place.

- The Faculty of Forestry plans to increase the number of presently unfunded MFC BIUs spots to fifteen will further to enhance the division's ability to place additional resources in the much needed areas of Aboriginal issues and the Faculty's research-based degree programs. Forestry is capable of increasing the capacity to accommodate the projected increase to eighty students. Additional revenue can be generated, provided that the international components remain steady at 25 per cent of the total enrollment.

Longer Term (3-5 years)

- Addressing students' desire for the undergraduate programs to be accredited
  - The Dean of Forestry recommends forming a joint committee to examine the future feasibility of pursuing accreditation.
- Broadening MFC courses offered and creating more transparency around internship placements
  - Once the hiring of the two proposed faculty positions in these specific areas is complete, the Faculty will broaden the analytical courses offered in other areas such as Crown forest management and Aboriginal relations.

The Provost's Office will work with the Dean's Office to monitor progress in implementing the above plan of action.

## 5 Executive Summary

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The reviewers identified the programs' strengths as the Faculty's long tradition of thought leadership, especially in urban forestry; important, high caliber research on biomaterials that taps into the bio-economy and capitalizes on Ontario's natural assets; constructive engagement with the private sector; undergraduates understand the professional dimension of forestry and the attractiveness of a forestry-style, interdisciplinary systems approach to the environment; association with Faculty of Arts & Science with respect to flexibility in combining a forestry major with other majors or minors; atmosphere of community created through the accessibility of faculty, their helpfulness, and the out-of-classroom enrichment opportunities in which they encourage students to participate; the MFC's high quality, effective training for careers in diverse settings while integrating students with diverse educational backgrounds; and MFC graduates' highly valuable qualifications, find work easily, and have risen to key leadership positions in Ontario. The reviewers recommended that the following issues be addressed: engaging in better coordination between the Faculty of Forestry and the Faculty of Arts & Science, specifically noting the Faculties' divergent perspectives on the specialist programs; addressing students' desire for the undergraduate programs to be accredited; determining how the programs' structure support their learning outcomes and broader undergraduate degree level expectations; broadening MFC courses offered and creating more transparency around internship placements; increasing the Faculty of Forestry's research and curricular capacity in the social dimensions of forestry and aboriginal issues; and identifying a sustainable budget model to maintain academic excellence and strengthen programs. The Faculty of Forestry and the Faculty of Arts & Science will develop a joint committee on curriculum initiatives. The wording, "Forest Conservation" will be changed to "Forest Conservation and Biomaterials

Science" to better reflect the content of the courses and will increase the visibility of the innovative biomaterials component of these programs. The Faculty plans to increase in research-based graduate students to 46 by 2021, and similarly increase the faculty complement by then as well. The Faculty put forward a budgetary justification for two additional faculty positions in the fields of Society and Forests and Forest Policy and Aboriginal Interests. The Faculty will pursue immediate strategies to increase undergraduate enrolment. The Dean of Forestry recommends forming a joint committee to examine the future feasibility of pursuing undergraduate accreditation.