

Request for Calendar Change Form

Tracking No:
(Senate Secretary's Office
use only)

Date:

To Secretary of Senate
From Name(Dean): Faculty
Dr. Ulf Runesson, Interim Dean Forestry and the Forest Environment
Department the change relates to
two departments; Forest Conservation and Forest Management
Contact Person
Dr. Ulf Runesson

Is the proposed calendar change Undergraduate

Instructions:

1. In all cases please complete and attach section 1 and 2
2. If the calendar change affect other departments/schools/faculties complete and attach section 3
3. If the answer to any of the questions below is yes, explain. Attach separate sheets with reference to the question

- | | | |
|--|--|---|
| 1. Do the proposed changes affect other departments/ schools/faculties in terms of their calendar change? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 2. Is a transition plan needed for student in progress? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 3. Are the proposed changes likely to affect student enrollment in your department/school/faculty? | Yes
<input checked="" type="checkbox"/> | No
<input type="checkbox"/> |
| 4. Are the proposed changes likely to affect student enrollment in other departments/schools/faculties at Lakehead University? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 5. Will the proposed changes require additional teaching space and/or teaching staff and/or equipment and/or other resources? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 6. Will the proposed changes affect existing teaching loads within your department/school/faculty? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 7. Will the proposed changes increase demand for teaching support services such as the library, computing services and technical staff ? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 8. Will the proposed change require direct or in-kind support from outside the academic unit? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 9. Do the proposed changes include change in course(s) which is/are required core course(s) for a major? | Yes
<input type="checkbox"/> | No
<input checked="" type="checkbox"/> |
| 10. Do the proposed changes include a change in course which is | Yes | No |

service/required course(s) in another program?

Yes No

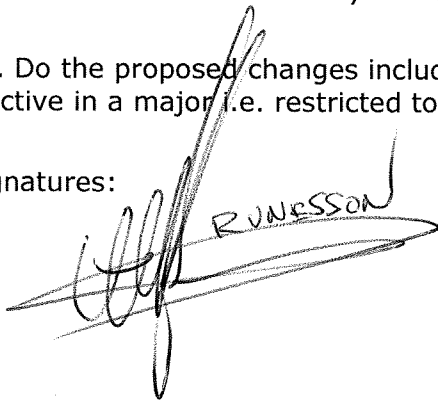
11. Do the proposed changes include change in course(s) which is/are open elective available to any student in any program?

Yes No

12. Do the proposed changes include change in course(s) which is/are elective in a major (i.e. restricted to students in a major)?

Yes No

Signatures:



R. J. NESSON

Date approved by faculty council
30/04/2009

Section 1

Description of the Proposed Calendar Change:

See Attached

Rationale of the Proposed Calendar Change(s):
(Corresponding to Section 2 where required)

1

See Attached

Section 2

Existing Calendar Entries:
(Page reference based on hard copy or
URL based on electronic version of
calendar)

Proposed Calendar Entries/Addition/ Deletion
-If only addition, specify page number and
placement in university calendar
-If only deletion, write Deleted

1

Pages 128 - 138

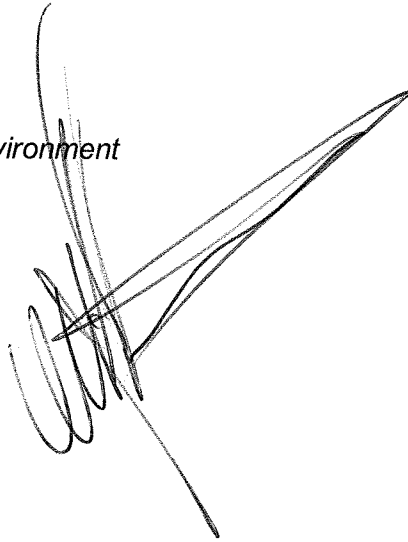
See pages 128 - 138

See Attached

Section 1 reference to question #3:

The intent with the proposed changes is to reposition the Faculty to meet new societal demands, **increase enrolment**, encourage better cross campus collaboration and maintain accreditation standards. These changes also follow the suggested directions in the proposed 2010/13 strategic plan for Lakehead University.

*Ulf Runesson, Interim Dean
Faculty of Forestry and the Forest Environment
September 24, 2009*

A handwritten signature in black ink, consisting of several overlapping loops and a long, sweeping stroke extending to the right.

Section 3

The Faculty(ies) affected by the proposed calendar change

See Attached from Science and Environmental Studies

Engineering

Business Administration

Social Sciences and Humanities

Health and Behavioural Sciences

I have been consulted regarding the attached calendar change and understand the academic and budgetary implication on my Dept./School/Faculty.

I agree to this calendar change proposal

Yes

No

Name:

Faculty:

Date:

Signature of Dean

see attached

Section 3

The Faculty(ies) affected by the proposed calendar change

I have been consulted regarding the attached calendar change and understand the academic and budgetary implication on my Dept./School/Faculty.

I agree to this calendar change proposal

Yes No

Name:

Lori A. Livingston, PhD

Faculty:

Health and Behavioural Sciences

Date:

Sept 22, 2009

Signature of Dean



Section 3

The Faculty(ies) affected by the proposed calendar change

Science & Environmental Studies

I have been consulted regarding the attached calendar change and understand the academic and budgetary implication on my Dept./School/Faculty.

I agree to this calendar change proposal

Yes

No

Name: Dr. Andrew P. Dean

Faculty: SES

Date: Sept 22 109

Signature of Dean Andrew Dean

Section 3

The Faculty(ies) affected by the proposed calendar change

Business

I have been consulted regarding the attached calendar change and understand the academic and budgetary implication on my Dept./School/Faculty.

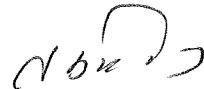
I agree to this calendar change proposal Yes No

Name: *Dean Podgostar*

Faculty: *Business*

Date: *Sept 14 - 09*

Signature of Dean



∴, Faculty's proposed calendar changes, to be brought before Senate in October, 2009.

Section 3

The Faculty(ies) affected by the proposed calendar change

I have been consulted regarding the attached calendar change and understand the academic and budgetary implication on my Dept./School/Faculty.

I agree to this calendar change proposal

Yes

No

Name:

GILLIAN SIDBALL

Faculty:

Social Sciences + Humanities

Date:

Sept 22, 2009

Signature of Dean



Section 3

The Faculty(ies) affected by the proposed calendar change

Engineering

I have been consulted regarding the attached calendar change and understand the academic and budgetary implication on my Dept./School/Faculty.

I agree to this calendar change proposal

Yes

No

Name: *Dean Saliba*

Faculty: *Engineering*

Date: *Sept. 18/09*

Signature of Dean

Henry Saliba

i.e., Forestry's proposed calendar changes, to be brought before Senate in October, 2009.

*Faculty of Forestry and the Forest Environment's
Proposed* Changes
to the
Faculty's Name
and its
Undergraduate Programs*

*This proposal is to be brought before Lakehead University's Senate in October, 2009

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1.1 Rationale

The following is a brief summary of the reasons for our proposed changes.

Problem Statement

Enrolment in our undergraduate programs is low.

- Why?
 - Forestry has an unattractive image to prospective students for several reasons:
 - The perception persists that forestry is not concerned with environmental sustainability or conservation, etc.
 - Forestry is not regarded as a career with a bright economic future.

This “image problem” of forestry is outside our control (it is national and international) and does not justly reflect the merits of our undergraduate program; or, in fact, the prospects for managerial employment in forestry and other environment-related careers in Canada. Figure 1 (below) illustrates that declining enrolment in forestry is a national trend. Our problem is to revise our curriculum such that the “image problem” is removed and enrolment trends can be reversed.

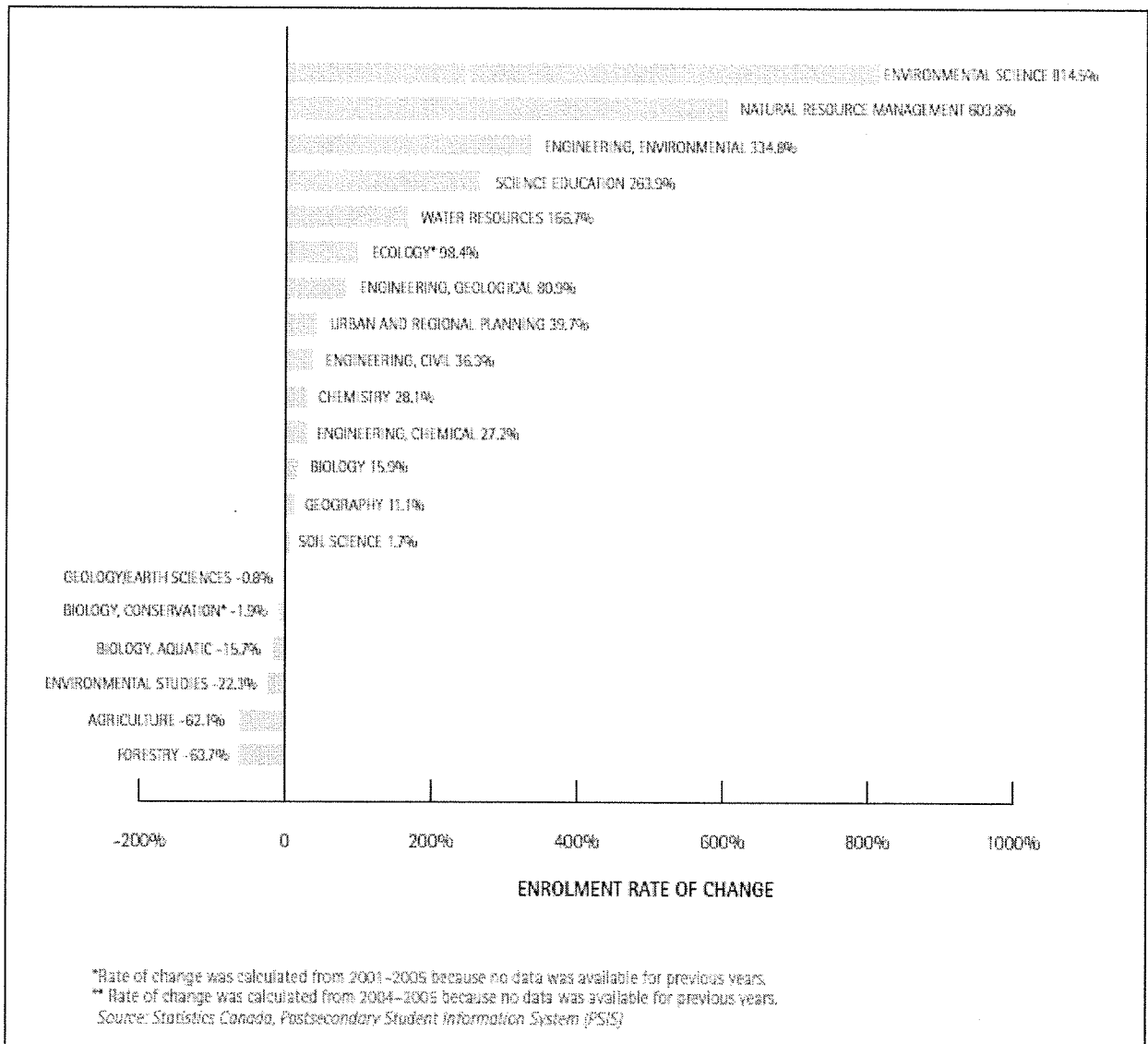


Figure 1: University enrolment rate of change for environment related programs 1999-2005.¹

Objectives

1. Replace Faculty's **image** from "Forestry" to "Natural Resources Management" (again, see Figure 1 above).
2. Alter our programs to appeal to **broader set of prospective students**.

¹ This graph is from: ECO Canada (2008). University graduation and enrolment for environment -related programs: 1999-2005. 20 pages. [The entire document may be downloaded as a .pdf from : http://www.eco.ca/pdf/ECO_university_eng_061308.pdf]

3. Retain our Faculty's competitive niche by designing programs that deliver a sequence of foundational and specialized courses leading to a well-rounded **managerial perspective** on natural resources.
4. Revise the curriculum **efficiently**. Avoid duplication of course offerings and teach where we are most competent. Allow other Faculties to help us in areas where they are most competent.
5. **Retain students** once they enrol.
6. Design revisions to be a platform for **expansion** of our Faculty over time—more students, more programs, more Faculty members, etc.

Strategies

1. Avoid use of term “forestry”, whenever possible--in Faculty's name, course titles, etc.
 - see **objectives 1 and 6**
2. Expand programs to include specializations in:
 - a. Wildlife conservation and management
 - b. Conservation planning
 - c. Directed specializations
 - d. Forest management
 - e. Forest health and protection.
 - f. Wood science
 - see **objectives 1, 2 and 3**
3. All programs have years 1 and 2 in common.
 - See **objective 4 and 5**
 - Note: **objective 5** is addressed because first-year students are not “locked into” a specialization they later discover is not to their liking. Specialization is not declared until the end of year 2.
4. Specialization
 - a. Specialization in each program will begin in years 3 and 4
 - b. Learner outcomes must be stated
 - See **objective 2**

1.2 Review of Major Changes Proposed

We propose the following **four changes**:

1. To change the Faculty's name of the "Faculty of Forestry and the Forest Environment" to the "Faculty of Natural Resources Management".

- By this change, we intend to solve the "image problem" associated with the term "forestry" and thereby increase our undergraduate enrolment.
- In addition, since the discipline of Natural Resources Management is somewhat broader than the term Forestry, we intend to broaden the appeal of our undergraduate program to a larger set of potential students.
- The changing of the name of our Faculty entails that we change our programs such that they are aligned with this new nomenclature and image.

2. Introduce an Honours Bachelor of Environmental Management Degree

- In effect, we propose re-naming and restructuring our current Bachelor of Environmental Studies degree into an Honours Bachelor of Environmental Management degree.
 - *The rationale for re-naming* the degree is that, by replacing the term "Environmental Studies" with the term "Environmental Management", we are i) emphasizing the **management perspective** of the

program's content and ii) aligning the degree's name with the Faculty's proposed new name.—both of which include the word “management”. Our Faculty's historically rich management perspective is, we believe, an academic niche in which we can compete effectively in recruiting new students and meeting society's growing need for environmental **managers**.

- ***The rationale for restructuring the program*** is twofold: i) that the program reflect the nomenclature; and ii) that the program be broadened, through multiple specializations, to appeal to a broader set of prospective students.

In greater detail, the proposed re-naming and restructuring would entail the following:

- Re-naming and restructuring the Bachelor of Environmental Studies (Forest Conservation) 3-year program. and the Honours Bachelor of Environmental Studies (Forest Conservation) 4-year Program into a program entitled Honours Bachelor of Environmental Management Four-Year Program.
- Admission requirements to the Honours Bachelor of Environmental Management Four-Year Program will be identical to the currently existing admission requirements to the Honours Bachelor of Science in Forestry Four-Year Program (rationale: the two programs will share the same the

common years 1 and 2, therefore our requirements for admission will be the same).

- For each of the undergraduate programs, we propose to offer three specializations (note: these specializations have already initially developed in our Faculty):
 - Honours Bachelor of Environmental Management Four-Year Program:
 1. specializing “Wildlife Conservation and Management”;
 2. specializing in “Conservation Planning and Management”;
 3. specializing in “Directed Specialization”.

3. Restructure the Honours Bachelor of Science in Forestry program.

- We propose that this program be restructured by offering three specializations and the rationale is to broaden the program’s appeal to a larger set of potential students and thereby increase enrolment.
- In particular, the Honours Bachelor of Science in Forestry Four-Year Program is to be divided into:
 1. specialist in “Forest Management”;
 2. specialist in “Forest Health and Protection”;
 3. specialist in “Wood Science”.

4. Deliver a Common 1st and 2nd Year for the Honours Bachelor of Environmental Management Degree and the Honours Bachelor of Science in Forestry.

- The rationale for this change is that student retention in our undergraduate programs should improve, since students do not

feel “locked into” a field of study which does not, they discover, interest them. In other words, by allowing students two years to discover which of six specializations truly interest them, we hope to retain students and cultivate a mature selection of specializations.

A conceptual Figure of the proposed changes is presented in Figure2 (below).

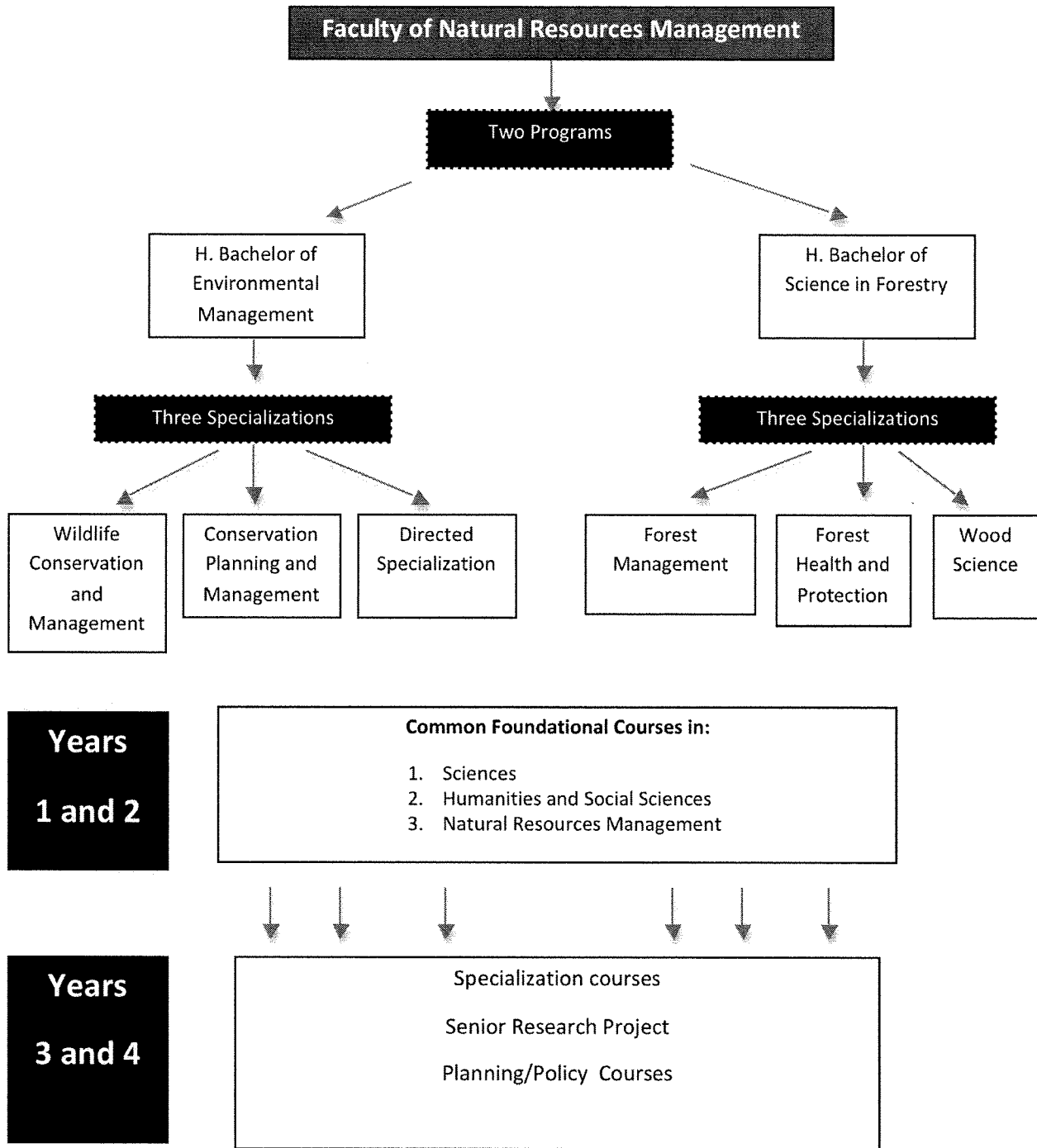


Figure 2: Conceptual figure of proposed undergraduate programs and specializations

1.3 Proposed H. Bachelors of Environmental Management Degree

1.3.1 Learner Outcomes

Career Vision Guiding Learner Outcomes for Program

- Our proposed program will be guided by a career vision which we will use in two ways:
 - First, the career vision guides and constrains our learner outcomes; and second, the career vision is used to attract and retain students within the program.
 - The proposed renaming and restructuring of the H. Bachelor of Environmental Studies into the H. Bachelor of Environmental Management is governed by the following career vision:
 - That this program produce graduates capable of excelling in a broad array of careers of environmental management.
 - That specialized courses be provided to prepare students immediately for managerial careers in:
 - Wildlife management—
 - This career involves planning for and evaluating the habitat individual species (endangered, threatened, or “at risk”).
 - Employment positions for this exist in governments (e.g., municipal conservation authorities, the Ontario Ministry of Natural Resources, Parks Canada) and many Non-Governmental Organizations.

- Conservation Planning—
 - This career involves planning for the selection or restoration of conservation reserves such that all elements of biodiversity are represented sustainably at minimal cost to society's other competing objectives for land use.
 - Employment positions exist in government (e.g., municipal conservation authorities, Ontario Parks, Canada Parks) and non-governmental organizations (e.g., The Nature Conservancy).
- That this program also provide a broad and solid foundation directly relevant to the successful completion of further studies required for careers in teaching, law, business administration, and research.

Learner Outcomes for Common Years 1 and 2

Upon completion of years 1 and 2, students will be able to:

Demonstrate writing and communication skills essential for careers in natural resources.

Identify and describe key taxonomic and functional characteristics of Canadian forest vegetation.

Comprehend the basics of plant and animal biology as they relate to ecosystems. Describe structure and functions in forested ecosystems.

Understand the social dimensions of public lands including first nations and small community impacts.

Demonstrate understanding of fundamental principles of chemistry.

Develop leadership experience through participation in group projects in the field.

Identify local land forms, geology and surficial processes.

Apply and interpret various field-based measurement techniques.

Comprehend the importance of ecosystem health on wildlife.

Demonstrate an understanding of micro- and macroeconomics.

Engage in class discussions where critical assumptions underlying divisive decisions are explored from multiple perspectives

Demonstrate comprehension of social, economic and ecological factors on public and private lands.

Demonstrate understanding of basic ecological concepts and principles.

Apply and interpret basic quantitative statistical techniques.

Describe soil properties, processes and classification; review basic components of forest hydrology.

Demonstrate understanding of the mechanism of inheritance and evolution as applied to forest ecosystems.

Apply hands-on skills with remotely sensed measurements and digital data analysis.

Describe the role and mechanisms of disturbance in the development of forested landscapes.

Develop field experience on the impact of management decisions on diverse social interests

Understand the historical and/or philosophical context of natural resources management.

Demonstrate comprehension of basic tree structure and properties.

Learner Outcomes for Each Specialization

Upon completion of Wildlife Conservation and Management specialization students will be able to:

Describe how aboriginal people should be included in planning activities around natural resources management.

Demonstrate a broad set of field observation skills needed in the management of fish and wildlife.

Prepare an inventory for a natural resource to be managed.

Understand the mathematical relations between the variables in a decision model for a wildlife resource and the actual resource under management.

Demonstrate a critical understanding of how to measure the distribution of biodiversity over space and time.

Develop management planning strategies for the conservation of wildlife.

Identify native plants of Canada and their ecological niches.

Interpret management planning decisions from the perspective of evolutionary biology.

Comprehend, evaluate, and communicate the current literature.

Understand the purpose, process, and criteria of innovation in research.

Assess the possible impact that a proposed project might have on the environment from multiple perspectives—natural, social, and economic.

Identify, in the field, Canadian soil taxonomy and the processes by which they are formed.

Demonstrate biological reasoning skills, using wildlife species to test hypotheses or predictions based on theories.

Classify animals based on their structure, function, behavior, and evolution.

Evaluate wildlife planning strategies from biological, social, economic, and political perspectives.

***Upon completion of Conservation Planning and Management
Specialization, students will be able to:***

Demonstrate knowledge of aboriginal peoples and their relationship to ecosystem conservation.

Comprehend the process and criteria by which ecosystems can be restored to conditions of natural integrity.

Evaluate the importance and functions of wetlands in designing a representative network of biodiversity reserves.

Apply advanced skills with remotely sensed measurements and digital data analysis.

Apply and evaluate decision modeling techniques to problems in natural resources management.

Demonstrate comprehension of the movement, distribution, and quality of water in natural ecosystems.

Develop team-work and leadership skills through supervised collaboration on large projects

Demonstrate a critical understanding of how to measure the distribution of biodiversity over space and time.

Demonstrate an understanding of the planning process and how it relates to multiple objectives and constraints set by public policy.

Organize and apply an understanding of the planning process to a major planning problem that involves evaluating and balancing multiple conflicting objectives.

Demonstrate knowledge of past and current provincial policies and regulations on natural resources management.

Assess the possible impact that a proposed project might have on the environment from multiple perspectives—natural, social, and economic.

Explain how the development and implementation of government policy enhances civil society and can facilitate the conservation of natural resources.

Comprehend, evaluate, and communicate the current peer-reviewed literature on a topic.

Understand the purpose, process, and criteria of innovation and research.

Apply and evaluate an understanding of research to a research problem.

Upon completion of the Directed Specialization, students will be able to:

Demonstrate knowledge of aboriginal peoples and their relationship to ecosystem conservation.

Understand the policy making process, organization of the civil service and the role of civil service in policy making.

Synthesize options in forest management to meet current societal demands and in anticipation for future change.

Evaluate the socio-economic, silvicultural, entrepreneurial, and managerial dimensions of providing recreation and tourism opportunities in a multiple use forest.

Effectively communicate natural resource and environmental issues orally, in writing and by on-line means.

Assess the role of healthy ecosystems, viable economic endeavors, governments, industry and civil society on a global scale as it relates to the environment.

Create management plans for multi-size forest estates on both public and private lands including urban forests, conservation authorities, community forests, industrial sustainable forest licenses.

Synthesize literature, experience and practical research discovery into hypotheses testing and independent theses creation.

1.3.2 Alignment with Lakehead University's Mission

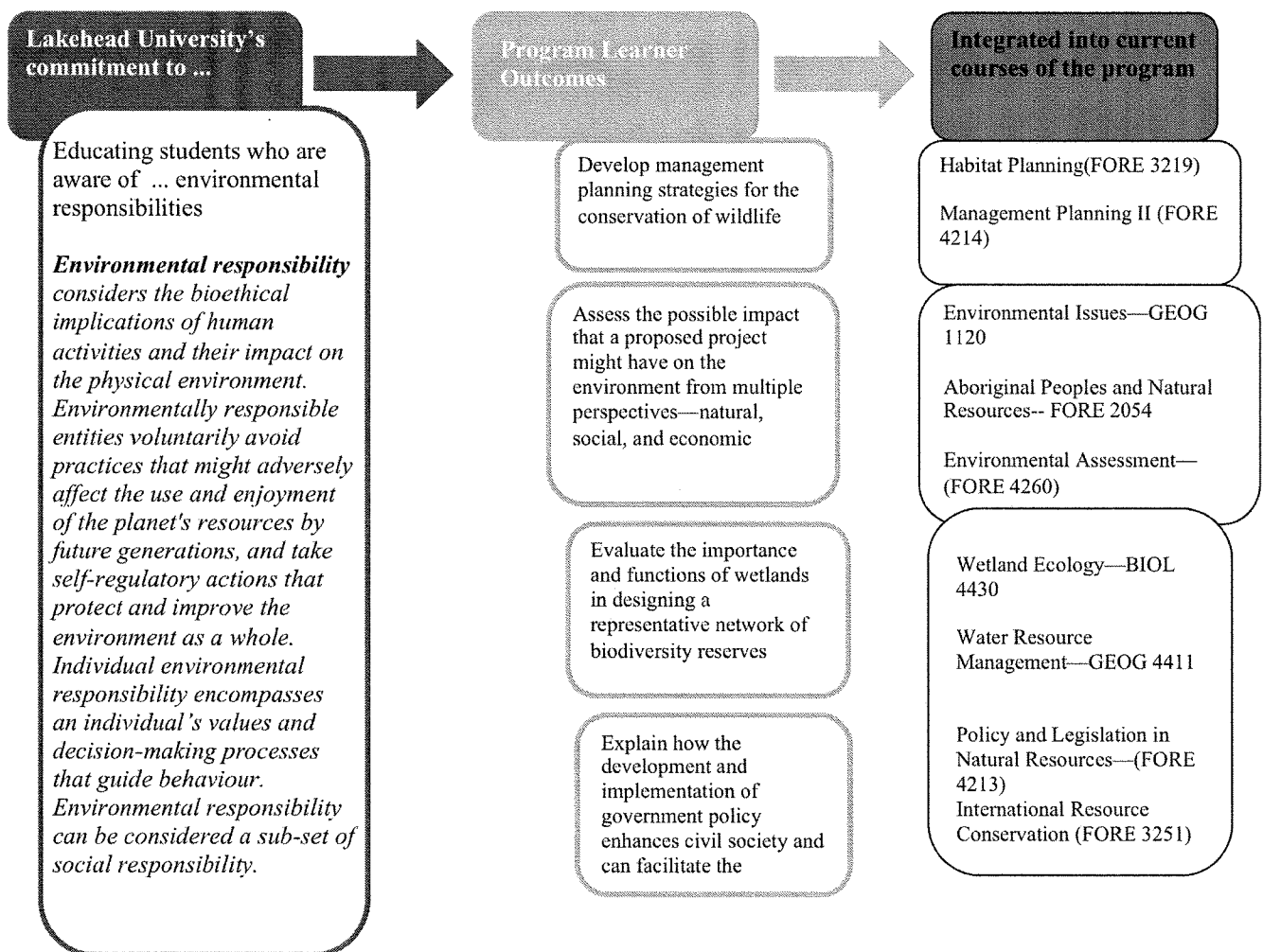
1.3.2.1 Institutional Appropriateness

- This proposal is consistent with Lakehead University's objective to develop high quality academic programs that are aligned with the mission of the university and are financially sustainable. One of the major objectives of this program revision is to increase enrolment and improve retention, thus contributing to Lakehead University's academic sustainability.
- This proposal requires students to take core courses outside of our Faculty and fits into the broader array of program offerings at Lakehead University.

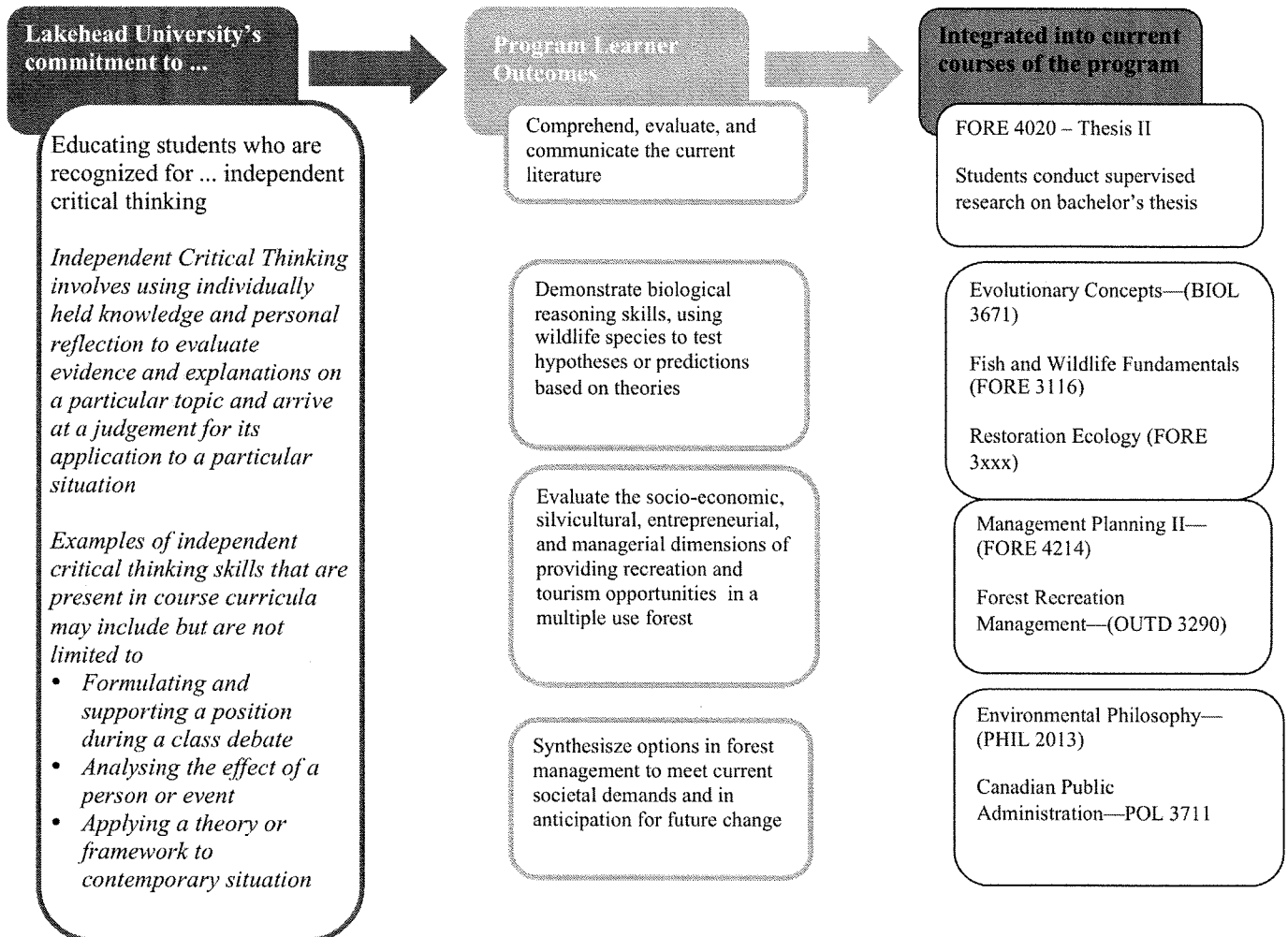
- This proposal will make Lakehead University a forerunner in environmental management. Our proposed enhanced focus on Natural Resources Management is a great complement to Lakehead University's mission and financial sustainability.
- Resources required for this proposal are already in existence—Faculty expertise, labs, field data, software, teaching, experimental sites in the field, institutional relationships, research programs, etc.

1.3.2.2. Commitment Statements

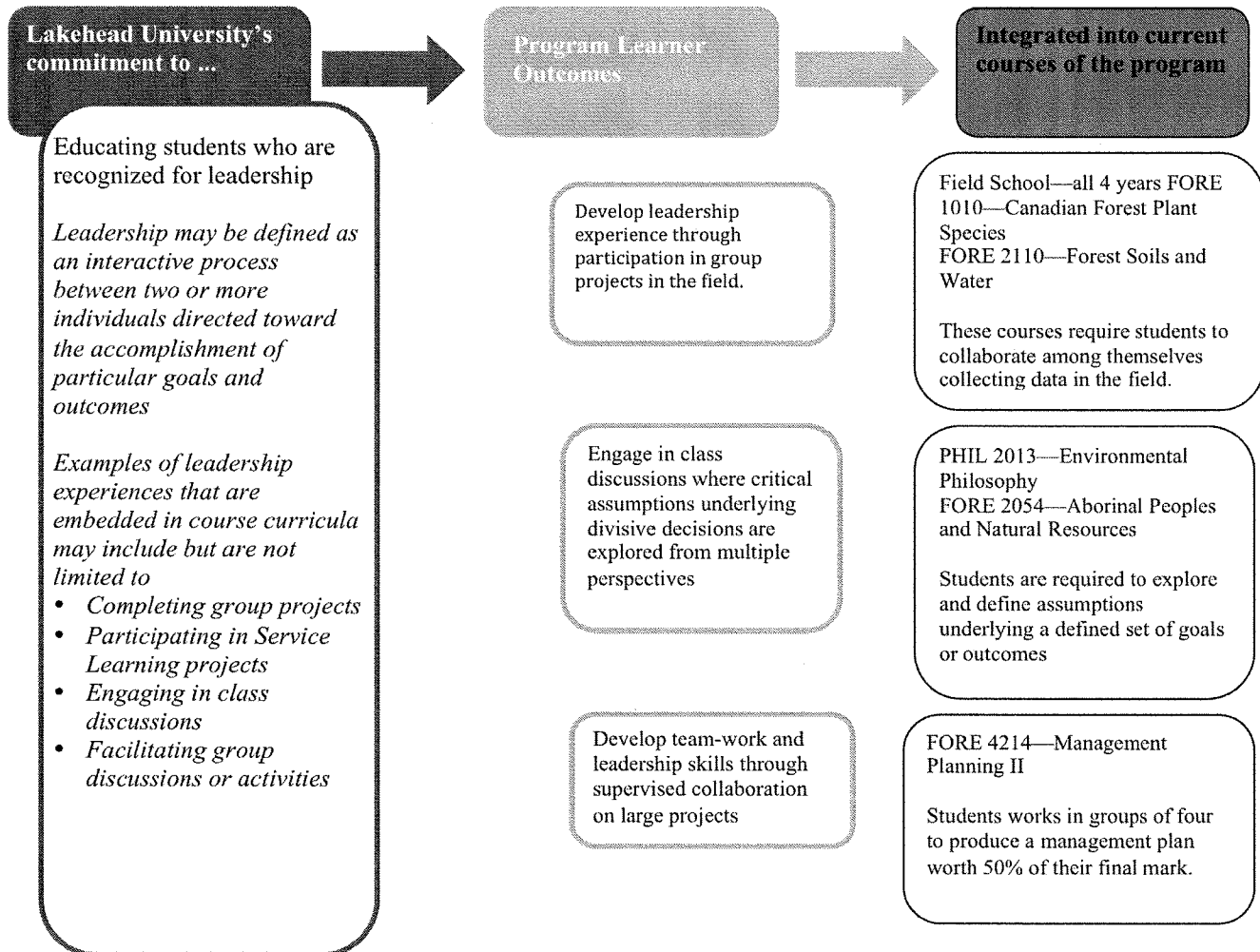
Environmental Responsibility



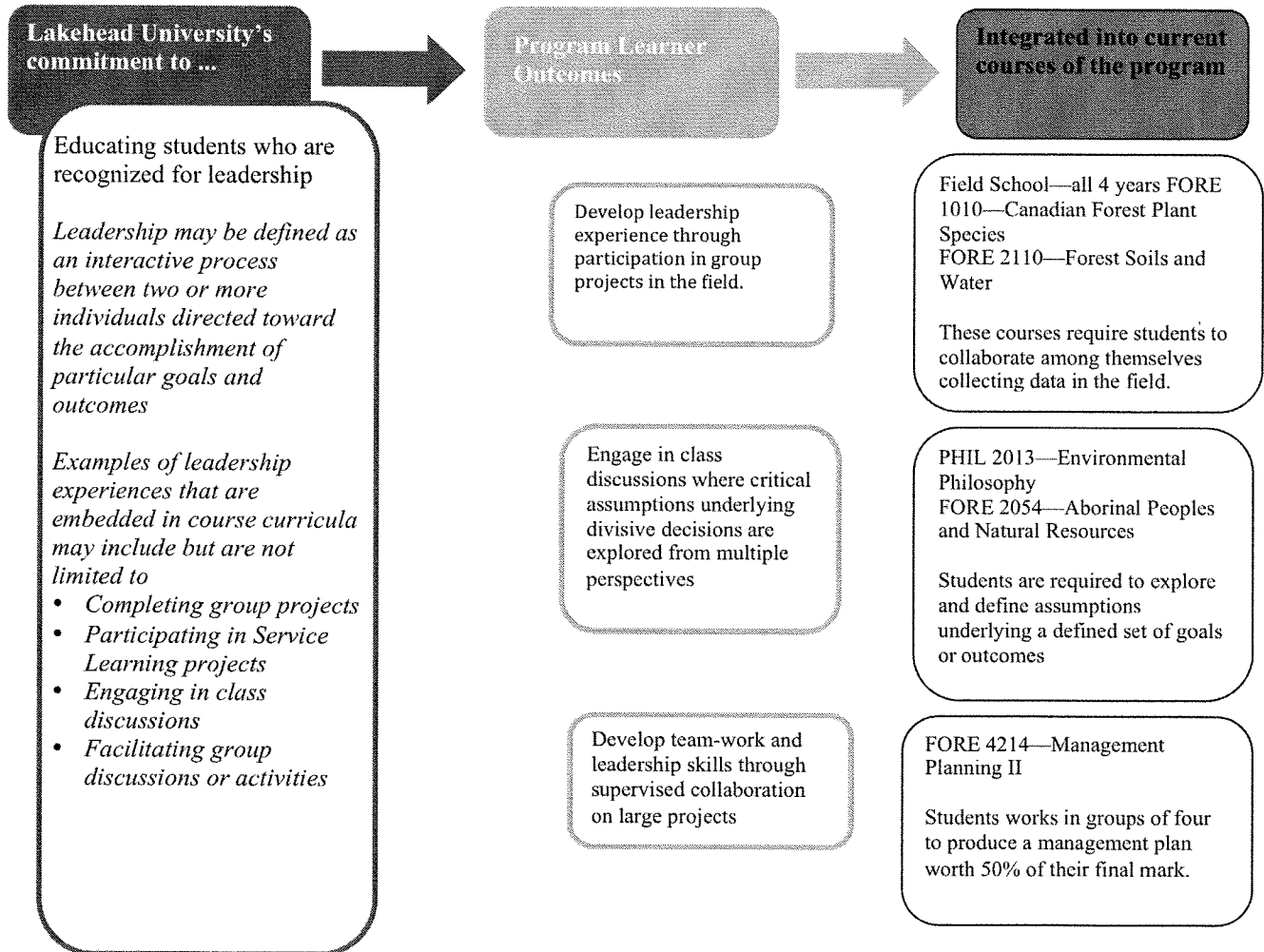
Independent Critical Thinking



Leadership



Social Responsibility



1.3.3 Nomenclature

- The Faculty Council of the Faculty of Forestry and the Forest Environment has voted in favour of both the new Faculty name (Faculty of Natural Resources Management) and the revised program name (Honour Bachelor of Environmental Management). We believe not only that this nomenclature is appropriate to the content and consistent with the current usage in the discipline, but also that we are extremely well positioned to deliver the content; for our Faculty has, since its inception, exercised a strong **managerial** perspective on the natural environment.
- In addition, with the growing public awareness of and regulation governing environmental sustainability over the last few decades, our Faculty has already expanded its teaching and research into water management, wildlife management, conservation planning, etc. Hence, the proposed name change is a realistic representation of the breadth and depth of our teaching and research expertise.