ALGONQUIN COLLEGE

PRESENTATION TO THE BOARD OF GOVERNORS

Program Title:	Environmental Management and Assessment
Credential:	Ontario College Graduate Certificate
Program Length:	One Year
School:	School of Advanced Technology
Dean:	Claude Brulé
Proposed Start Date:	Fall 2013

PURPOSE

This 630 hour, one-year Environmental Management and Assessment Ontario College Graduate Certificate program offered over two levels will offer students the opportunity to enhance their existing skills to succeed in the expanding field of environmental management and assessment. Students will develop practical expertise in a range of interdisciplinary scientific techniques used at the forefront of environmental management practice and become familiar with current environmental law and policy.

Graduates may find employment in fields such as environmental research, site assessment, pollution prevention and control, water and wastewater monitoring and regulatory compliance, and policy development.

BACKGROUND

With escalating demand for environmental awareness, there is an increasing need for highly-skilled personnel capable of working in the fields of environmental auditing and assessment. This program builds proficiency and adds depth to the knowledge base of students, allowing them to specialize in, or broaden, their expertise in a range of disciplines including biodiversity conservation, environmental law and policy, as well as environmental chemistry.

The proposed program affords laddering opportunities for graduates of the Biotechnology Technologist, and Water and Wastewater Technician programs who could extend their educations with this graduate certificate. In addition, graduates from the new Environmental Technician program offered at the Pembroke Campus will also be able to ladder into this program.

The theory portions of the curriculum will be offered exclusively online. Laboratory and field experiences will be delivered on weekends employing existing laboratory facilities. This format is designed to accommodate working professionals who wish to develop their skills while making use of laboratory space used by other programs during the weekdays.

CONSIDERATIONS

(i) **Evidence of Need**

The predominant conclusion from the labour market analysis was that while university enrollment is very strong in environment related programs – a stable and positive outlook is also conveyed for Environmental Control type programs and graduates. According to an Environment Careers Organization (ECO) Canada labour market survey of employers, 41

percent of organizations in Ontario hired environmental employees in 2010, a proportion second only to Alberta's environmental employee hiring rate of 43 percent. The survey also indicated that organizations that planned to hire environmental employees in the near future were most likely to hire site assessment and reclamation, waste management, and environmental safety and health workers.

Three colleges in Ontario offer Ontario College Graduate Certificate programs in Environmental Control or closely related areas including Environmental Management and Assessment; all three share course objectives and core academic requirements focused on waste management, pollution control, site assessment and remediation, and wastewater treatment. These programs have reported success in attracting students, with enrolments ranging from approximately 25 to 50 students.

(ii) **Student Interest**

In addition to the enrolment success of the three other Ontario Graduate Certificate programs noted above, an in-house survey was conducted of current Algonquin students enrolled in programs that would ladder into the Environmental Management and Assessment program. The results showed 78% of 67 students polled had significant interest in the proposed program.

(iii) **Staffing**

Program teaching costs will be attributed to part-time professors. A full-time faculty member will coordinate the program. Alternate staffing plans may be undertaken based on program performance.

(iv) **Admissions Requirements**

Program Eligibility:

Ontario College Diploma, Ontario College Advanced Diploma or Degree in areas of environmental science, water and wastewater, biotechnology; or equivalent.

(v) **Advisory Committee Support**

The existing Program Advisory Committee (PAC) for the Water and Wastewater Technician program has endorsed the need for the Environmental Management and Assessment program and has agreed to cluster with the program to serve as the PAC for both overlapping programs should it be approved.

(vi) **Strategic Alignment**

The implementation of this program reflects the strategic directions of the College including the commitment to digital learning with 52% online, alternative weekend delivery, leveraging of our relationships with business and industry with applied research, and meeting the needs of students and the community.

Appendix 1: Program of Study
Appendix 2: Cash Flow Analysis

RECOMMENDATION

That the Board of Governors approve the Environmental Management and Assessment Ontario College Graduation Certificate program effective Fall 2013 and seek validation of the program title and outcomes from the Credential Validation Service and approval for funding from the Ministry of Training, Colleges and Universities.

Appendix 1: **Program of Study**

LEVEL 1 – 15 Weeks

COURSE NUMBER	COURSE TITLE	Hours					
		Theory		Lab		Field / Clinical	Total Hours
		In class	Online	In class	Online		
QUA4000	Applied Environmental Statistics		45				45
SCI4000	Sample Processing and Analysis			45			45
ENV4002	Field Techniques & Sample Acquisition					90	90
ENV4003	Environmental Policy I		45				45
ENV4004	Applied Research Project I		45				45
CHE4000	Advanced Environmental Chemistry			45			45
	TOTAL LEVEL HOURS		**135**	**90**		**90**	**315**

LEVEL 2 – 15 Weeks

COURSE NUMBER	COURSE TITLE	Hours					
		Theory		Lab		Field / Clinical	Total Hours
		In class	Online	In class	Online		
ENV4005	Environmental Policy II		45				45
SCI4001	Biodiversity Conservation/ Ecophysiology		45				45
ENV4006	Environmental Auditing and Site Assessment		45			45	90
SCI4002	Sustainable Hydrology		45				45
ENV4007	Applied Research Project II			90			90
	TOTAL LEVEL HOURS		**192**	**90**		**45**	**315**

Graduate Certificate Program Total Hours: 630