**Curriculum Renewal:**

**Analysis and Action Plan Template**

| **Program Coordinator:**  | **Melanie Logan** | **School:** | **SENRS** |
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| **Program Code:** | **ETN/ETD** | **Date Completed:** | **October 2012** |
| **Program Name:**  | **Environmental Technician**  |
| **A. Analysis of Indicators**Note: data is **not** recorded in this section of the template.**Reflect on, and discuss, the following indicators in the context of the curriculum and program:**   |
| 1. **Industry / Sector Trends**

New or emergent *industry or sector* related issues and trends identified over the past year and their potential impact on the program.Advisory Committee recommendations from the past year that will affect the positioning, nature, or scope of the program.Information / observations generated via faculty and staff professional development, engagement in sectoral and profession associations, and involvement in community and employer networks connected to the field.New or changing employment trends in the industry or sector.Curriculum issues / strengths that have been identified by employers pertaining to graduate job readiness. |
| **2. Curriculum Development**2.1 Curriculum changes in the last year such as changes in course content and course materials, course / program outcomes, innovative delivery approaches, assessment practices, applied learning experiences, e-learning / blended learning.2.2 Recent or anticipated initiatives that promote student pathways including dual credits, partnerships with high schools, program laddering, and university transfer / articulations, continuing education?2.3 New competitor programs and/or re-positioning of existing programs.2.4 New or changing provincial standards, standards for accreditation, credentials, and / or industry or sector certifications over the past year. 2.5 Progress made from the last curriculum renewal initiative.  |
| **3. Student and Graduate Satisfaction**3.1 Key performance indicators # 4, 8, 9, and 11 (see **Appendix of Curriculum Guide** for a description of these).3.2 Review and discuss student retention on a semester by semester basis over the past year. |
| **B. Curriculum Strengths and Challenges** Summarize the curriculum strengths and challenges identified by the team.  |
| * Integrated
* Sequenced (with concerns regarding sequencing of required Semester 2 courses for ETD students)
* Timely (Fall vs. Winter) e.g. Field Activities
* Applied hands on learning
* Academic format with theory based knowledge incorporated
* Selective Competency-Based Education
* Comprehensive Program of Study (few options and directed education to ensure successful competency to Environmental Program Standard).
* The program has been accredited with the Canadian Environmental Accreditation Commission
* The program incorporates a progressive curriculum
* Appropriate Prerequisite knowledge and skills developed for further study in 3rd year Technology Program
* Curriculum is designed to develop analytical thinking. This allows students to see how things fit with the bigger picture and how it ties into the big picture and why the information is important.
* Integrates fundamental science concepts into broader comprehensive industry-based applications
* Water/Wastewater operator certificate requirements are embedded into the program curriculum
* Excellent program reputation within the employment industry
* Lack of a succession plan for program faculty

**Curriculum Challenges*** Although the program has been organized to provide for sequential learning, there is a disconnect with the ETD and dual diploma students in semester 4, where they have to add 6-8 hours of additional classes to add two 2nd semester courses to their workload (Environmental Principles and Environmental Techniques).
* Tracking of student numbers for preparation of course loads/course enrolment is nonexistent for dual diploma students. As a program with approximately 10-15% of our student numbers as dual diploma it is critical to be able to track these students to prepare course loads.
* Program budget process needs to become streamlined and flexible to allow for essential equipment technology replacement/purchasing mid-financial year if not anticipated as part of the budget.
* Appropriate class room space/resources. Although the program gained Rooms 191 and 194 in the fall of 2010, the historic ET dedicated classroom space in Rm 132 is out of date and Room 191 is not equipped with necessary equipment such as an in house vacuum system, convection oven, ashing furnace, autoclave/incubator etc…
* Program equipment and student numbers – function of amount of equipment and class sizes. The program numbers have been increasing, while the number of critical pieces of equipment has not. When student numbers increase and there is too little equipment, the students do not received the appropriate training time. Alternatively, when there are increased student numbers in class and sufficient equipment, there are too many set-ups around the classroom and little quality control on classroom activities and therefore the quality of training is compromised. There is no existing capital equipment renewal/replacement program in place – such a program would benefit the ET program to resolve this issue.
* Desire to incorporate Coop program for either a separate student stream or into the 2nd or 3rd year program(s)
* Challenge to maintain current curriculum (ie contact with the field of study – it is difficult to have PD for Professors due to timing of semesters (ie as was done in May/June period). There are little opportunities for faculty to train outside of the in-house PD sessions.
* Absence of opportunity of program staff to review, amend and integrate curriculum changes (as was historically conducted in May/June prior to the initiation of the January common first semester intake)
* Retirement of a long-standing program faculty member in December 2011 – new hire to replace this complement is anticipated to be more involved in applied research than in-class teaching, therefore, there is an existing decline in full-time faculty complement within the program. This full-time faculty complement decrease is critical when student numbers are increasing.
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| **C. Action Plan**Identify priority actions for the next year and the rationale for their inclusion. For each, indicate the project lead, and the proposed timelines for completion.   |
| * **Action #1: Implement curriculum changes proposed by program team**

Shifts in curriculum were proposed in 2009 but further analysis should be completed to determine the cost-benefits of these changes. As part of the curriculum changes, the delivery mode of core program courses will also be conducted. A fall offering of Environmental Techniques would benefit the ETD and dual diploma students and provide for a more balanced room use in Rms 122/126 during the winter semester. The program needs to have support from the Academic Lead and appropriate release time allocation. **Project Lead:** Academic Lead/Program Coordinator with support from ET Program Faculty. **Anticipated Completion Date:** August 2013 (dependent on release time and funding)* **Action #2: Implement student tracking system with admissions for dual diploma students**

The program needs to have support from the admissions department with respect to tracking all students that are deficient in select semester 2 courses due to the dual diploma nature of study. **Project Lead:** Academic Lead in coordination with the admissions department. **Anticipated Completion Date:** August 2013 * **Action #3: Secure one Full-Time ET Program Faculty to replace open position due to faculty retirement**

It is imperative to replace the open full-time ET Faculty position prior to the start of the winter 2013 term to maintain program integrity and continuity. The desired skill set and discipline focus of the individual will be identified and developed during the implementation of curriculum changes/delivery activities associated with action item #1.**Project Lead:** Academic Lead/Program Coordinator with support from ET Program Faculty**Anticipated Completion Date:** January 2013* **Action #4: Direct contact with Industry Representatives**

Each faculty to liaise with outside individuals in each of their respective disciplines. This item is not intended to be conducted through PD, but to enhance curriculum amendments, therefore faculty initiatives are to focus on curriculum enhancements not to learn new context.**Project Lead:** Environmental Technology Faculty and Staff**Anticipated Completion Date:** December 2013 (dependent on release time and funding)* **Action #5: Completion of ET Room 191/194 Set Up**

Rooms 191/194 are not equipped with necessary equipment such as a vacuum system, convection oven, autoclave to conduct learning sequences for the students. The purchase and installation of such equipment is imperative to curriculum delivery.**Project Lead:** Environmental Technology Faculty and Staff**Anticipated Completion Date:** August 2013 (dependent on funding)* **Action Item #6: Recruitment of Advanced Standing Students**

Implement a recruitment strategy for advanced standing students through the program curriculum changes/delivery activities associated with action item #1 to make entry seamless.**Project Lead:** Academic Lead/Program Coordinator with support from ET Program Faculty. **Anticipated Completion Date:** August 2013 (dependent on release time)* **Action Item #7: Development of ET Co-op Program Option**

Develop an ET program Co-op option for the 2nd year technician program. This option would potentially increase student enrollment numbers and allow for a desired work placement for students while conducting their studies. **Project Lead:** Academic Lead/Program Coordinator with support from ET program Faculty**Anticipated Completion Date:** August 2013 (dependent on release time)* **Action Item #8: Development of a Capital Equipment Renewal/Replacement Program**

Develop an Capital Equipment Renewal/Replacement program would potentially benefit the program from a budgetary standpoint and help to alleviate program challenges related to program equipment availability and student numbers. **Project Lead:** Academic Lead/Program Coordinator/Program Technologist with support from ET program Faculty**Anticipated Completion Date:** August 2013 (dependent on release time) |
| **D. Deferred Actions**Record any issues that will need to bemonitored, researched, or deferred for future action. |
| * **Incorporate competency-based education training**

Need to explore options for this type certification for graduating students (i.e letters of certification, take advantage of physical facilities to enhance skills of graduates)Follow Up Date: Summer 2013 |
| **E. Attach an updated Program Curriculum Map to your report**  |
| Please file an updated Program Curriculum Map in folder named Program Curriculum Map.: **S:\shared data\CLT\School Name\Program Name\Program Curriculum Map** |