

**Curriculum Renewal and Program Review**

**Annual Summary Report**

**School of Environmental and Natural Resource Sciences**

**(SENRS)**

Prepared by:

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for Linda Skilton, Dean SENRS

The following section highlights the common themes that emerged as a result of this process and the actions that will be taken to address these issues.

**Common Themes**

1. **Infrastructure Needs**

All programs indicated there is a need to update existing equipment and facilities. Several programs share equipment and with the increased use and demand for these pieces, there is extensive wear and tear on most of the equipment. The cost to repair a lot of the equipment is expensive. Storage space also continues to be an issue.

***Action:***

Continue to advocate for capital equipment and a space plan that includes a designed area to store, sign out, monitor and maintain existing equipment.

1. **Industry Support**

Various members of the Advisory Committees have requested lists of needed equipment to see if they could donate any of their surplus pieces.

***Action:***

Coordinators have to be proactive to make the requests for donations.

1. **Program Quality**

It was identified that some of the protocols and procedures used, and the supporting materials, are outdated. There is the challenge to find time to update curriculum at the same time as moving forward to adopt corporate initiatives such as blending learning. There is also a need to develop new skills around assessment and evaluation, and the use of new technology in the learning environment.

***Action:***

Faculty are making a conscious effort to ensure relevance and currency in their curriculum, but they need professional development to incorporate different learning methods. There needs to be more support for individual assistance to redesign curriculum and its assessment, to embrace the advancement of technology, and to learn how and where to use technology.

1. **Human Resources**

There has been an increased use of contract faculty, primarily due to enrollment growth, which can potentially compromise program content as the faculty may change from semester to semester. There have also been several retirements, whose specialized skill sets needs to be replaced.

***Action:***

Develop a hiring plan to replace the skill sets required as SENRS moves forward to start new programs and update existing ones. Five fulltime faculty and one full time instructor are in the approved plan for 2012/13.

1. **Articulation/Transfer Agreements**

Program coordinators continue to be active in engaging in opportunities to create articulation agreements across colleges and universities. With increased competition for a shrinking student population, and the desire of employers to have graduates with both technical, applied skills as well as advanced learning, the environment is favourable to create more pathways for learning.

***Action:***

Coordinators identify potential articulation opportunities to the Chair, who will make the connections and initiate dialogue to establish agreements. Once established, a clear visual aid for marketing these opportunities to students needs to be created.

**Environmental Technology Summary**

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| **Program Strengths*** Integrated
* Sequenced
* 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 is currently applying to be accredited with the Canadian Environmental Accreditation Commission
* The program incorporates a progressive curriculum
* Appropriate Prerequisite knowledge and skills are gained through the 2 year Technician program further study in 3rd year Technology Program
* 3rd year Technology Program is designed and recognized as an advanced level of study
* 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

**Program Challenges*** Appropriate class room space/resources. Although the program gained Rooms 191 and 194, the historic ET dedicated classroom space in Rm 132 is out of date and Rooms 191/194 are not equipped with necessary equipment such as a vacuum system, convection oven, autoclave 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 receive 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.
* Desire to incorporate Coop program for either a separate student stream or into the 3rd year program
* 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)
* Retirement of a long-standing program faculty member in December 2011.
* Lack of a succession plan for program faculty
* Inflexible internal systems that encumber academics (i.e. class sizes, scheduling, accommodation of part time staff)
* Absence of integration with generic skills courses (i.e. no integration of program concepts with select courses (surveying, stats, communications)
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| **Summary Recommendations** |
| * **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. The program needs to have support from the Chair and appropriate release time allocation. **Project Lead:** Chair/Program Coordinator with support from ET Program Faculty. **Anticipated Completion Date:** August 2012 (dependent on release time and funding)* **Action #2: 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 fall 2012 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:** Chair/Program Coordinator with support from ET Program Faculty**Anticipated Completion Date:** August 2012 * **Action #3: 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 StaffAnticipated Completion Date: December 2012 (dependent on release time and funding)* **Action #4: 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 2012 (dependent on funding) |
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| * **Coop Program for 3rd Year Technology Program**

Need to explore options for this type of learning strategy. The program feasibility will be investigated along with the program curriculum/delivery changes.Follow Up Date: Summer 2012* **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 2012 |