**Curriculum Renewal:**

| **Program Coordinator:**  | Joe Outram | **School:** | SENRS |
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| **Program Code:** | AR | **Date Completed:** | December 4, 2013 |
| **Program Name:**  | Arboriculture Co-op |

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| **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**
	1. Are there new or emergent *industry or sector* related issues and trends identified over the past year and their potential impact on the program? **Role of storm damage/invasive species/climate change and its impact on the urban forest and municipal budgets.**
	2. What are the Advisory Committee recommendations from the past year that will affect the positioning, nature, or scope of the program? **Continued emphasis on safety and safety training**.
	3. What information / observations have been generated via faculty and staff professional development, engagement in sectoral and profession associations, and involvement in community and employer networks connected to the field?
	4. Are there new or changing employment trends in the industry or sector? **There is increasing employment in the field due to invasive species and the increased prevalence of storms and storm clean-up.**
	5. What are the curriculum issues / strengths that have been identified by employers pertaining to graduate job readiness? **Strengths are safety training, hands-on techniques so that graduates are ready to work upon graduation and have the requisite skills. Co-op continues to be an excellent training opportunity and many students get hired by the company that the field placement was in. Students are encouraged to register as apprentices to gain 450 of work experience (they need 6000 hours). If registered, they are also given the opportunity to be exempt from the in-class instruction but must write the exemption test.**
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| **2. Curriculum Development*** 1. Have there been any 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? If yes, please provide details. **Co-op committee explored co-ops across programs and made recommendations for better support for co-ops.**
	2. Does the current curriculum align with the college’s e-learning strategy which strives to have all Fleming graduates experience e-learning in each semester of their program? **The program aligns with the e-strategy with increased additions of online lectures and videos to support the hands-on learning.**
	3. Are there any recent or anticipated initiatives that promote student pathways including dual credits, partnerships with high schools, program laddering, and university transfer / articulations, continuing education? **One-third of the current new students are from other Frost programs; while many are graduates the exception is Forestry where students enter the program after Sem II.**
	4. Are there any new competitor programs and/or re-positioning of existing programs?

**There are no competitor programs for this program and it continues to be unique in the province.*** 1. Are there any new or changing provincial standards, standards for accreditation, credentials, and / or industry or sector certifications over the past year? **None at this time**
	2. What is the progress made from the last curriculum renewal initiative? For a couple of courses, increased web-enhanced content to support course learning. Many students who fail climbing will not graduate and it they could pick up Woody Plant Propagation on-line, they could potentially graduate with UF Certificate.
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| **3. Applied Learning*** 1. The current program contains the following applied learning opportunities for students.

 Field Work (Indirect Supervision) Field Work (Direct Supervision) Co-op Applied Project * 1. Indirectly supervised field work would include a street tree inventory for the City of Kawartha Lakes
	2. Directly supervised field work would include pruning trees for the City of Kawartha Lakes
	3. During the summer semester students do a paid 450 hour co-op.
	4. An applied project was to prune all trees in proximity to live power lines at Darlington Provincial Park.
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| **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).The KPIs continue to be fairly strong and positive for this program. Graduate Satisfaction (KPI 4) was very high in 2013 with 94% compared to the college average of 87%. Note that there are still no comparator programs in the system. Students report high satisfaction with the learning experience (KPI 8) with 95% higher than the college average of 81%. Students are also very satisfied with their teachers (KPI 9), with 89% satisfaction as opposed to 74% for the college. In 2013, more graduates were satisfied with the program (KPI 11), with 98%, the highest percentage in the last 5 years, higher than the college average of 83%. Arboriculture has a high graduation rate between 2008-2012 (10% above the system average)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.  |
| **Strengths*** High percentage of learning is hands on, in field.
* Student demand is high for this program.
* Excellent employment rate. Close to 100% since 1998.
* Excellent KPIs
* Program well recognized and held in high esteem by industry.
* Faculty remain current within industry in terms information, techniques and contacts.
* Strong enrollment in past and forecasted for future years.

**Challenges*** High cost of delivery due to high lab time and requirement of technical support.
* Rising fuel and equipment maintenance costs.
* High cost of bussing students to work sites.
* High cost of maintenance and operation of bucket truck.
* Limited space for hands-on learning and storage of equipment.

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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. **What resources are required to complete the action plan, i.e., software, equipment, and training?**  |
| * Deal with high fuel and maintenance costs. Consider having Fleming support person negotiate fuel delivery and costs across programs where applicable.
* Continue to scan industry for changes and updates.
* Continue with applied projects.
* Research projects for industry
* **Review program outcomes during CBD to examine currency and wording**
* Fall protection drop testing and rigging testing with industry partners.
* Continue to update curriculum as new information, equipment, technology and techniques become available.
* Monitor student input on program and curriculum and adjust as necessary.
* Strive to provide more e-learning opportunities for all types of students and learners.

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| **D. Deferred Actions**Record any issues that will need to bemonitored, researched, or deferred for future action. |
| * Monitor industry changes in information, techniques and equipment

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| **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** |

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| **Arboriculture - AR** | **Vocational Outcomes** | **Essential Employability Skills** |
|  **Semester 1** | Course # | Course Name | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **15** | **16** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** |
| FSTY001 | Advanced Tree Climbing and Pruning |   |   | 1  | 1 | 1  | 1  | 1  |   |  | 1  |   | 1  | 1 | 1  | 1  |   | 1  | 1  |   | 1  | 1  |   | 1 | ?  | 1  | 1  | 1  |
| FSTY005 | Basic Tree Climbing |   |   |   |   | 1  | 1  |   |   |   |   |   | 1  | 1  | 1  | 1  |   | 1  |  |   | 1 | 1 |   |   |   | 1  | 1 | 1 |
| FSTY032 | Plant Health Care |  1 | 1 | 1  | 1  |   |   |   |   |   |   | 1  | 1 | 1 | 1 | ?  |   | 1  | 1  | 1 | 1  | 1  | 1  | 1  | ?  | ?  | 1  | 1  |
| FSTY060 | Tree Sciences and Practices | 1  | 1  | 1 | 1  |  |   |   |   |   |  | 1  | 1  | 1  |   | 1  |   | 1  | 1 |   | 1  | 1  |   |   |   | 1  | 1 |   |
| MECH045 | Operation and Maintenance of Equipment |   |   | 1 |   | 1  |   |   | 1  |  | 1  | 1  | 1  | 1 | 1  | 1 |   | 1 | 1  |   | 1 | 1  |   | 1  | 1 | 1 | 1 | 1  |
| APST89 | Co-op Preparation |    |   |   |   |   |   |   |   |   |   | 1 |   |   | 1 |   | 1 |  1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **2** | APST86 | Arboriculture Co-op | 1  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1  | 1  |  1 | 1  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
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|  **Semester 3** |  | General Education Elective |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| FSTY003 | Arboriculture Practices | 1  |  1 | 1  | 1  | 1  |   |   |   |  | 1 | 1  | 1  | 1 | 1 |  |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 |   |  | 1 | 1 |
| FSTY007 | Dendrology |   | 1  | 1  |   |   |   |   |   |   |   | 1  |   |   |   |  |   | 1  |   |   | 1  | 1 |  | 1 |   |  | 1  |   |
| FSTY011 | Forest Entomology and Pathology | 1  | 1 | 1  | 1  | 1 |   |   |   |   |   | 1  | 1 | 1 | 1 | ?  |   | 1  | 1  | 1 | 1 | 1  | 1  | 1 |   | ? | 1  | 1 |
| FSTY025 | Line Clearing |   | 1 | 1 | 1 | 1  | 1 |   | 1  | 1  | 1  |   | 1 | 1 | 1  | 1 |   | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| FSTY049 | Tree Removal |   | 1 | 1 | 1 | 1 | 1  | 1  | 1  |   | 1  |   | 1  | 1 | 1 | 1 |   | 1  | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |