**Curriculum Renewal:**

**Analysis and Action Plan Template**

| **Program Coordinator:** | **Dave Wood** | **School:** | **SENRS** |
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| **Program Code:** | **FW** | **Date Completed:** | **November 14, 2012** |
| **Program Name:** | **Fish and Wildlife Technologist** | | |
| **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.*  Many jobs are predicted for the “Green” sector and we are starting to see some hiring of our graduates in this area. Some of these areas include pre and post monitoring alternate energy projects, fisheries and wildlife management, water quality assessment, habitat classification, assessment and remediation. We are well positioned on the aquatic side and this is one of the strengths of our program. We should maintain our standing in this area. We are lacking in the terrestrial component as only a few of the necessary skills are covered in the current curriculum. The terrestrial component is considered the growth area.  A private sector growth area is in problem wildlife management and our students are well positioned t compete in this area.  The public sector is going through a period reduction over the next few years. The prediction at this point (Nov. 2012) is that it will be a 3 year process. The demographic of the Ministry of Natural Resources coming out the other end is such that the retirement rate will necessitate hiring in the leaner organization at the end of the reduction process.  The new green energy initiatives have a legislated requirement for the proponents to do the pre and post development assessment and monitoring. Strong growth in private sector consulting firms especially in the terrestrial assessment areas is expected over the next several years. This is an overall industry comment but was confirmed by the F&W advisory committee.  The advisory committee also suggested that hydro, wind and solar are emerging trends – all forms of green energy. Freshwater mussels and fish egg ID are other trends. Huge need for Ontario Wetland (OWES) course, Invasive species and species at risk.  ***Curriculum Issues***  **F&W Introduction to Vector GIS - GEOM34 - Issues**  **Shared with Ecosystems Management Students.**  Under the current curriculum, F&W students have exposure to GIS content in semester 1 in the Geospatial Techniques course. The issue that the students have is that GIS is not introduced to them again until Semester 5, in the Introduction to Vector course, approximately 2 years later. In that time frame the methods of storage, new data sources, and new versions of software have been implemented and therefore the students are at a re-learning curve, instead of being able to pick up where they left off in Semester 1. In most cases, due to the length of time in between the courses, the students have not being able to retain the contents of GIS.  Currently the F&W students join the EM students for some courses, GIS being one of them. The course is taught with the direction of the EM students and therefore, not all is applicable to F&W and some content is not being taught that the F&W student s require.  There tends to be gaps with the program when combining EM courses with F&W programs. For example, F&W have field trips and field placement, where EM does not. Classes continue for EM and these results in F&W students missing important curriculum. It also results in adding compensation factors in to the overall course curriculum. I.e. Project, assignments, and tests/examinations need to have a different deadline/due date than EM. There is also the issue of having to delay returning marked assignments/projects and tests/exams until after the F&W have completed.  It is recommended that the F&W courses be deferred from the EM program. F&W need to have their own GIS course that matches with their timetable and needs. Historically, contents of the program were designed specifically around F&W, including courses of forest management, wildlife HIS and fisheries applications such as lake surface area, shoreline slop, etc. With the constant change in part time faculty, most of the application curriculum has been eroded. | | | | |
| **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.*  In semesters 5 (Environmental Analysis) and 6 (Environmental Monitoring) there are posted tutorial videos on webCt that are screen casts of procedures that they use throughout the term, most specifically related to Microsoft applications, i.e excel. Also posted are chemistry review videos on WebCT to get the students up-to-speed on material they should know from previous courses. The students are also required to conduct research for labs and term papers that require them to access various data bases of information.  *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?*  The University of Prince Edward Island will now accept a graduate from a NAWTA (North American  Wildlife Technology Association) accredited institution by allowing a block transfer into their BSc.in  Wildlife Management. The Fish and Wildlife Technician Program at Fleming is accredited by the  NAWTA  *2.3 New competitor programs and/or re-positioning of existing programs.*  Unaware of any  *2.4 New or changing provincial standards, standards for accreditation, credentials, and / or industry or sector certifications over the past year*.  Unaware of any  *2.5 Progress made from the last curriculum renewal initiative.*  Development o**f** e-learning / blended learning experiences in semester 5 and 6.  A new Applied Habitat Assessment Course has been added to semester 5. The new course covers Wetland Evaluations, Environmental Impact Studies and other wildlife assessment protocols. This course has a strong applied learning component. | | | | |
| **3. Student and Graduate Satisfaction (2012)**  *3.1 Key performance indicators # 4, 8, 9, and 11 (see* ***Appendix of Curriculum Guide*** *for a description of these).*  KPI #4: Generic and Vocational Learning Outcomes ……….. 88%  KPI #8: Student Satisfaction – Learning Experience ………… 92%  KPI #9: Student Satisfaction – Teachers ……………………… 79%  KPI #11: Graduate Satisfaction – Program …………………… 87%  *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**   * Field placements in each semester each with a duration of two weeks to enhance graduate hands on skills and knowledge of the workplace * The capstone research project in semester 6 utilizes industry data and prepares students both for the workplace and transfer into university * Third year program courses are integrated and build on previous knowledge resulting in a holistic view of the overall educational experience * One week fall and winter field camps * Experienced and dedicated faculty and staff   **Challenges**  **F&W Introduction to Vector GIS - GEOM34 – Issues discussed above.** | | | | |
| **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. | | | | |
| * **Continue to look for a way to deal with the issues in the Introduction to Vector GIS - GEOM34.** * **Changes in the entry process for third year will mean students already in the system as Technology will have to be managed until all Technology Cohorts in the system have moved through. September of 2013 should be the last year of with this issue. See 2012 program review for details.** | | | | |
| **D. Deferred Actions**  Record any issues that will need to bemonitored, researched, or deferred for future action. | | | | |
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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** | | | | |