Fleming College

EXECUTIVE SUMMARY FOR PROGRAM REVIEW

The Executive Summary will be presented to Fleming College's Academic Council and Executive Leadership Team for information and feedback. The Executive Summary will also be provided to Fleming College's Board of Governors.

Subject:	School of Environmental & Natural Resource Sciences Program Review Report
Program Name:	Blasting Techniques Certificate
Presented By:	Linda Skilton
Action:	For Discussion / Information

SOURCE

- Fleming College's Curriculum Renewal and Program Review (College Policy 2-207)
- Fleming College's Quality Assurance Policy (College Policy 2-213)
- Board of Governors By-law (1-102 - reference section 39.6)
- Academic Council Terms of Reference (https://department.flemingcollege.ca/vpa/academic-council/terms-of-reference/)

Reference Documents

- Ministry of Training Colleges and Universities: Minister's Binding Policy Directive, Framework for Programs of Instruction http://www.accc.ca/ftp/es-ce/MTCUCollegeFramework.pdf
- Guidelines for the Program Review and Curriculum Renewal process and templates are located on the Centre for Learning and Teaching Website. http://flemingclt.ca
- Ontario College Quality Assurance Service - http://www.ocqas.org

BACKGROUND

Fleming's quality assurance process includes a two-staged process that includes: Curriculum Renewal (conducted annually) and Program Review (conducted every five years). These two internal processes are integrated so there is an *ongoing* focus on curriculum quality.

The Program Review process is characterized by both depth and breadth of analysis. Program data is collated, reviewed and assessed against given criteria, providing a measure of both the vitality and viability of each program. Based on this analysis, long-term plans are then created to guide continuous curriculum improvement and build on the cumulative outcomes of annual curriculum renewal. At the end of this process, a Program Review Panel (convened by the Dean) is charged with the responsibility of making recommendations concerning program viability as well as suggesting program/curriculum revisions.

In adhering to the mandate of the Academic Council to receive reviews of existing programs of instruction, the Executive Summary for the School of Environmental & Natural Resource Sciences is hereby provided, for the Council's information.

PROGRAM STRENGTHS

Fleming's Blasting Techniques certificate program provides graduates with several advantages including common core training as required by the Ministry of Labour to enter most blasting sites and an option to certify with the International Society of Explosives Engineers (ISEE) in Quarrying, Basic Construction Blasting, and the Fundamentals of Blasting (Level One). Graduates can also expand their career and job opportunities by continuing in Fleming's Resources Drilling and Blasting Technician diploma program through direct entry into the program's second semester.

Job opportunities are very good across many sectors and several provinces, including Ontario and the program benefits from good relations with industry including companies such as Lafarge, CBM, Orica and Austin Powder. And students that pursue both the Blasting Techniques Certificate and the Resource Drilling and Blasting Diploma become highly desirable to potential employers in the industry.

This program is very learner-centred with its applied programming and smaller student numbers in field labs. There is approximately two hours of field work for every hour of in-class time. For example, the courses Blasting Applications Field Camps I (APST 80) and II (APST 81) take place mostly in a quarry where students learn to conduct controlled blasts.

Safety is a key component in the program and more safety training has been added successfully to the program which aligns with industry trends. The industry is witnessing more ministry investigations and increasing legislative requirements for safety. As a result, program outcomes are being updated to reflect industry changes and include an emphasis on safety.

PROGRAM CHALLENGES

Starting in January 2016, there will be an additional intake of students into the Blasting Techniques Certificate program. Due to the hands-on delivery of this program, increasing student numbers presents increased demands on resources. A plan will need to be developed to deal with these increased demands as the program expands with the additional winter intake of students.

The numeracy skills of students entering the program are a continuing concern. Admission requirements allow students with workplace high school math to enter the program. These students often have weak numeracy skills. This may be resulting in the lower graduation rate witnessed in 2014 as students entering the program with high school workplace level math are struggling with the math components of the program.

KPI RESULTS

The Student and Graduate Satisfaction KPIs continue to be strong and positive for this program. Graduate Satisfaction with the Program (KPI 11) has continuously increased over the past four years and was at its highest reporting in 2014 at 92%. This may be a result of new faculty hires and curriculum changes in the past four years. Graduate Satisfaction with Generic and Vocational Learning Outcomes (KPI 4) and Student Satisfaction with Learning Experience (KPI 8) were comparable to the college averages.

Overall Employment Rate (KPI 2) has been steadily increasing and in 2014 was 100%. Related Employment Rates (KPI 3) was lower than the college average from 2011-2013 but in 2014 became comparable at 50% (college average was 53%).

The Graduation Rate (KPI 1) is 53% which is of concern as it is lower than the college average of 66%. However, it should be noted that the rate is improving. According to Fleming Data Research, the latest graduation rate (to be published in June 2015) is 57.7%.

It should also be noted that there are still no comparator programs in the system.

SUMMARY OF RECOMMENDATIONS

Recommendations Building on Program Strengths:

1) The Blasting program will examine ways in which to further increase the hands-on learning component of the program. Opportunities to increase student learning activities in surface and underground mines will be examined, as well as, investigating the possibility of converting lecture hours to lab hours in the Blasthole Drilling for Drillers (GEOL 68) course possibly through the use of blended learning and moving the course to Semester 1.
2) The program would like to increase applied learning and assessment on blasthole drill machinery in order for students to gain credit and prepare them for Ministry Common Core Surface Miner modules. If implemented, this would further increase the employability of our graduates.
3) Develop a plan for the January 2016 intake to deal with demands on resources due to increases in student numbers.

Recommendations Developed to Address Gaps Identified:

1) The numeracy skills of students entering the program are a continuing concern. Admission requirements allow students with workplace high school math to enter the program, however further analysis of the students' high school math courses taken upon entry is required to inform potential changes to the math admission requirement. In addition, it will be important to ensure students avail themselves of existing math supports available on campus.
2) An investigation into the possibility of developing an online math course to allow students who were unsuccessful in Semester 1 math to make up the credit will be undertaken. Students could enrol in this course during the winter or spring rather than having to wait for the following fall in order to make up the credit. This would improve the graduation rate of the program.
3) Direct entry opportunities into the Resource Drilling and Blasting program will need to be reviewed. More students from the Blasting Techniques program are interested in this additional credential however the existing patterns of enrolment suggest that they are not gaining entry into this program as expected.

Program Review Panel Meeting Date: March 9th, 2015

Program Review Panel Participants:

Chair: Mary Ann Fader
Program Co-ordinator: William Smith
Curriculum Consultant: Kris McBride
Program Faculty/Support (maximum 4): Lorne Bellamy, Cathy Stalkie
External Members (minimum 3): Al Romphf, John Newton, Cam Thomas, Pierre Labelle, Joey Vieglin